Environmental Report

For the SEA of the EMFAF Programme 2021-2027

Report

Environmental Report

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DISCLAIMER

This report has been prepared by AIS Environment with all reasonable skill, care and diligence, and taking account of the manpower and resources devoted to it by agreement with the client. Information reported herein is based on the interpretation of data collected and has been accepted in good faith as being accurate and valid.

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1 INTRODUCTION

The Strategy & Implementation Division (SID) within the Ministry for the Economy, European Funds and Lands has commissioned AIS Environment Ltd. through the public procurement system (CT3000/2020/2) to carry out a Strategic Environmental Assessment (SEA) of the EMFAF Programme 2021-2027.

The SEA will be carried out in accordance with local legislation S.L.549.61 (Environment Protection Act), and involves the following tasks as outlined in the TORs:

Task 1: Kick-off meeting
Task 2: Inception report
Task 3: Screening and scoping report
Task 4: Draft environmental report
Task 5: Public and stakeholder consultations
Task 6: Final environmental report
Task 7: Draft adoption and monitoring report
Task 8: Final adoption and monitoring report

This report achieves the requirements of Task 6.

1.1 ENVIRONMENTAL REPORT OBJECTIVES

This environmental report aims to assess the strategic environmental impacts arising from the proposed EMFAF Programme. It also summarises the findings of the SEA, which AIS will publish as part of the public consultation.

The report portrays the overall vision of the EMFAF Programme, including details on the measures proposed as part of the strategy. The report then provides details of the methodology used in the SEA process, followed by the results of the baseline studies and the impact assessment.

1.2 REPORT STRUCTURE

The report is structured in accordance with the guidelines set out in Schedule I of the STRATEGIC ENVIRONMENTAL ASSESSMENT REGULATIONS (S.L.549.61).

S.L. 549.61 SCHEDULE 1 REQUIREMENT		SECTION
a	An outline of the contents, main objectives of the plan or programme and relationship with other relevant plans and programmes	2
b	The relevant aspects of the current state of the environment and the likely evolution thereof without implementation of the plan or programme	5
c	The environmental characteristics of areas likely to be significantly	5

	S.L. 549.61 SCHEDULE 1 REQUIREMENT	SECTION
	affected	
d	Any existing environmental problems which are relevant to the plan or programme including, in particular, those relating to any areas of a particular environmental importance, such as areas designated pursuant to Directives 79/409/EEC and 92/43/EEC	8
e	The environmental protection objectives, established at international, European or national level, which are relevant to the plan or programme and the way those objectives and any environmental considerations have been taken into account during its preparation	4
f	The likely significant effects on the environment, including on issues such and biodiversity, population, human health, fauna, flora, soil, water, air, climatic factors, material assets, cultural heritage including architectural and archaeological heritage, landscape and the interrelationship between the above factors. These effects should include secondary, cumulative, synergistic, short, medium and long-term permanent and temporary, positive and negative effects	7
g	The measures envisaged to prevent, reduce and as fully as possible offset any significant adverse effects on the environment of implementing the plan or programme	8
h	An outline of the reasons for selecting the alternatives dealt with, and a description of how the assessment was undertaken including any difficulties, such as technical deficiencies or lack of know-how, encountered in compiling the required information	6
i	A description of the measures envisaged concerning monitoring in accordance with regulation 11	9
j	A non-technical summary of the information provided under the above	10

2 OVERVIEW OF THE SECTOR PROGRAMME

2.1 OVERVIEW OF THE PROGRAMME

The SEA covers one programme related to the use of European funds dedicated to the Common Fisheries Policy (CFP) and the Integrated Maritime Policy (IMP), called the European Maritime, Fisheries and Aquaculture Fund (EMFAF) 2021-2027. This funding programme is the successor to the European Maritime & Fisheries Fund (EMFF) 2014-2020. Funds allocated through this Programme cover the management of fisheries, aquaculture and fishing fleets. Investments supported under EMFAF shall particularly aim to foster sustainable fisheries and aquaculture, contribute to food security, restore and protect marine biodiversity whilst enabling the sustainable growth of the blue economy. Measures related to scientific input, controls and checks, market intelligence, amongst others, are also applicable under this programme.

2.2 PROPOSED MEASURES

The Programme will focus on enhanced sustainable management of the Maltese fisheries and aquaculture sectors by focusing on three (3) thematic priorities where resources shall be focused. These Priorities have a total budget (EU+MT share) of around EUR 31 million, and shall cover:

- Priority 1: Fostering sustainable fisheries and the restoration and conservation of aquatic biological resources
- Priority 2: Fostering sustainable aquaculture activities, and processing, and marketing of fisheries and aquaculture products, thus contributing to food security in the Union; and

In 2019, the Ministry launched a consultation process on Malta's challenges and investment needs that may be supported through the new wave of EU funds for the 2021-2027 period. Consultations were held in line with partnership principle in accordance with multi-level governance and a bottom-up approach. Furthermore, in 2020-2021, bilateral meeting with various stakeholder were also held with a particular focus on the EMFAF. The outcomes of such consultation sessions and discussions provided important insights on the needs and investment priorities for Malta's socio-economic development and served as a basis for the drafting of the EU funds and programmes.

For further information on the measures proposed as part of the public consultation document for the EMFAF, kindly visit the Ministry's website.[2]

[2]EU Funds for Malta 2021-2027,Public Consultation Document, EMFAF, https://eufunds.gov.mt/en/EU%20Funds%20Programmes/EU%20Territorial%20Programmes/Documents/EMFAF%20Consultation.pdf.

3 METHODOLOGY

AIS Environment first undertook the screening exercise of the Programme to determine whether an SEA was required. The screening exercise concluded that an SEA should be carried out to reasonably predict any environmental impacts from the implementation of the Programme measures. Further detail on this preliminary phase is provided in Section 3.1.

The methodology for the SEA follows the requirements of the STRATEGIC ENVIRONMENTAL ASSESSMENT REGULATIONS (S.L.549.61). Table 1 outlines the stages involved in the compilation of the Environmental Report. AIS Environment completed Step 1 as part of the Scoping Report (refer to Section 3.2). Steps 2-7 are presented in this Environmental Report. The methodology for the SEA is outlined in Sections 3.3 to 3.5.

TABLE 1: STAGES INVOLVED IN COMPILING THE ENVIRONMENTAL REPORT

STAGE		DESCRIPTION
1	Environmental themes	Identification of the key environmental aspects to be addressed in the environmental report
2	Environmental baselines	Description of the environmental baseline scope
3	Policies	Links to other relevant environmental policies, plans and programmes, particularly in relation to the SEA Regulations
4	Potential environmental issues & impact assessment	Environmental issues potentially arising from the PaMs
		Impact assessment exercise during all its phases (i.e. construction/installation, operation and decommissioning), including cumulative impacts, to evaluate whether the proposed policy-level measures are expected to be effective in pre-empting significant impacts
		Designation of mitigation measures for the adverse impacts and determining the residual impacts
5	Assessment of alternatives	The zero-option will be identified and assessed as an alternative to the proposed EMFAF programme to determine the preferred alternative (including reasons for rejection of others)
6	Recommendations	A description of the recommendations made throughout the SEA process to improve criteria and measures
7	Monitoring proposals	A description of the monitoring requirements to assess the impacts and implications of the policy during the

STAGE	DESCRIPTION
	implementation stage

3.1 RESULTS FROM THE SCREENING REPORT

The Consultants completed the screening template provided by the SEA Focal Point with details on the EMFAF Programme 2021-2027. This template outlined a range of information about the Programme including a general description, relevance of SEA regulations and potential environmental effects.

The final component of the screening exercise involved the identification of key stakeholders relevant to the SEA exercise (refer to Table 2), which also includes the respective designated authorities as required by S.L. 549.61 article 7 (3).

TABLE 2: LIST OF STAKEHOLDERS TO BE TARGETED DURING THE PROJECT

GROUP	STAKEHOLDER
Governmental bodies	The Environment & Resources Authority
	Transport Malta
	Planning Authority
	Ministry for the Environment, Energy and Enterprise
	Ministry for Finance and Employment
	Department of Fisheries and Aquaculture
	Ministry for Transport, Infrastructure and Capital Projects
	Ministry for Gozo
	Ministry for Agriculture, Fisheries, and Animal Rights
	University of Malta
	Malta Aquaculture Directorate
	Energy and Water Agency
	Ambjent Malta Agency
	Ministry for Health
	Regulator for Energy and Water Services
	Environmental Health Directorate
	Civil Protection Department
	Occupational Health & Safety Authority
	Local Councils' Association
	Malta Resources Authority

GROUP	STAKEHOLDER
NGOs	Ghaqda Koperattiva tas-Sajd (GhKS)
	Koperattiva tas-Sajd Malta (KSM)
	Flimkien Ghal Ambjent Ahjar
	Friends of the Earth Malta
	Biological Conservation Research Foundation
	Fondazzjoni Wirt Artna
	Nature Trust
	Moviment Graffitti
	Birdlife Malta
	Din l-Art Helwa

3.2 RESULTS FROM THE SCOPING REPORT

The Scoping Exercise involved a review of the proposed measures which have been included in the programme. Following the review, a list of key environmental themes was drawn up, as follows:

- Air quality
- Biodiversity (terrestrial and marine)
- Land uses & landscape
- Cultural heritage
- Waste management

The Scoping Report also identifies the list of key environmental themes, in line with the guidelines provided in Schedule I of the SEA Regulations S.L. 549.61.

The SEA Directive does not specifically require the use of objectives or indicators in SEA, yet they provide a suitable methodology to describe, analyse and compare environmental effects. SEA objectives provide the environmental goals, while the indicators measure the plan's performance against the objectives. The SEA objectives are different and separate from the policy objectives, although the two influence each other and may overlap. SEA indicators are measurements of temporal trends, which help to determine the success of the implementation of the policy against various SEA objectives.

Table 3 provides the environmental issues, criteria and indicators associated with each theme. The impact assessment also took into consideration the inter-relationships between the themes, as well as secondary, cumulative, synergistic, short, medium and long-term, permanent and temporary, positive and negative impacts of the policy.

The SEA also assessed the relevant policies. Such policies included EU policies, regulations, communications, directives and international obligations and agreements as well as the relevant national legislation that they transpose or that Malta is party to.

A copy of the Screening & Scoping Report is attached as Annex 1.

TABLE 3: ENVIRONMENTAL THEMES, CRITERIA AND INDICATORS RELATED TO THE EMFAF PROGRAMME 2021-2027

THEME	SEA OBJECTIVE		CRITERION	INDICATOR	DATA SOURCE
Air quality	1	Improve air quality	Ensure that the national air quality issues and emission limit values are not breached	National emissions (tonnage) of pollutants into the air, with regards to Malta's obligations under the NEC Directive 2016/2284	National Statistics Office
					ERA
Biodiversity	2	Maintain and safeguard protected habitats and species	Maintain and safeguard the conservation of designated habitats and species of flora and fauna	Status of protected habitats and species of flora and fauna	ERA
			Maintain and safeguard other important habitats which are not officially protected yet	Status of other habitats, including valleys and watercourses	ERA
			Maintain and safeguard environmental factors essential to ecosystems	Status of environmental factors, including coastal water, groundwater, geology and soil	ERA
Land uses & landscape	3	Protect the quality, integrity and distinctiveness of the landscape and townscapes	Protection of the landscape	Status of landform and topography, landscape, the natural beauty and scenic amenity of the landscape	ERA
Cultural heritage	4	Conserve and protect sites of architectural, archaeological and/or ecological importance from adverse impacts of	Conserve and protect sites of cultural heritage	Number of scheduled sites	PA

THEME	SEA OBJECTIVE		CRITERION	INDICATOR	DATA SOURCE
		infrastructural works			
Waste management	5	Increase sustainable management of waste, waste preventions and minimisation practices	Promote prevention, re-use, recycling, recovery (energy)	Waste generation by type	MEEE/ Wasteserv/ NSO/ Eurostat
		Increase re-use, recycling and recovery wastes	Reduce landfilling	Waste separation and recycling	

3.3 DESCRIPTION OF ENVIRONMENTAL BASELINES

Stages 2 and 3 of the SEA involved a thorough literature review of any existing and available information relevant to the Measures. Relevant literature included but was not limited to the following data sources:

- THE STRATEGIC PLAN FOR THE ENVIRONMENT AND DEVELOPMENT (SPED, 2015)
- STATE OF THE ENVIRONMENT REPORT (2018)
- THE NATIONAL ENVIRONMENTAL POLICY (2012)
- THE NATIONAL STRATEGY FOR THE ENVIRONMENT (2020-2050)
- THE NATIONAL BIODIVERSITY STRATEGY AND ACTION PLAN (2012-2020)
- Update of ARTICLES 8, 9 AND 10 OF THE MARINE STRATEGY FRAMEWORK DIRECTIVE (2008/56/EC) in Malta's Marine Waters: Second Assessment Report (2020)
- FLORA, FAUNA AND NATURAL HABITATS PROTECTION REGULATIONS (S.L. 549.44)
- LONG-TERM WASTE MANAGEMENT PLAN (2021-2030)
- 2ND WATER CATCHMENT MANAGEMENT PLAN FOR THE MALTA WATER CATCHMENT DISTRICT (2016)
- BATHING WATER QUALITY REGULATIONS (S.L. 465.09)
- AIR QUALITY PLAN FOR THE MALTESE ISLANDS (2010)
- NOISE ACTION PLAN (2013)
- THE LIMITATION OF EMISSIONS OF CERTAIN ATMOSPHERIC POLLUTANTS REGULATIONS (S.L. 549.124), in view of the specific emission ceilings for Malta
- Any other relevant literature sources, such reports and other papers from the NSO, ERA, Eurostat, MetOffice, Malta Airport, MECP and Wasteserv.

The Consultants carried out a thorough assessment of the proposed programme. The SEA also compared each of the measures to the do-nothing scenario (zero option) and a do-minimum scenario as required by S.L.549.61 article 6 (1).

3.4 IMPACT AND IDENTIFICATION EVALUATION

Stage 4 involved the assessment of the significance of the environmental impacts, in line with the guidelines provided in Section 2 of Schedule II Criteria for determining the likely significance of effects referred to in Regulation 4(5) of S.L.549.61 on the Strategic Environmental Assessment:

(a) the probability, duration, frequency and reversibility of the effects,
(b) the cumulative nature of the effects,
(c) the transboundary nature of the effects,
(d) the risks to human health or the environment (e.g. due to accidents),
(e) the magnitude and spatial extent of the effects (geographical area and size of the population likely to be affected),
(f) the value and vulnerability of the area likely to be affected due to:
  i. special natural characteristics or cultural heritage,
  ii. exceeded environmental quality standards or limit values,
  iii. intensive land-use,
(g) the effects on areas or landscapes which have a recognised national, Community or international protection status.

The SEA assesses the impacts on the environmental themes highlighted in Table 3, as presented in Environmental Report. For each environmental theme, the report presents the assessment results in tabular format, including the comparison to the alternative scenarios (Stage 5). The matrix summarises the impacts of the alternatives, the significance of the impacts and the timeframe of the impacts. On the basis of the results from Stages 4 and 5, we have put forward recommendations for alteration to the proposed measures of the EMFAF programme (Stage 6), as well as proposals for a monitoring programme of the EMFAF programme (Stage 7).

3.5 CONSULTATIONS

As required by Article 5 (2) and Article 6(2) of S.L. 549.61, the Screening and Scoping Report underwent a stakeholder consultation period that involved the respective designated authorities as required by S.L. 549.61 article 7 (3) including the Environment and Resources Authority, the Regulator for Energy and Water Services, the Ministry for Agriculture, Fisheries, and Animal Rights, Ministry for Health, the Ministry for Health and the Environmental Health Directorate. The consultation period allowed the interested parties to provide feedback on the results of the Screening and Scoping exercises. This first consultation period allowed the Consultants to properly integrate all environmental considerations and viewpoints in the early stages of the SEA. During the consultation period, two stakeholders came forward with comments on the Screening & Scoping Report.[4]

In line with the requirements of S.L. 549.61 article 7 (3), the Environmental Report will be opened to public and stakeholder consultations. The entities in Table 2 will be targeted as part of the stakeholder consultation session.

As was carried out during the first consultation sessions, the Environmental Report has been sent directly via email to the stakeholders and made public. Stakeholders and the public were invited to a stakeholder consultation session, during which AIS presented the findings of the Environmental Report. Comments received via email or during the consultation session (Annex 2) were integrated into the final version of the Environmental Report.

[4] The Environment and Resources Authority and BirdLife Malta were the two stakeholders that provided comments during the first consultation period.

4 RELEVANT POLICIES & LEGISLATION

4.1 FISHERIES

4.1.1 Common Fisheries Policy (CFP)

The Common Fisheries Policy (CFP) establishes the fisheries policy within the EU, applicable to all Member States and dates back to 1970. Having been reformed throughout the years, the new CFP aims to promote sustainable fishing and stock management by establishing a Maximum Sustainable Yield such that the maximum amount of fish may be harvested on a long term basis. Moreover, the policy emphasises the importance of scientific advice in shaping policies and setting limits on fish stocks. Due to the use of natural resources, fishing and aquaculture activities must be regulated, ensuring enforcement and compliance of regulations. This is essential to meet the policy's demand in sustainability, together with phasing out of discard practices and opting for sustainable aquaculture.

4.1.2 Aquaculture Operations Regulations (S.L. 425.12)

The AQUACULTURE OPERATIONS REGULATIONS (S.L. 425.12) which entered into force on 30th May 2017, provide a framework for the operations of aquaculture activities carried out within the Maltese islands. According to Regulation 2(1), such operations include "the farming, rearing, keeping or cultivation of aquatic organisms using techniques designed to increase production of the organisms in question in any manner whatsoever, including mariculture" and can only be carried out with the possession of a valid permit. An Aquaculture Operations Register must identify the location of all aquaculture establishments and holds records to ongoing activities within such establishments to ensure regulatory compliance.

4.1.3 Aquaculture Regulations (S.L.36.34)

AQUACULTURE REGULATIONS (S.L.36.34) which entered into force on 29th May 1990, provide a framework for general aquaculture activities. The regulations stipulate that operators can only keep, rear or fatten farmed fish if they possess a valid licence to carry out such activities within a licenced fish farm. Multiple operational fish farms must be separated by a distance of at least one kilometre. Translocation, including importation, of live fish from a licenced location to another place may only be carried out upon the Director's approval.

4.1.4 Aquaculture Strategy for the Maltese Islands: Towards Sustainability 2014-2025

The AQUACULTURE STRATEGY FOR THE MALTESE ISLANDS Aims to establish a policy framework for the local aquaculture industry in Malta. This policy sets out the first National Aquaculture Strategy for Malta covering the period between 2014 and 2025.

The policy views aquaculture as an important maritime sector and highlights the marine-dependent resources i.e. tuna penning and farming of closed cycle species. Moreover, the policy encourages the growth and development of aquaculture in a sustainable manner and aims to enhance the clarity of pertinent regulations. Aquaculture activities should be limited to designated Aquaculture zones, limiting

user conflict on land and sea whilst maintaining low impacts on the coastal environment.

4.1.5 Fishing Vessels Regulations (S.L.425.07)

The FISHING VESSELS REGULATIONS (S.L.425.07) which entered into force on 14th September 2004, sets out a policy framework for the use of vessels in fishing activities. Such vessels must be registered and appropriately categorised in the Fishing Vessel Register and those which are of 6m or more in length must also be registered under the Merchant Shipping Act. Only licenced vessels of this minimum size are permitted to carry out fishing activities beyond 12 nautical miles, in international or convention waters. Operators of licenced fishing vessels must log all fishing activities including type and quantity of fish catches.

4.2 ENERGY & CLIMATE

4.2.1 National Energy and Climate Plan

MALTA'S NATIONAL ENERGY AND CLIMATE PLAN (NECP) fulfils EU Regulation 2018/1999 which stipulates that each member country must compile an NECP to encompass the five dimensions of the Energy Union between 2021 and 2030. The five components of the Energy Union are summarised hereunder:

- Decarbonisation
- Energy efficiency
- Energy security
- Internal energy market
- Research, innovation and competitiveness.

4.2.2 Low Carbon Development Strategy

The EU has a long-term strategy to achieve climate neutrality by 2050, so termed the European Green Deal.[5] Under this strategy, each Member State is required to plan and communicate a Low Carbon Development Strategy (LCDS) to outline the way in which greenhouse gas emissions are phased out by 2050. Malta has prepared such a strategy, which falls in line with the Regulation on the governance of the energy union and climate action (EU/2018/1999). The LCDS includes mitigation measures which were researched and quantified through Marginal Abatement Cost Curve (MACC) modelling. This strategy aims to help Malta achieve its EU-committed targets: reducing overall 1990 emission levels by 20% up to the year 2020, by 55% by 2030 and be climate neutral by the year 2050.

4.2.3 National Renewable Energy Action Plan

Malta's NATIONAL RENEWABLE ENERGY ACTION PLAN (NREAP) for 2015-2020 forms part of Malta's obligations for the RENEWABLE ENERGY DIRECTIVE 2009/28/EC. This action plan outlines how Malta will achieve its national 2020 target of 10% renewable energy share in gross final energy consumption as stipulated in the Directive. The NREAP

[5] European Commission (2022). A European Green Deal. https://ec.europa.eu/info/strategy/priorities-2019-2024/european-green-deal_en

encourages the use of renewable forms of energy, in preference to the use of fossil fuels. The shift towards cleaner renewable sources of energy coupled with the reduction of energy demand will subsequently also affect the overall carbon emissions of the country.

4.2.4 National Climate Change Adaptation Strategy (2012)

This Strategy seeks to provide adaptation solutions to various sectors which are vulnerable to climate change impacts, by recommending a number of action plans which should be taken into consideration. At present, Malta does not have a legal framework which relates particularly to climate change adaptation. However, there are other existing regulations and studies which tackle such an issue indirectly by adopting implementation measures over the next 10 to 50 years, for instance; Environmental Impact Assessments (EIA), water policy, terrestrial and marine ecosystems, infrastructure (including energy, transport, telecommunications, buildings, and waste) and health.

4.3 ENVIRONMENT

4.3.1 Marine Strategy Framework Directive 2008/56/EC (MSFD)

On the 17th June 2008, the European Council issued the MARINE STRATEGY FRAMEWORK DIRECTIVE 2008/56/EC for the protection, preservation and restoration of healthy oceans/seas. The main aim of the Directive is to ensure that the waters are clean and productive thus allowing biodiversity within to thrive. The Directive takes an "ecosystem-based approach" to manage the impact of human activities in the seas/oceans whilst ensuring that they are used sustainably, and the environmental status is maintained or even improved where feasible. The Directive covers not only the water but also the seabed and subsoil.

4.3.2 Water Framework Directive 2000/60/EC (WFD)

The legal framework for the protection and restoration of all types of waters, be it surface water or a groundwater body is known as the WATER FRAMEWORK DIRECTIVE (WFD) (2000/60/EC). The WFD has been transposed into Maltese legislation under the ENVIRONMENT PROTECTION ACT (CHAPTER 435) and the MALTA RESOURCES AUTHORITY ACT (CHAPTER 423) through the WATER POLICY FRAMEWORK REGULATIONS (S.L. 549.100), which entered into force on 23rd October, 2015. The WFD aims for the achievement of good status in continental, transitional and coastal waters by 2015 (later amended to 2021). The WFD and other European and regional environmental agreements provide a framework for a coherent approach to the sustainable protection, use and management of inland and transitional water resources. The EU's current approach is to integrate various water policies with the adoption of an ecosystem-based management framework for human activities in such water bodies[6].

[6] Apitz, S. E., Elliott, M. Fountain, M., Galloway, T. S. (2006). European Environmental Management: Moving to an Ecosystem Approach. Integrated Environmental Assessment and Management, 2: 80-85.

4.3.3 Habitats Directive 92/43/EEC

The HABITATS DIRECTIVE (92/43/EEC) provides a framework for the conservation of natural habitats and of wild fauna and flora in EU Member States. This Directive, which entered into force on 21st May, 1992, was transposed into Maltese legislation through the Flora, Fauna and Natural Habitats Protection Regulations, 2006 (S.L. 549.44). Article 2 states that the Directive aims to "contribute towards ensuring bio-diversity through the conservation of natural habitats and of wild fauna and flora in the European territory of the Member States." The Directive allows the competent authorities from each member state to set up a coherent European Ecological Network of special areas of conservation, established under the title of Natura 2000 sites. EU Member States need to take all the necessary measures to maintain the population of these species at a Favourable Conservation Status (FCS), as defined in Article 1 (i) of the Habitats Directive.[7]

4.3.4 Birds Directive 79/409/EEC

The BIRDS DIRECTIVE (COUNCIL DIRECTIVE 79/409/EEC) provides a framework for the conservation of wild birds in EU Member States. This Directive, which entered into force on 2nd April, 1979, was transposed into Maltese legislation through the Flora, Fauna and Natural Habitats Protection Regulations, 2006 (S.L. 549.44). The Directive aims to address the conservation of wild birds, their eggs, nests and habitats.

Similarly to the Habitats Directive (COUNCIL DIRECTIVE 92/43/EEC), the Birds Directive allows the competent authorities from each member state to set up a coherent European Ecological Network of Special Protected Areas (SPAs), established under the title of Natura 2000 sites. SPAs are designated to those areas containing habitats which are ecologically important in supporting bird species listed in Annex I of the Directive.

The STATE OF THE ENVIRONMENT REPORT fulfils a recurring commitment set by the ENVIRONMENT PROTECTION ACT towards providing information on the current status of the environment we are living in, in an accessible format. The 2018 report covered the following issues: Biodiversity, Resources and Waste, Land and Coast, Ambient Air Quality and Climate Change, Environmental Health and Cross-Cutting Policy Responses; all of which are reflected in criteria within Thematic Objectives (TOs) 6–9. The 2018 document is an updated version of STATE OF THE ENVIRONMENT REPORT (SOER) 2008. Chapter 5 of the 2018 report focuses on the state of marine and fresh waters, outlining the pressures on these resources and methods of improving their status. Pressures on the marine environment are of a chemical, hydromorphological and biological nature. The status of marine waters may be improved through the implementation of the MARINE STRATEGY FRAMEWORK DIRECTIVE 2008/56/EC (MSFD) and the WATER FRAMEWORK DIRECTIVE 2000/60/EC (WFD) as well as through water efficiency practices.

[7] EU Habitats Directive 92/43/EEC: https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:31992L0043

4.3.5 Flora, Fauna and Natural Habitats Protection Regulations (S.L. 549.44)

The legislation and subsequent amendments transpose EU Council Directive of 92/43/EEC of 1992 (HABITATS DIRECTIVE) and 79/409/EEC of 1979 (BIRDS DIRECTIVE). The regulations aim to set up a national ecological network to safeguard the natural habitats, fauna and flora on the Maltese Islands. Protected sites must be identified and undergo the necessary procedures to be classified as Special Areas of Conservation (SACs) or Special Protection Areas (SPAs) so as to ensure the protection of any ecologically important habitats and species within such areas.

4.3.6 The Water Catchment Management Plans (2011, 2016 & 2022)

Since Malta has no rivers, Malta has drafted the Water Catchment Management Plan (WCMP), which integrates the Maltese Islands into one water catchment district under Article 3 of the WFD (regulation 13 of S.L. 549.100). The first version of the WCMP for the Maltese Islands was published in March 2011. The WCMP is a comprehensive document detailing the implementation of the EU WATER FRAMEWORK DIRECTIVE in the Maltese Islands since the nation's accession into the EU (2004), and provides a guideline for implementation in the following years. The Plan contained measures relating to regulatory issues, agriculture and animal husbandry, fisheries and aquaculture, industry and the urban environment, the coastal and marine environments, groundwater, Natura 2000 sites and water-dependent areas of ecological significance, research needs and awareness-raising. It formed the baseline for the future of water basin management in the Maltese islands. In line with article 13(7) of the WFD and sub-regulation 13(5) of S.L. 549.100, the WCMP was updated in 2015. THE 2ND WATER CATCHMENT MANAGEMENT PLAN FOR THE MALTA WATER CATCHMENT DISTRICT builds upon the previous WATER CATCHMENT MANAGEMENT PLAN FOR THE MALTESE ISLANDS (2011), to fulfil the requirements of EU DIRECTIVE 2000/60/EC. It outlines measures to protect, improve and restore the water environment of the Maltese Islands. The plan encompasses surface, water and coastal waters. Malta's 3RD WATER CATCHMENT MANAGEMENT PLAN FOR THE MALTESE ISLANDS will cover the period 2022-2027 and must be prepared by March 2022.

4.4 OTHER POLICIES & LEGISLATION

Other relevant policies and legislation that have been consulted as part of this SEA are listed below:

- The WASTE MANAGEMENT PLAN (2021)
- The BATHING WATER QUALITY REGULATIONS (2009)
- MALTA'S NATIONAL AIR POLLUTION CONTROL PROGRAMME (2019)
- WELLBEING FIRST: A VISION FOR MALTA'S ENVIRONMENT, NATIONAL STRATEGY FOR THE ENVIRONMENT 2050
- The NATIONAL BIODIVERSITY STRATEGY AND ACTION PLAN (2012)
- INTENT AND OBJECTIVES: NATIONAL BIODIVERSITY STRATEGY AND ACTION PLAN TO 2030
- Fisheries Conservation and Management Act (CAP 425)
- Fisheries and Aquaculture Services Payments Regulations (S.L. 425.05)
- Implementation and Enforcement of Certain Fisheries Management Plans Order (S.L. 425.09)

5 ENVIRONMENTAL BASELINE

The environmental baseline data for this Environment report document evaluated in Sections 5.1 to 5.5 tracks the progress of the different environmental themes presented in Table 3.

5.1 AIR QUALITY

Air quality is a top-priority environmental concern for Malta. The authorities have given it increasing importance over the recent years, including on the national political agenda. This concern arises because of the direct link of air quality to the quality of public human health and ecosystems – terrestrial, freshwater and marine. In order for Malta to conform with the EU Air Quality Directives, it must avoid, prevent and reduce the impact of harmful air emissions by abiding with set thresholds. In response to these Directives, the ERA has implemented Malta's National Air Pollution Control Programme (2019) that builds on the Air Quality Plan for the Maltese Islands (2010). [8] The Plan sets out the basic framework for the measurement of air quality in Malta and the specific reduction of PM_{10} and NO_2 concentrations which have shown annual exceedances since 2004 and 2006, respectively. This air quality plan outlines measures to reduce and, if possible, prevent further exceedances. The ERA continuously measures the concentration of a number of pollutants, and compares the results to the emission limit values (ELVs) established by EU legislation. Trained staff collect these measurements using specialised equipment at the five real-time monitoring stations and a sixth mobile monitoring station as follows:

- Traffic site in Msida
- Traffic site in St Paul's Bay
- Urban background in Żejtun
- Urban site in Attard
- Rural background in Għarb, Gozo
- Additional mobile monitoring station in Senglea

These monitoring stations provide hourly real-time data for the concentrations of a number of pollutants, as outlined in Table 4.[9]

The fixed station network is complemented by a passive diffusion tube network (Figure 1), which consists of approximately 98 NO_2 and 90 VOC passive diffusion tubes located around Malta and Gozo. These are exposed for a period of four weeks at a time for a total of 13 exposure periods per year.[10]

[8] ERA (2019). Malta's National Air Pollution Control Programme - 2019 Environment & Resources Authority, Malta, 128pp. https://era.org.mt/wp-content/uploads/2021/04/NAPCP.pdf.

[9] ERA (2022). *Real Time Air Quality Network.* https://era.org.mt/topic/real-time-air-quality-network/.

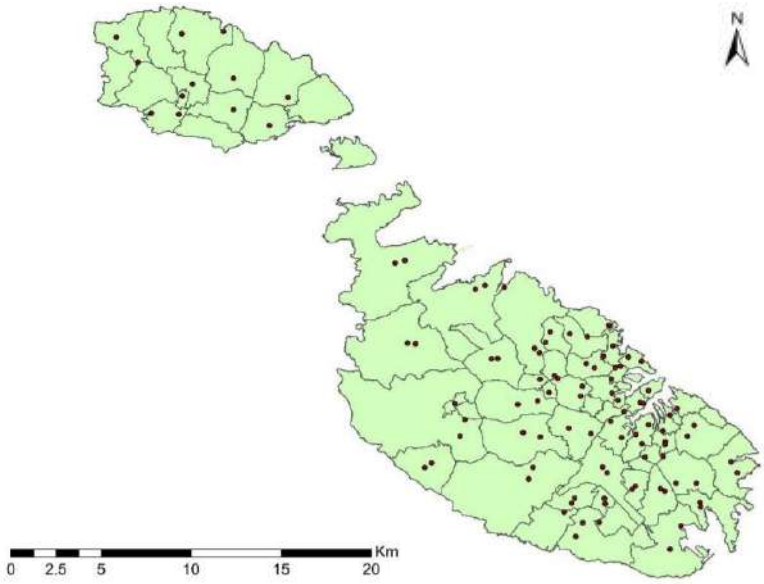

FIGURE 1: PASSIVE DIFFUSION TUBE NETWORK IN MALTA[10]

[10] ERA (2018). *State of the Environment Report 2018.* https://era.org.mt/en/Pages/State-of-the-Environment-Report-2018-Summary-and-Chapters.aspx

TABLE 4: POLLUTANTS MONITORED REAL-TIME BY ERA AND THEIR EU AND WHO LIMITS[9]

POLLUTANT	EU AMBIENT AIR QUALITY DIRECTIVES			WHO GUIDELINES	MALTA MONITORING STATION						
	AVRG PERIOD	LV (MG/M^3)	EXCEEDANCES/YEAR	AVRG PERIOD	AQG (MG/M^3)	GĦARB	ATTARD	MSIDA	ŻEJTUN	SPB	SENGLEA
Particulate matter (PM_{10})	1 day	50	35 days	1 day	50	Yes	No	Yes	Yes	No	Yes
	1 year	40	N/A	1 year	20						
Particulate matter ($PM_{2.5}$)	1 year	25	N/A	1 day	25	Yes	Yes	Yes	Yes	No	Yes
				1 year	10						
Carbon monoxide	Max 1 day 8-hour mean	10	N/A	1 hour	30,000	No	No	Yes	No	Yes	Yes
				Max 1 day 8-hour mean	10,000						
Nitrogen dioxide	1 hour	200	18 hours	1 hour	200	Yes	Yes	Yes	Yes	Yes	Yes
	1 year	40	N/A	1 year	40						
Ozone	1 hour	180	N/A	Max 1 day 8-hour mean	100	Yes	Yes	Yes	Yes	Yes	No
	Max 1 day 8-hour mean	120	25 days								
Sulphur dioxide	1 hour	350	24 hours	10 minutes	500	Yes	No	Yes	Yes	Yes	Yes
	1 day	125	3 days	1 day	20						

POLLUTANT	EU AMBIENT AIR QUALITY DIRECTIVES			WHO GUIDELINES	MALTA MONITORING STATION						
	AVRG PERIOD	LV (MG/M^3)	EXCEEDANCES/YEAR	AVRG PERIOD	AQG (MG/M^3)	GĦARB	ATTARD	MSIDA	ŻEJTUN	SPB	SENGLEA
Benzene	1 year	5	N/A	1 year	1.7 (ref limit)	No	No	Yes	No	Yes	No
Nitric oxide	N/A	N/A	N/A	N/A	N/A	Yes	Yes	Yes	Yes	Yes	Yes
Air pressure	N/A	N/A	N/A	N/A	N/A	No	Yes	Yes	Yes	Yes	Yes
Humidity	N/A	N/A	N/A	N/A	N/A	Yes	Yes	Yes	Yes	Yes	Yes
Temperature	N/A	N/A	N/A	N/A	N/A	Yes	Yes	No	Yes	Yes	Yes
Wind direction	N/A	N/A	N/A	N/A	N/A	Yes	Yes	Yes	Yes	Yes	Yes
Wind speed	N/A	N/A	N/A	N/A	N/A	Yes	Yes	Yes	Yes	Yes	Yes

The European Environmental Agency (EEA) Air Quality in Europe – 2021 Report highlights that air pollution within Europe is still a major concern. The report records the values of various pollutants recorded at monitoring stations and compares these values with the EU thresholds and much stricter WHO long-term guidelines (2021).[11]

In 2019, recorded PM_{10} levels slightly exceeded the EU thresholds at 1 of the stations (Msida) and significantly exceeded the WHO guidelines at all stations. Similarly, only one station (Għarb) recorded exceedances in the EU thresholds for ozone but all stations slightly exceeded the WHO guidelines for this chemical. None of the $PM_{2.5}$ concentrations exceeded the EU thresholds for $PM_{2.5}$ at any of the monitoring stations, but the concentrations did exceed the WHO guidelines. NO_2 values remained below the EU thresholds but three of the stations (Msida, Attard and Żejtun) surpassed the WHO guidelines.

The EEA historical pollution database indicates that the levels of PM_{10}, $PM_{2.5}$, NO_2 across the Maltese islands declined between the period of 2013 and 2020 (no data available for ozone).[12] Recent declines in levels (2020 onwards) should be treated with caution as they are likely attributable to the COVID-19 pandemic lockdowns. During these lockdowns, many polluting generating activities slowed down/stopped, in turn reducing the levels of emissions.

5.1.1 Pollution Sources

Malta's STATE OF THE ENVIRONMENT REPORT (SoER) published in 2018[10] identifies numerous sources for the aforementioned air pollutants, as listed in Table 5. Active construction sites are also considered to be a primary source of particulate matter in the Maltese Islands.

TABLE 5: POLLUTANTS AND THEIR PRIMARY SOURCES[10]

POLLUTANT	SOURCE(S)
Particulate matter (PM_{10} and $PM_{2.5}$)	Fuel combustion in power generation Fuel combustion in road transport Incineration Tyre and brake wear Road wear
Ozone (O_3)	A secondary pollutant that results from reactions involving precursor gases such as volatile organic compounds and nitrogen oxides

[11] WHO (2021). WHO Global Air Quality Guidelines 2021. https://cdn.who.int/media/docs/default-source/air-quality-and-health/who-global-aqgs.-afro-presentation-2-nov-2021_final.pdf?sfvrsn=7d2f3da7_5.

[12] EEA (2022). Dashboard: Air Quality Statistics for the main air pollutants. https://www.eea.europa.eu/data-and-maps/dashboards/air-quality-statistics.

POLLUTANT	SOURCE(S)
Nitrogen Oxides (NO and NO_2)	Combustion sources (results in NO mostly, with subsequent oxidation to NO_2)
Sulphur Dioxide (SO_2)	Combustion of fuels containing high levels of sulphur (e.g. Heavy Fuel Oil in thermal power plants)
Benzo[a-]pyrene (BaP)	Incomplete combustion of fuels and rubber-tyre wear
Carbon monoxide (CO)	Incomplete combustion of fuels in road transport
Benzene	Incomplete combustion of fuel in road transport Handling and distribution of petrol
Arsenic	Metal smelters Coal combustion
Cadmium	Non-ferrous metal production Iron and steel production Cement production Waste incineration Stationary combustion of fossil fuel
Nickel	Combustion of fuel oil and coal in stationary plants Combustion of fuel in ships Waste incineration Steel manufacture Electroplating
Lead	Combustion of fossil fuel Waste incineration Production of non-ferrous metals Production of iron and steel Production of cement
Mercury	Combustion of coal

5.1.2 Particulate Matter

Particulate matter (PM) consists of very small suspended solid or liquid particles, which have both short- and long-term effects on human health. Such particles originate mainly from fuel combustion in transport and power generation, quarrying and construction dust, mechanically-generated dust, tyre and brake abrasion, and aerosols of transboundary origin. Dust from natural sources such as atmospheric sea salt and wind-blown dust also contribute to PM.

In 2017, Malta's real-time monitoring stations recorded high levels of PM_{10}, as can be visualised in Figure 4.[10] In 2017, Għarb, Msida and Żejtun stations recorded an average of 15.8 µg/m^3, 38.1 µg/m^3 and 26.2 µg/m^3 of PM_{10} respectively.[10] The EU established a daily limit value of 50µg/m^3 which should not be exceeded more than 35 times during one calendar year. After the Directive 2008/50/EC allowed natural resources to be deduced, it was only in 2010 when Malta recorded an exceedance in PM_{10}. This was within the time period of the allowed number of annual exceedances in PM_{10}, between 2009 and 2015 (Figure 2).

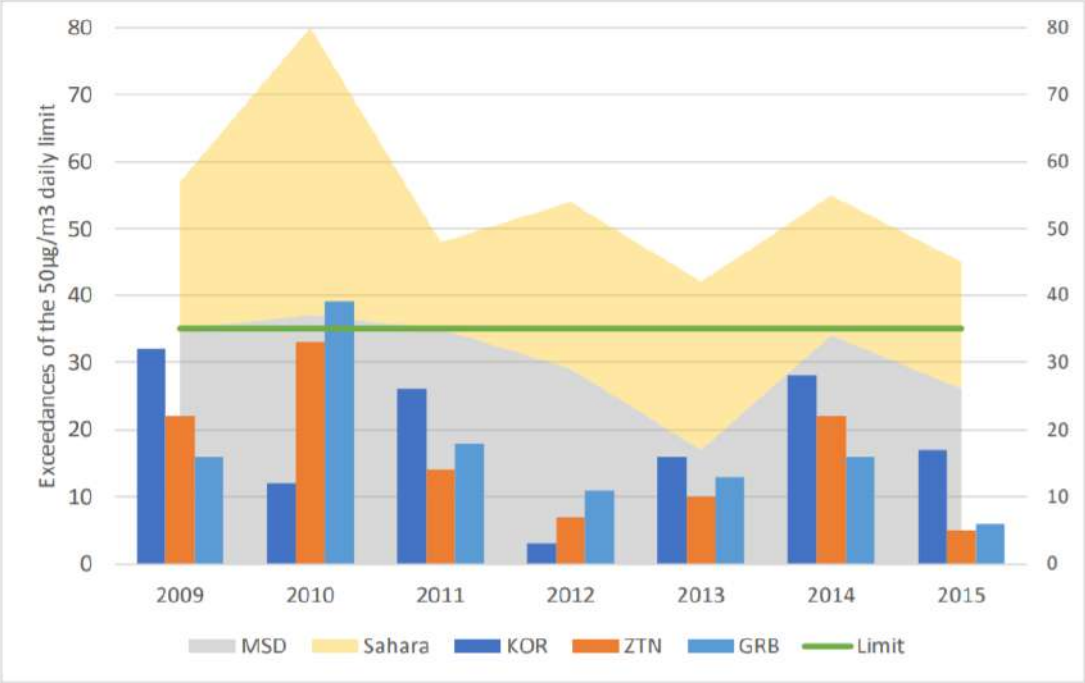

FIGURE 2: NUMBER OF ANNUAL PM_{10} EXCEEDANCES BETWEEN 2009-2015[10]

The annual average concentration of PM_{10} in 2017 was below the 40µg/l limit stipulated by EU legislation in all stations (vide Figure 3). Following deduction of natural sources (as allowed by Directive 2008/50/EC), Malta only exceeded the annual average concentration in 2009, and was within the limits between 2010 and 2015.

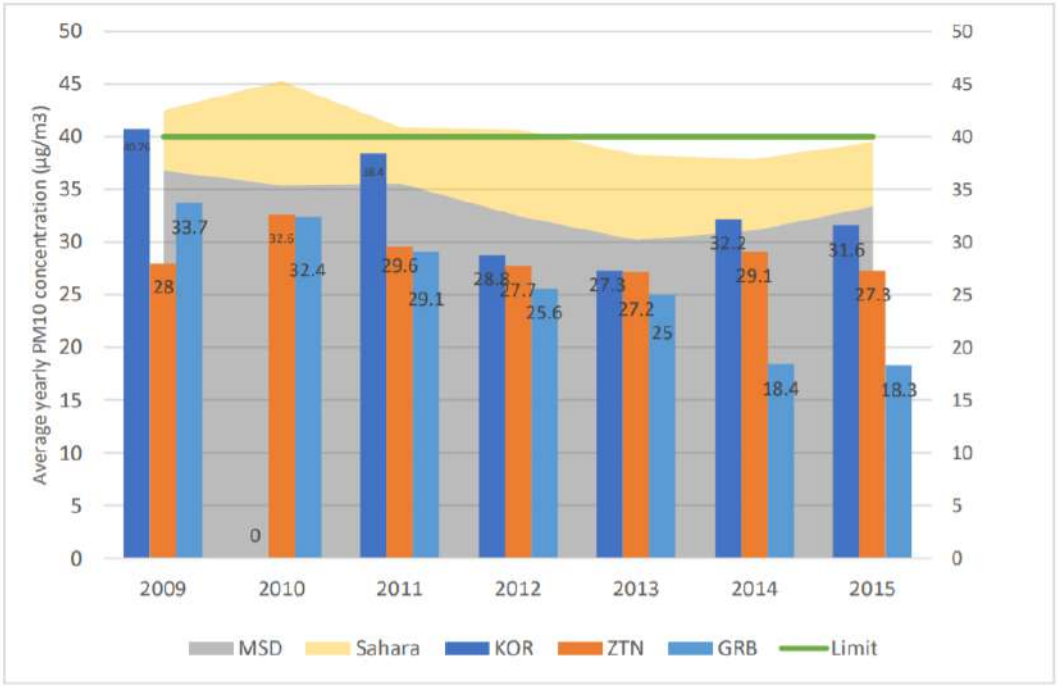

FIGURE 3: ANNUAL AVERAGE PM_{10} CONCENTRATIONS FOR 2009-2015[10]

$PM_{2.5}$ are harmful because of their ability to penetrate deeper into the lungs when compared to PM_{10}. In 2017, Għarb, Attard, Msida and Żejtun stations recorded and average of 8.4µg/m³, 12.6µg/m³, 13.9µg/m³ and 10.6µg/m³ of $PM_{2.5}$ respectively (Figure 4).[9] By 2015, all Member States should have attained the EU annual average LV for $PM_{2.5}$ of 25µg/m³. The station in Għarb, Gozo recorded a total of 2 exceedances from the 356-day monitoring time period, which are suspected to represent Saharan dust episodes (black arrows in Figure 4).[9] In 2017, the station in Attard recorded a total of 10 exceedances from the 356 days of monitoring.[9] In Msida, 17 days exceeded the EU threshold from the 365 days of monitoring, whereas the Żejtun station recorded 4 exceedances during the same time period.[9]

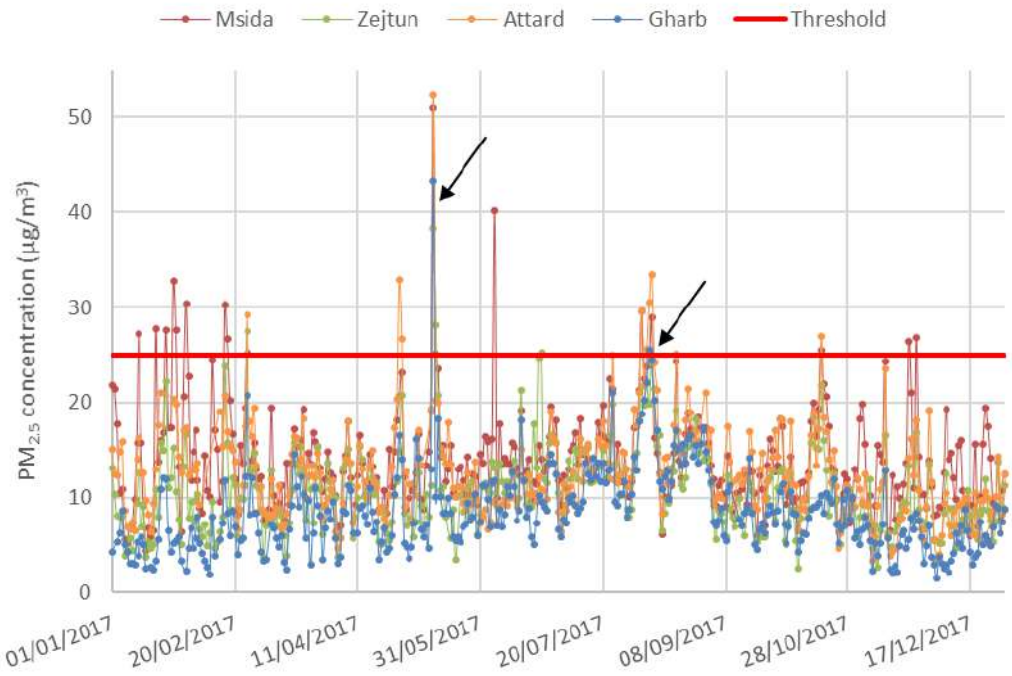

FIGURE 4: DAILY $PM_{2.5}$ CONCENTRATIONS FOR 2017[9]

The annual average concentration of $PM_{2.5}$ in 2017 was below the 25µg/l limit stipulated by EU legislation in all stations (vide Figure 5). The 2017 concentrations were the lowest observed between 2013 and 2017 at all stations, except for Attard.[9] The Attard station, which began measuring $PM_{2.5}$ in 2016, showed an increase in concentration in the following year.[9]

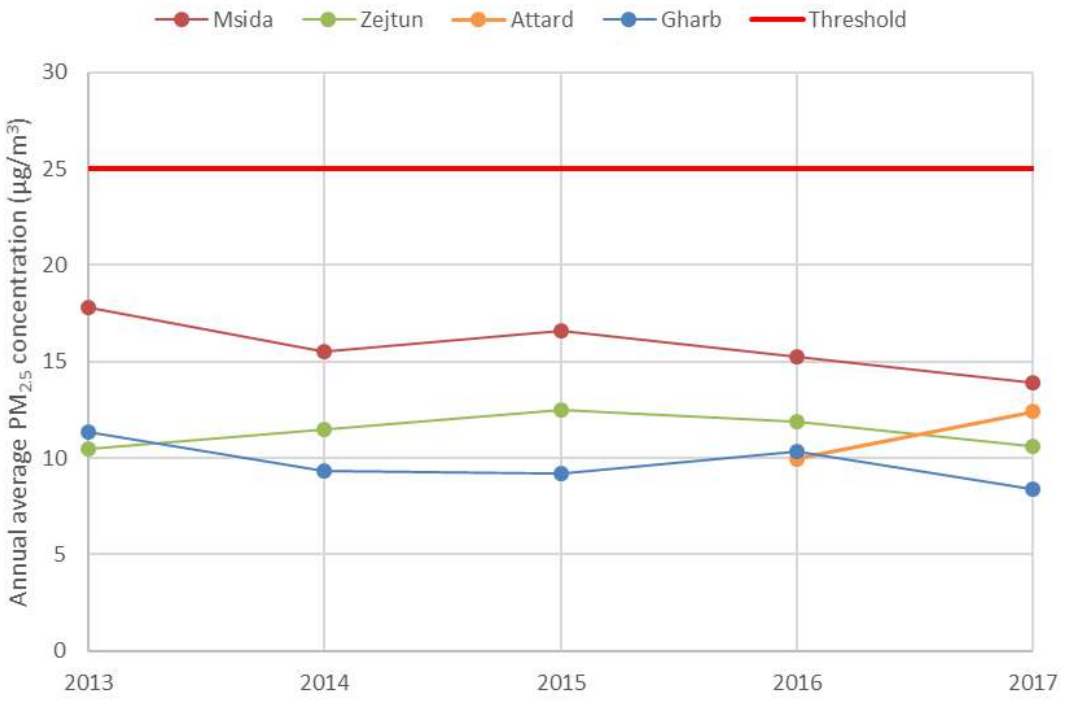

FIGURE 5: ANNUAL AVERAGE $PM_{2.5}$ CONCENTRATIONS FOR 2013-2017[9]

5.1.3 Ozone

Air quality standards include concentrations of ozone. Vehicles with internal combustion engines produce nitrogen oxides and volatile organic compounds (VOCs). These engine by-products react in the troposphere which form ozone. Ozone is also produced when emissions from power stations react in the presence of sunlight. It is a harmful pollutant in low atmospheric levels since it causes respiratory and cardiovascular health issues, and damages plant health. Three limit values are established by the EU and WHO for ozone, which require real time monitoring, as follows:

- 180µg/m³ hourly threshold for human health protection, which should never be exceeded;
- 120µg/m³ 8-hourly running average limit value for human health protection, not to be exceeded more than 25 times per year; and
- 100µg/m³ 8-hourly running average limit value for human health protection.

The hourly average concentrations for ozone in 2017 were 98.1µg/m³, 77.5µg/m³, 55.6µg/m³ and 75.1µg/m³ in Għarb, Attard, Msida and Żejtun, respectively (Figure 6).[9] On 8th August 2017, the Għarb station recorded 2 exceedances in the hourly threshold.[9] Conversely, the same station recorded 71 exceedances in the 8-hourly limit.[9] For the same limit, the Attard station recorded 15 exceedances whereas that of Żejtun recorded 4 exceedances (Figure 7).[9] The data indicates that the highest concentrations and exceedances occur in the areas with lowest traffic, i.e. rural areas. Such a typical pattern occurs since nitrogen oxides from road traffic quickly react with ozone.

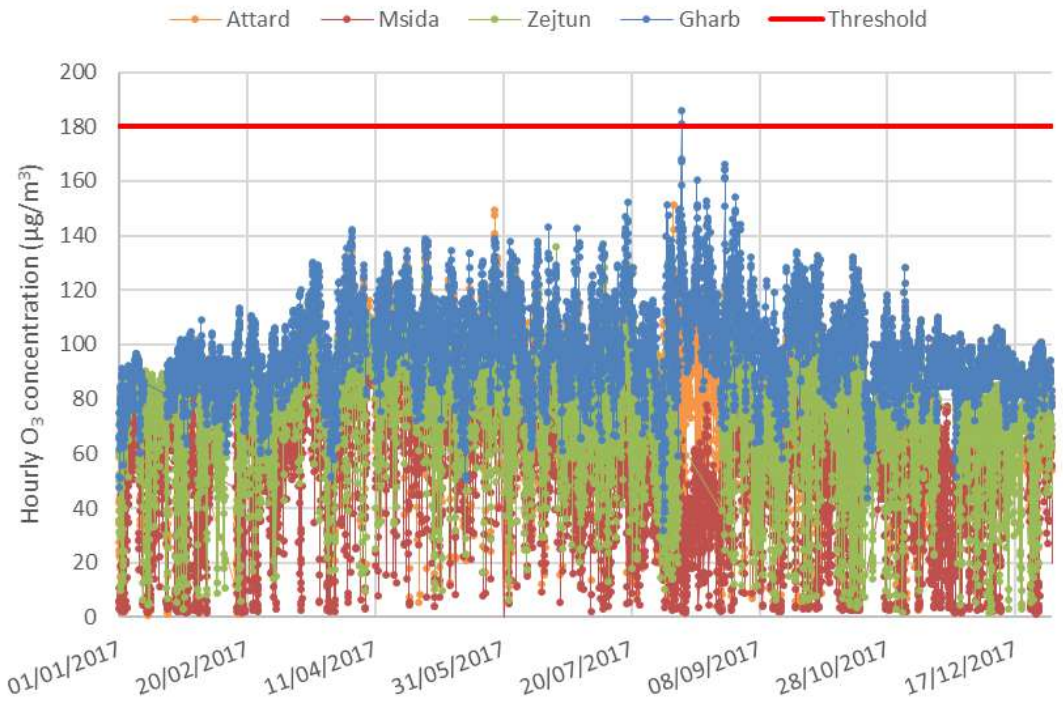

FIGURE 6: HOURLY O_3 CONCENTRATIONS FOR 2017[9]

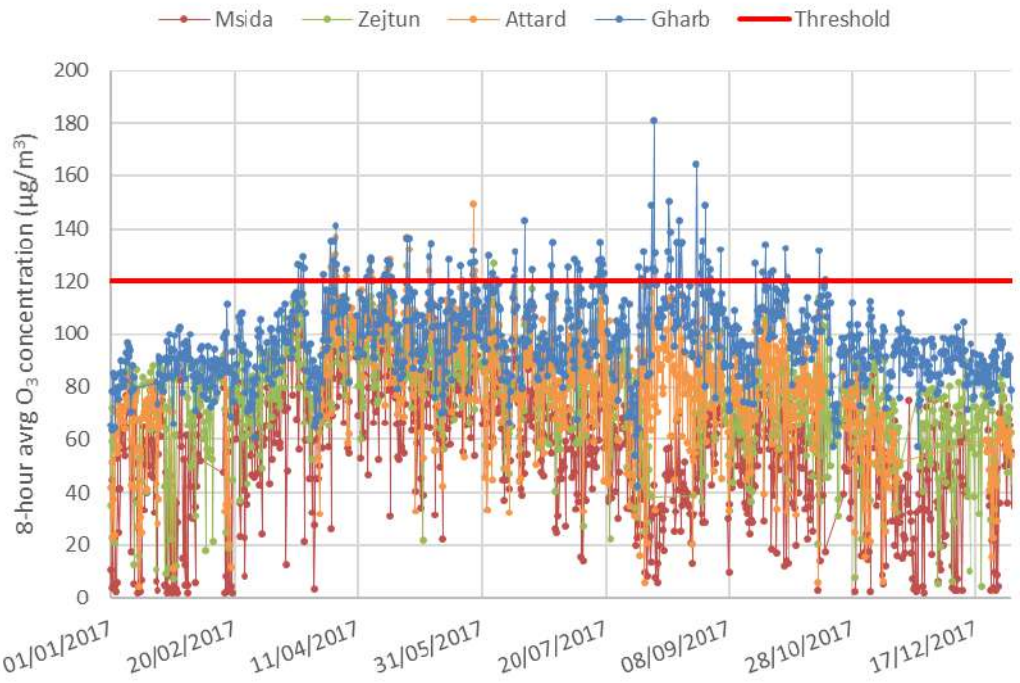

FIGURE 7: 8-HOURLY AVERAGE O_3 CONCENTRATIONS FOR 2017[9]

5.1.4 Benzenes and VOCs

Apart from being responsible for the formation of ozone at low atmospheric levels, benzene and other VOCs also cause respiratory irritations and genetic and nervous disorders, depending on various factors such as exposure duration. Processes such as incomplete and inefficient combustion emit such pollutants. Their liquid counterparts may also evaporate directly into the atmosphere and the ERA monitors benzene, toluene, ethylbenzene and xylenes (BTEX).

Average annual concentrations of benzene declined by 82.9% between 2013 and 2017 at the Għarb station and by 46.2% at the Msida station.[9] None of the concentration levels of benzene exceeded the EU limit value of 5µg/m³.[9] The decline in benzene and other VOCs level is likely due to lower benzene and concentrations in imported gasoline. The WHO does not stipulate a threshold value, but instead advises a reference limit of 1.7µg/m³. Malta did not exceed this reference limit, specifically between 2014 and 2017 in Għarb and 2015 and 2017 in Msida.[9]

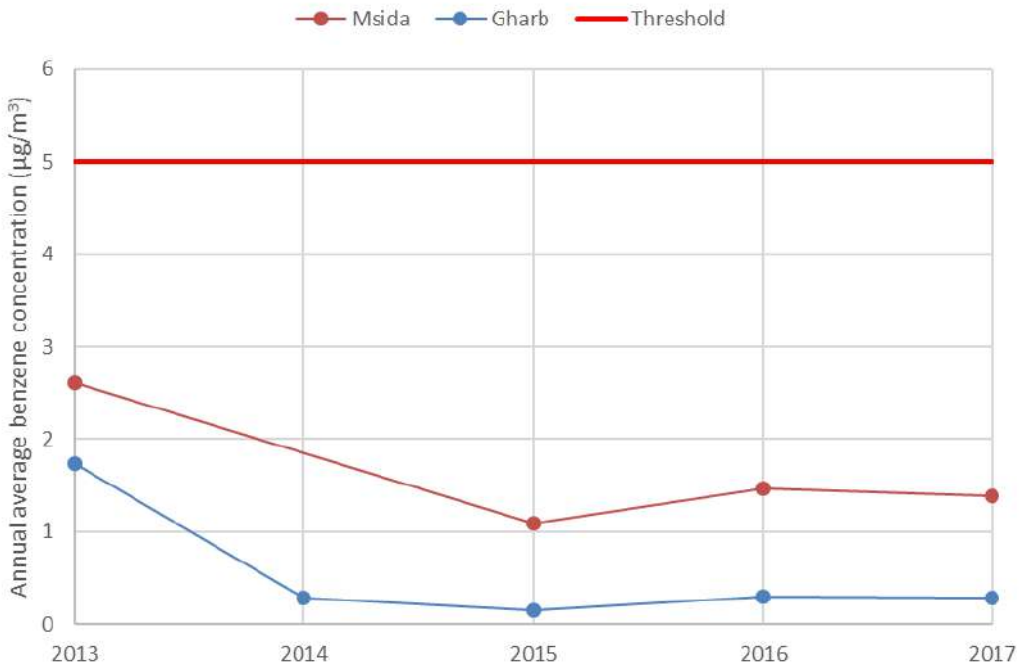

FIGURE 8: ANNUAL BENZENE CONCENTRATION FOR 2013-2017[9]

5.1.5 Nitrogen Dioxide

Nitrogen dioxide is another air quality parameter of importance according to EU legislation. Fuel combustion such as industrial facilities and road transport emit NO_2. Nitrogen dioxide forms acids upon contact with water, and can convert to nitrates or other harmful compounds when reacting with atmospheric chemicals. NO_2 forms part of a group of nitrogen oxides (NO_x) which also includes nitrogen monoxide (NO). The latter makes up the majority of NO_x emissions. NO_x ultimately contributes to the formation of ozone and PM.

The hourly nitrogen dioxide concentrations remained below the 200µg/m³ EU limit at all stations in 2017, as shown in Figure 9.[9] The annual average level of nitrogen dioxide concentrations in 2013-2017 for all stations was also below the 40µg/m³ EU and WHO limit value, as shown in Figure 10.[9] The NO_2 concentration changes were relatively constant in 2013-2017, despite a dip in concentration in 2014 at the Msida station.[9] However, one may note that the NO_2 levels in 2017 at the Msida station are only 6.2% lower than the EU/WHO limit, meaning marginal increases in concentrations can bring about exceedances.[9]

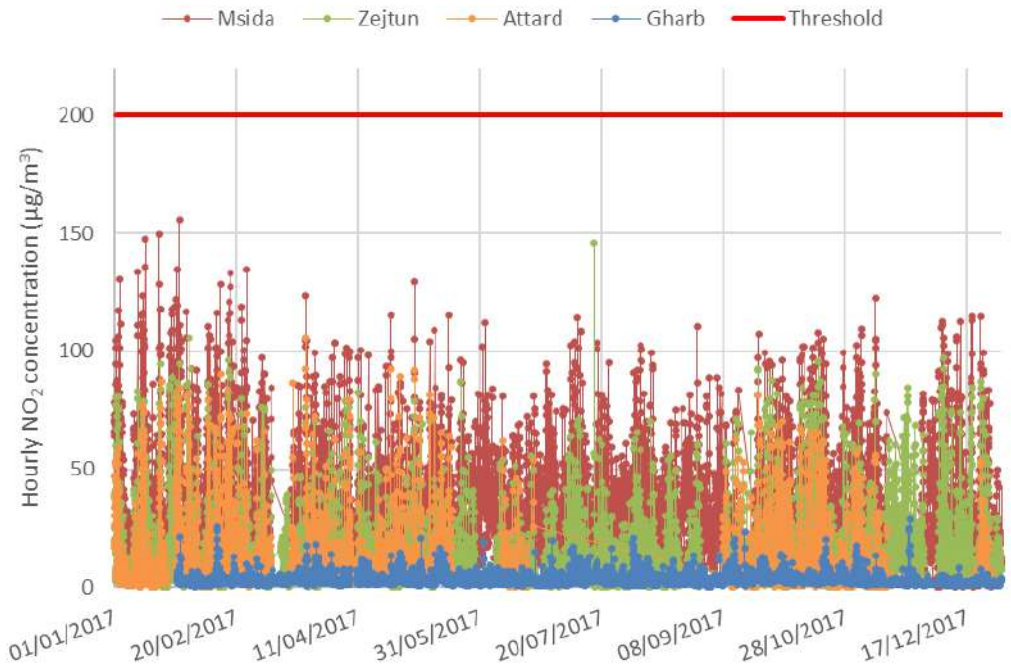

FIGURE 9: HOURLY NO_2 CONCENTRATIONS FOR 2017[9]

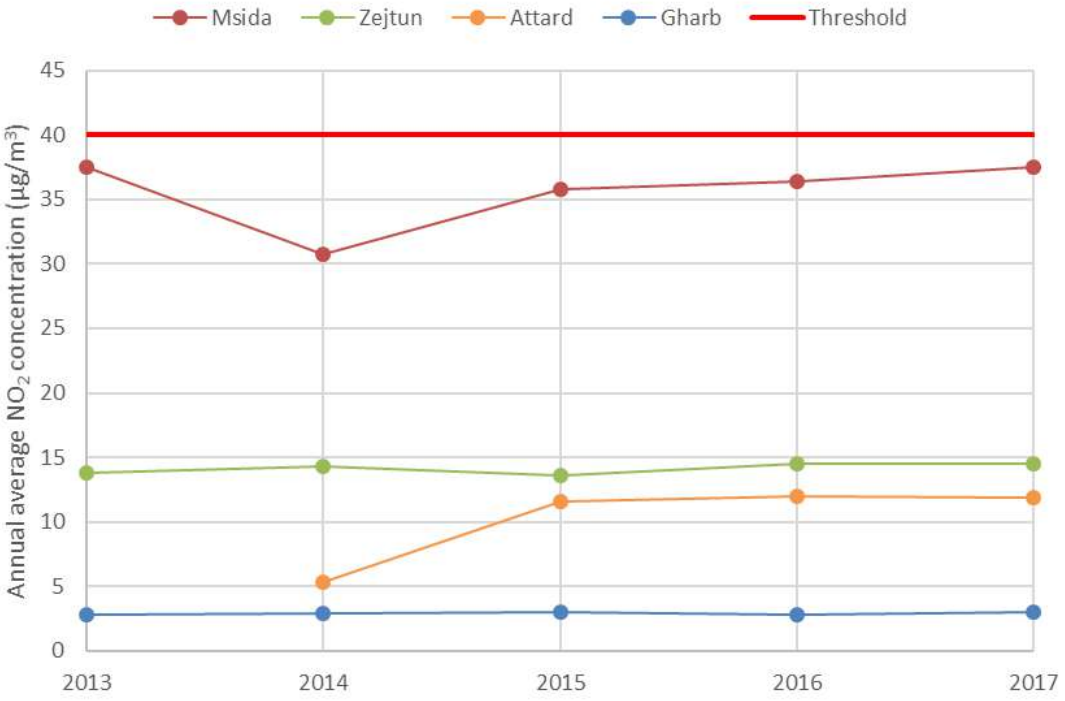

FIGURE 10: ANNUAL AVERAGE NO_2 CONCENTRATIONS FOR 2013-2017[9]

The extensive passive diffusion tube network around the Maltese Islands allows for mapping of the distribution of NO_2 concentrations in the local context, as visualised in Figure 11.

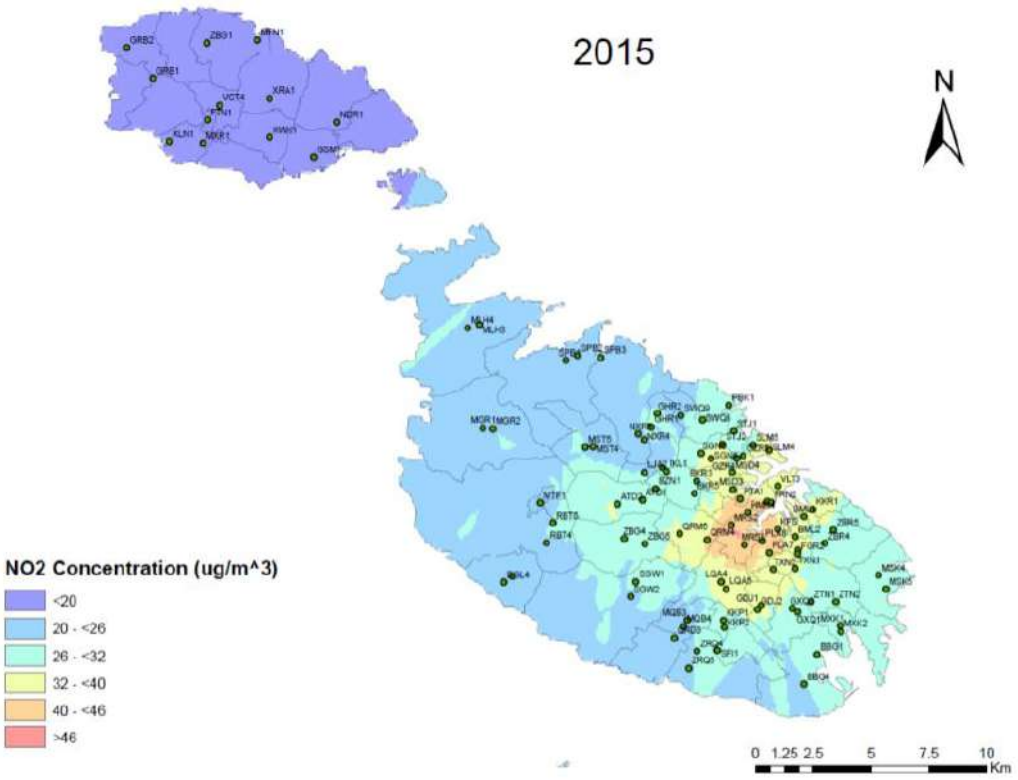

FIGURE 11: NO_2 CONCENTRATION MAP IN 2015[10]

5.1.6 Sulphur Dioxide

Sulphur dioxide adversely affects the human respiratory system and lung function.[10] It damages aquatic ecosystems, soils, vegetation and limestone buildings.[10] Sulphur dioxide originates from burning of sulphur-containing fuels, including biofuels, in power stations and transport (amongst others).[10] In addition, international shipping is a source of sulphur dioxide pollution and is a matter of increasing concern.[10] Although natural sources of sulphur also exist (most notably active volcanoes), no such sources exist in Malta. Sulphate also combines with other atmospheric compounds to become particulate matter and is therefore an important source of ultra-fine particles such $PM_{2.5}$.

In 2017, the national hourly concentration of sulphur dioxide (SO_2) was well below the EU limit of 20µg/m³ (Figure 12).[9] In fact, the annual average concentrations at Għarb, Msida and Żejtun equated to 7%, 5.5% and 7% of the LV, respectively.[9] The 2017 daily average concentration was also below the 125µg/m³ LV (Figure 13).[9]

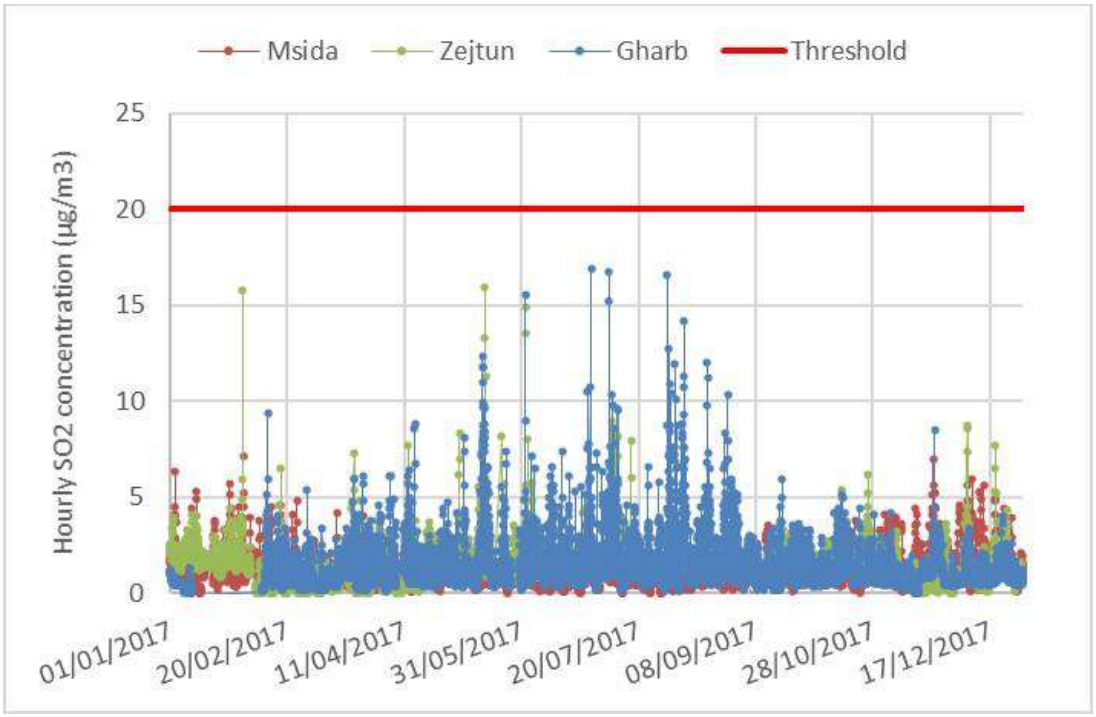

FIGURE 12: HOURLY SO_2 CONCENTRATIONS FOR 2017[9]

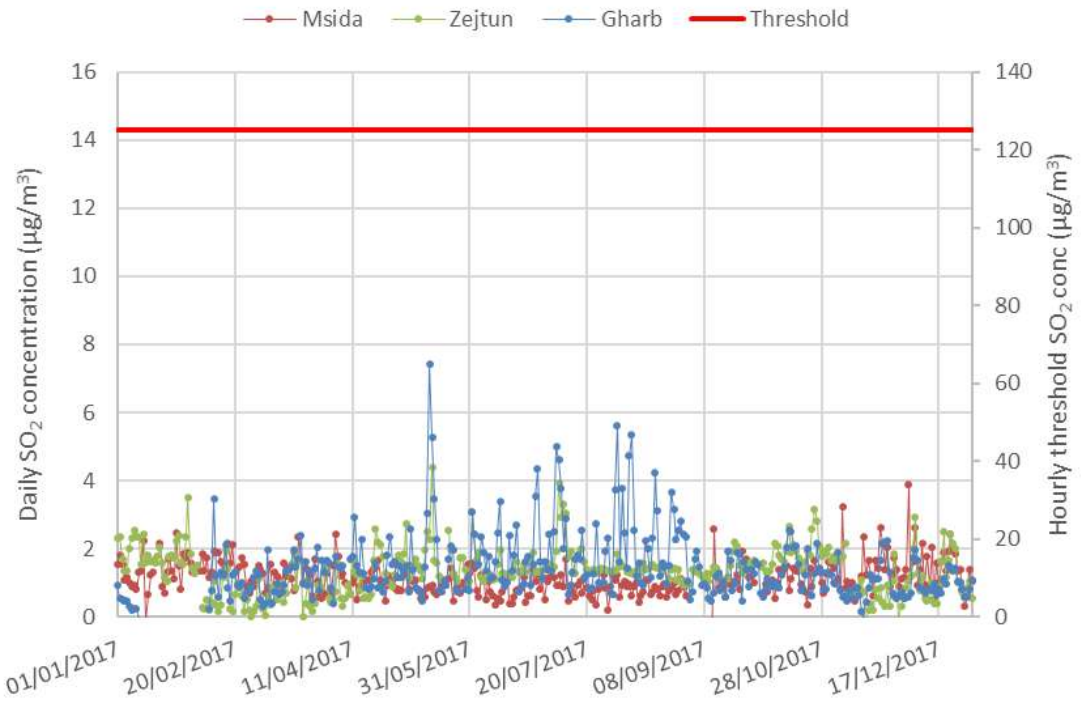

FIGURE 13: DAILY SO_2 CONCENTRATIONS FOR 2017[9]

5.1.7 Emission Ceilings

The ERA has provided data for the 2018 emissions and their emission ceilings, as delineated in Table 6. The 2018 concentrations of SO_2 and $PM_{2.5}$ are below the 2020 and 2030 emission ceilings. The NH_3 concentration is below the 2020 ceiling and just

above the 2030 ceiling. The concentration of NMVOC is just above both the 2020 and 2030 ceilings. The NO_x concentration is just below the 2020 ceiling and significantly above the 2030 ceiling.

TABLE 6: NATIONAL EMISSIONS AND THEIR EMISSION CEILINGS[13]

	POLLUTANT				
	NO_x	NMVOC	SO_2	$PM_{2.5}$	NH_3
2019 emissions (tonnes)	5301	2258	160	1336	371
2020 emission ceilings (tonnes)	5565	1766	2784	1797	542
2030 emission ceilings (tonnes)	2015	1675	605	1422	361

5.2 BIODIVERSITY

Biodiversity encompasses all living organisms and habitats which they occupy. It is an integral component of an area's/country's natural heritage. The quintessential aspect of nature is captured by biological diversity, since it encompasses an assortment of species and habitats at different taxonomic levels of biological organisation in terrestrial and aquatic systems, namely:

- Genetic diversity
- Species diversity
- Habitat diversity
- Ecosystem diversity

The more diverse and complex a biological system is, be it terrestrial, freshwater or marine, the healthier it tends to be and the more resistant it is to external pressures.[14] Communities of living organisms also interact with non-living components of their environment to form a unified and effective system.[14] Since the health of the physical environment directly affects the health of the organisms within, it is important that we maintain it in good condition.

Biodiversity also produces an endless list of goods and life-supporting services to human beings, termed as "ecosystem services".[14] Such services are divided into four categories:[15]

[13] Communication with the ERA in October 2020

[14] WHO (2015). *Biodiversity and Health.* https://www.who.int/news-room/fact-sheets/detail/biodiversity-and-health.

[15] National Wildlife Foundation (2022). *Ecosystem services.* https://www.nwf.org/Educational-Resources/Wildlife-Guide/Understanding-Conservation/Ecosystem-Services.

1. **Supporting services**: such as primary production, nutrient cycling, soil formation, pollination, etc.
2. **Provisioning services**: such as provision of food, raw materials, genetic resources, water, etc.
3. **Regulating services**: such as climate regulation, predation (to regulate prey/pest populations), waste decomposition, water/air purification, etc.
4. **Cultural services**: such as historical, recreational, spiritual, cultural, etc.

5.2.1 Fisheries and Aquaculture

Due to the Maltese Island's central location in the Mediterranean Sea and favourable weather conditions it has huge potential for fishing activities and aquaculture. The weight of fish caught by the Maltese fishing fleet varied slightly between 2015 and 2020 (vide Figure 14). The largest quantities were caught in 2016 (3,573 tonnes) and the lowest in 2020 (1,850 tonnes).[16] The apparently low figure for 2020 may be partly attributable to the Covid-19 pandemic.

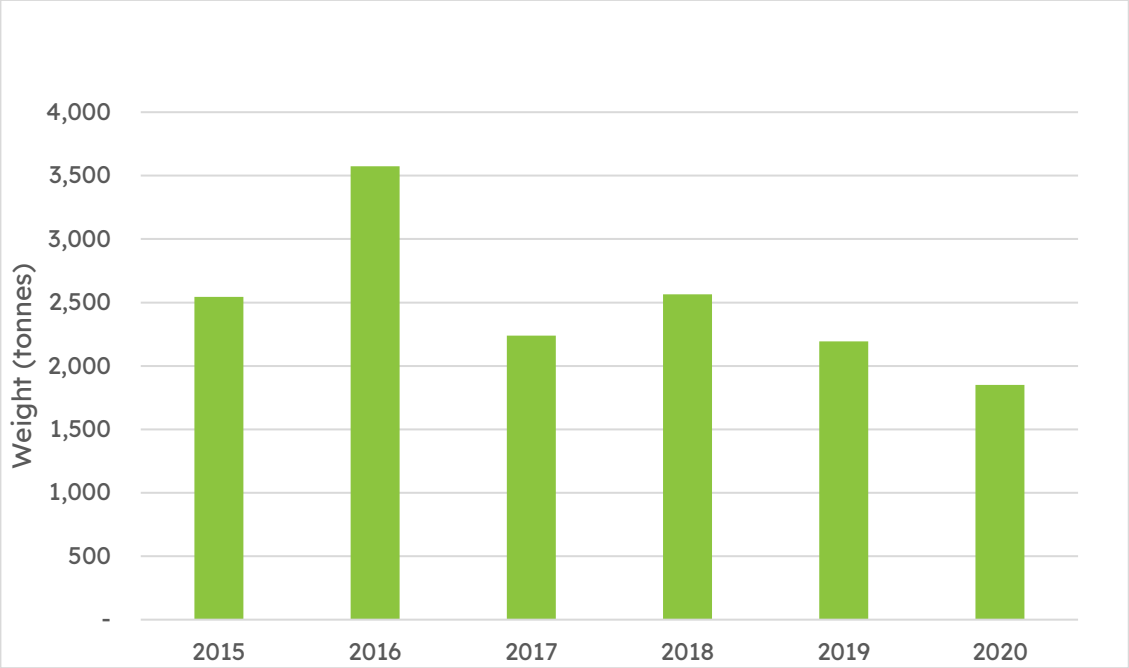

FIGURE 14: TOTAL FISH CATCHES (2015 - 2020)[16]

The fish species reared in Maltese aquafarms comprise of Tuna, Gilthead Seabream, European seabass, Meagre and Amberjack. The tuna is reared in specialised tuna farms; whereas the other species are farmed in close cycle systems. Tuna are the main farmed fish species, followed by Gilthead Seabreams and European Seabream (Figure 15).[17]

[16] NSO (2021). Fisheries. https://nso.gov.mt/Home/SELECTED_INDICATORS/Pages/Sub-Selected-Indicators/Fisheries.aspx

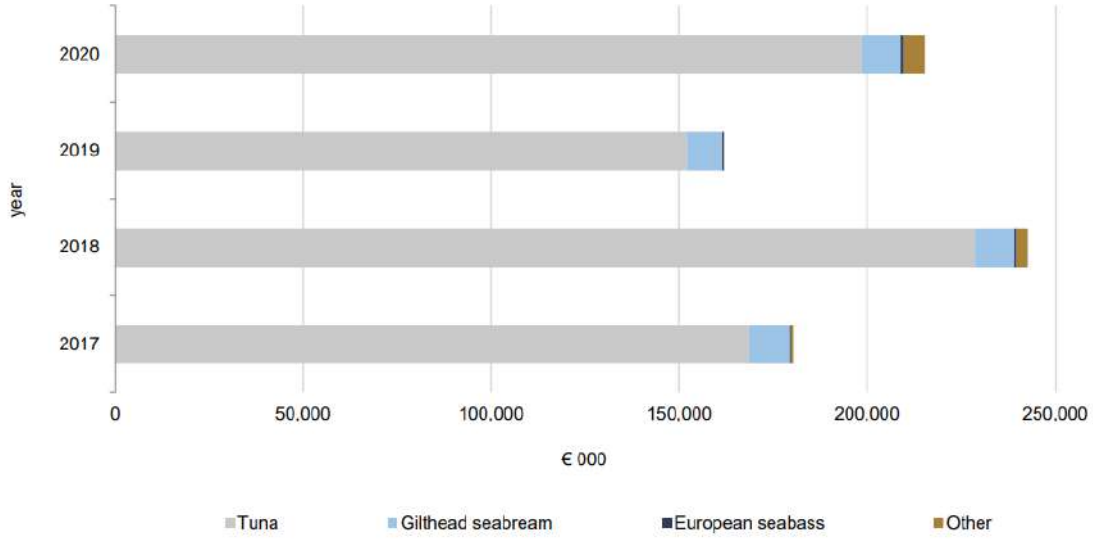

FIGURE 15: DISTRIBUTION OF SALES BY FISH SPECIES PER YEAR (2017 - 2020)[17]

Aquaculture in the Maltese Islands was steadily growing until the onset of the Covid-19 pandemic which slowed production (refer to Figure 16). The number of farms increased from 5 to 7 in the period between 2015 and 2017; since 2017 the number has remained constant at 7 farms.[16] Despite the on-going pandemic the farmed fish sales did increase by 43.4% between 2019 and 2020, equivalent to 6 million kilograms.[17]

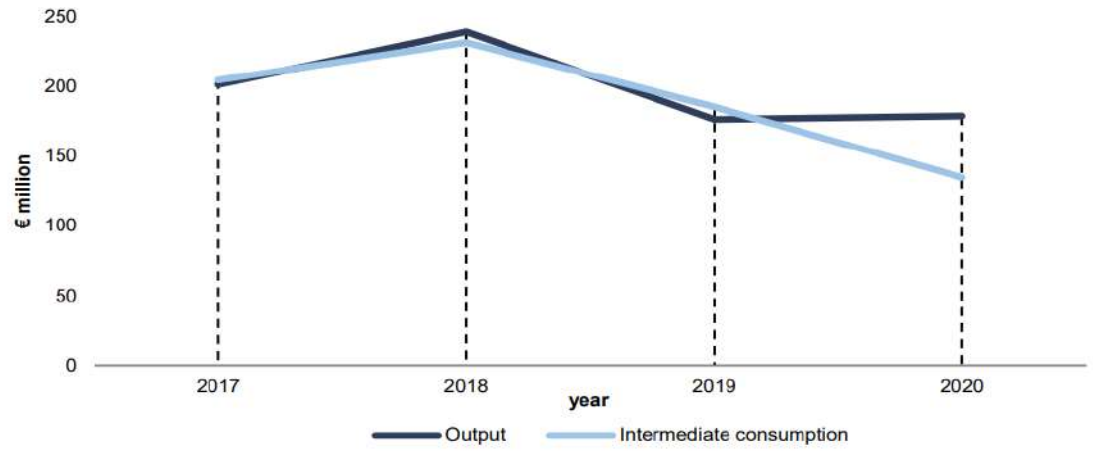

FIGURE 16: OUTPUT AND INTERMEDIATE CONSUMPTION OF THE AQUACULTURE INDUSTRY (2017 - 2020)[17]

5.2.2 Protected Sites

Due to the importance of certain habitats and species, national and international regulatory bodies designate such habitats and species as protected areas. Ecological experts study these sites in detail to establish their role and importance, along with specific measures to preserve and improve their environmental and ecological health (i.e. biodiversity). Across the Maltese Islands, 28.9% (91.3km^2) of the land area is

[17] NSO (2021). New Release: Aquaculture 2020. https://nso.gov.mt/en/News_Releases/Documents/2021/11/News2021_210.pdf.

protected by one or multiple designations. About 13.8% (over 43.6km²) of land area is designated as part of the EU Natura 2000 Network of protected areas. Furthermore, 35.5% of Maltese waters (4,138km²) have been designated as marine protected areas.[18] The number of internationally protected sites, and consequently the areas have increased over the recent years, as illustrated in Figure 17 and Figure 18.

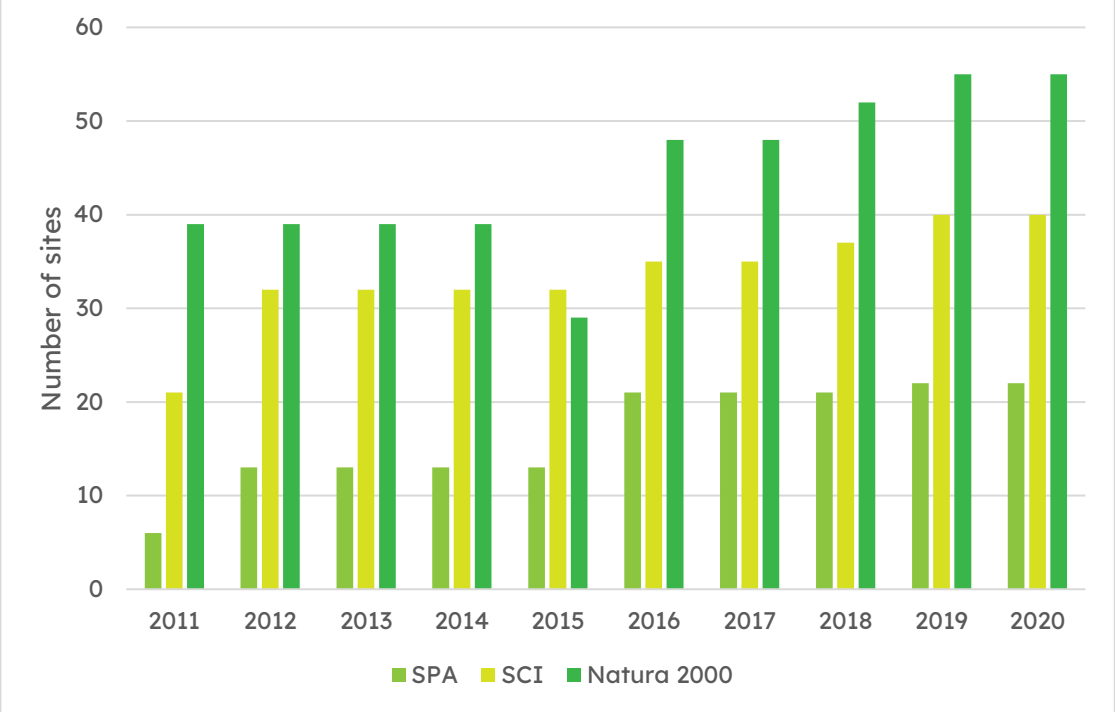

FIGURE 17: NUMBER OF DESIGNATED SPA, SCI AND NATURA 2000 SITES (2011 - 2020)[19]

[18] ERA (2022). Protected Areas – National. https://era.org.mt/topic/protected-areas-national/.

[19] European Environment Agency (2022). Natura 2000 barometer. https://www.eea.europa.eu/data-and-maps/dashboards/natura-2000-barometer.

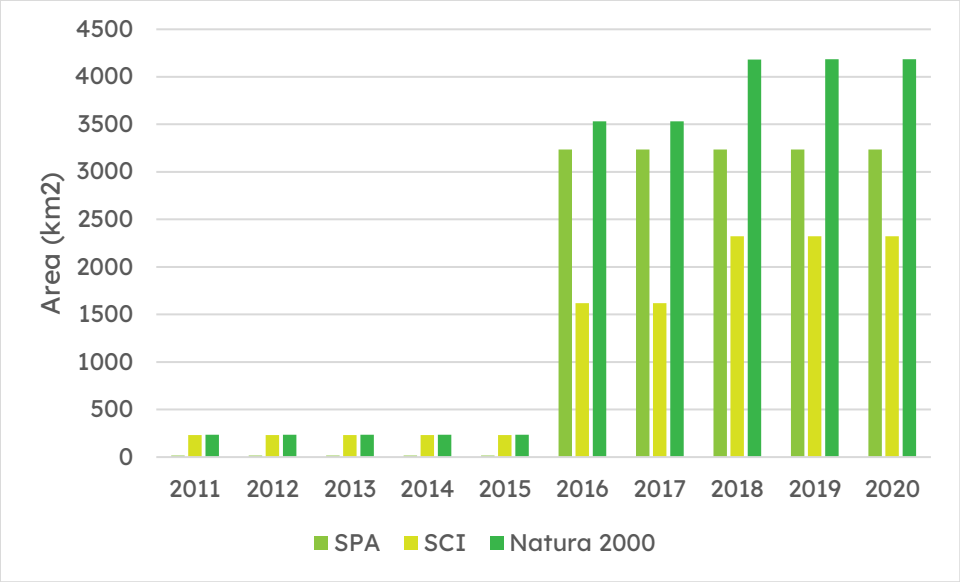

FIGURE 18: AREA OF DESIGNATED SPA, SCI AND NATURA 2000 SITES (2011 - 2020) [20]

Maltese legislation currently defines a total of 263 protected sites, comprising of 244 terrestrial sites and 18 marine sites. Table 7 outlines the trends of national designations given to protected sites.

TABLE 7: INTERNATIONAL AND NATIONAL DESIGNATIONS AS OF 2013 AND 2019

DESIGNATION		NUMBER OF SITES (2013)[21]	NUMBER OF SITES (2022)[22]	% CHANGE
National legislation	Area of Ecological Importance	20	24	+ 120.0
	Site of Scientific Importance	8	10	+ 125.0
	Area of Ecological Importance & Site of Scientific Importance	38	42	+ 110.5
	Nature Reserves/Parks	3	4	+ 133.3
	Tree Protection Area	29	60	+ 206.9
	Historical Trees having an	6	6	+ 0.0

[20] European Environment Agency (2022). Natura 2000 barometer. https://www.eea.europa.eu/data-and-maps/dashboards/natura-2000-barometer.

[21] MEPA (2012). The Environment Report Indicators 2010-2011. https://era.org.mt/wp-content/uploads/2019/05/TERI-2010_2011.pdf.

[22] ERA (2022). Designated Areas in National Law. https://era.org.mt/topic/database-on-designated-areas-in-national-law/.

DESIGNATION		NUMBER OF SITES (2013)[21]	NUMBER OF SITES (2022)[22]	% CHANGE
	Antiquarian importance			
	Bird Sanctuary	26	26	+ 0.0
	Protected Beaches	11	11	+ 0.0

5.2.2.1 International Designations

The ERA classifies the sites protected by internal legislation into one or more categories, as described in Table 8.

TABLE 8: INTERNATIONAL DESIGNATION, LEGISLATION AND MALTESE SITES[23]

Designation	Legislation	Malta sites
Wetlands of International Importance (Ramsar sites)	CONVENTION ON WETLANDS OF INTERNATIONAL IMPORTANCE (or UN Ramsar Convention)	L-Għadira and Is-Simar
Special Protection Areas	CONVENTION FOR THE PROTECTION OF THE MARINE ENVIRONMENT AND THE COASTAL REGION OF THE MEDITERRANEAN (UN Barcelona Convention)	L-Għadira, Il-Gżejjer ta' San Pawl (St Paul's Islands), Filfla & surrounding islets, and Ħaġret il-Ġeneral (Fungus Rock)
Natura 2000 sites (Special Areas of Conservation and Special Protection Areas)	EC HABITATS DIRECTIVE (92/43/EEC) and EC BIRDS DIRECTIVE (2009/147/EC)	37 terrestrial sites and 18 marine sites
Areas of Special Conservation Interest (Emerald Network of Protected Areas)	COE BERN CONVENTION	Same as those of the Natura 2000 network

The EU Natura 2000 Network is a system of protected sites across the EU, designated under the HABITATS DIRECTIVE (92/43/EEC) and BIRDS DIRECTIVE (79/409/EEC), which merit special conservation measures since they support habitats and species of community interest. This network is one of the tools used by the EU to assist with

[23] ERA (2022). Protected Areas – International. https://era.org.mt/topic/protected-areas-international/#:~:text=Malta%20has%20four%20such%20sites,2009%2F147%2FEC).

halting the loss of biodiversity. Malta has designated several of the ecological important sites as part of the EU Natura 2000 network.

Annex I of the Habitats Directive lists the habitats if international importance that require special conservation. The Directive refers to these habitats as Special Areas of Conservation (SAC). Schedule I of the FLORA, FAUNA AND NATURAL HABITATS PROTECTION REGULATIONS (S.L. 549.44) transposes this EU list of SAC areas into the local context.

In 2011, 13.3% and 5.2% of land area was designated as an SAC and SPA, respectively, as shown in Figure 19. As of 2022, 13.3% and 5.8% of Malta's land area was designated as SACs and SPAs, respectively. As of 2015, 35% of Maltese territorial waters formed part of the EU's Natura 2000 network (Figure 20),[10] which has increased even further through more recent additions, as shown in Figure 21.

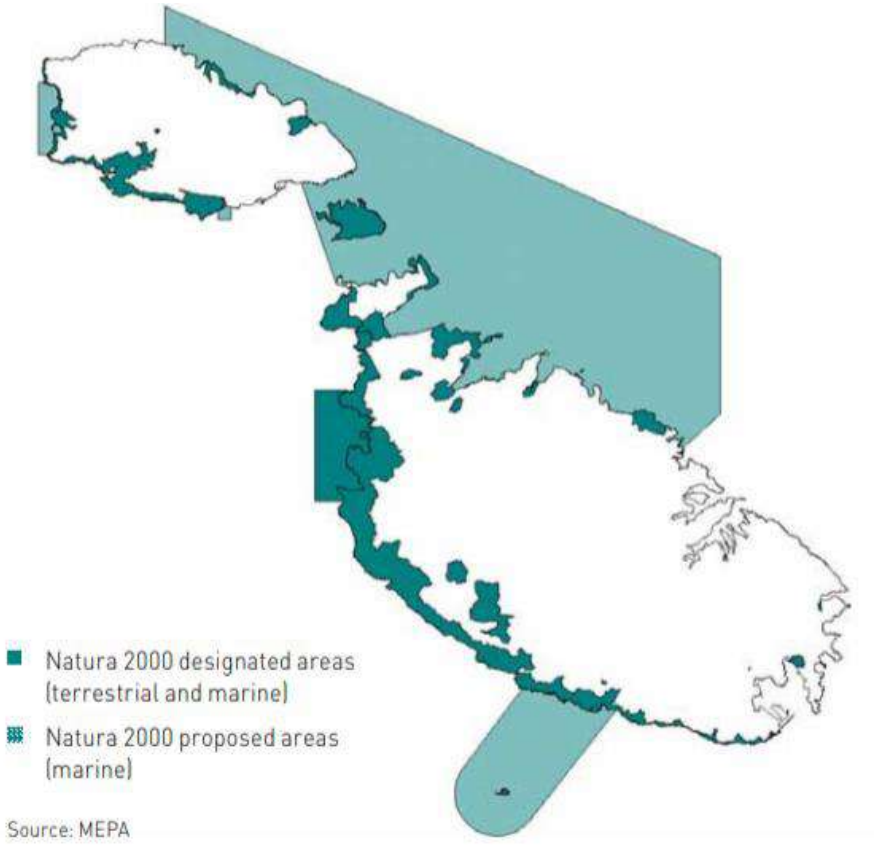

FIGURE 19: MALTESE NATURA 2000 NETWORK IN 2011[21]

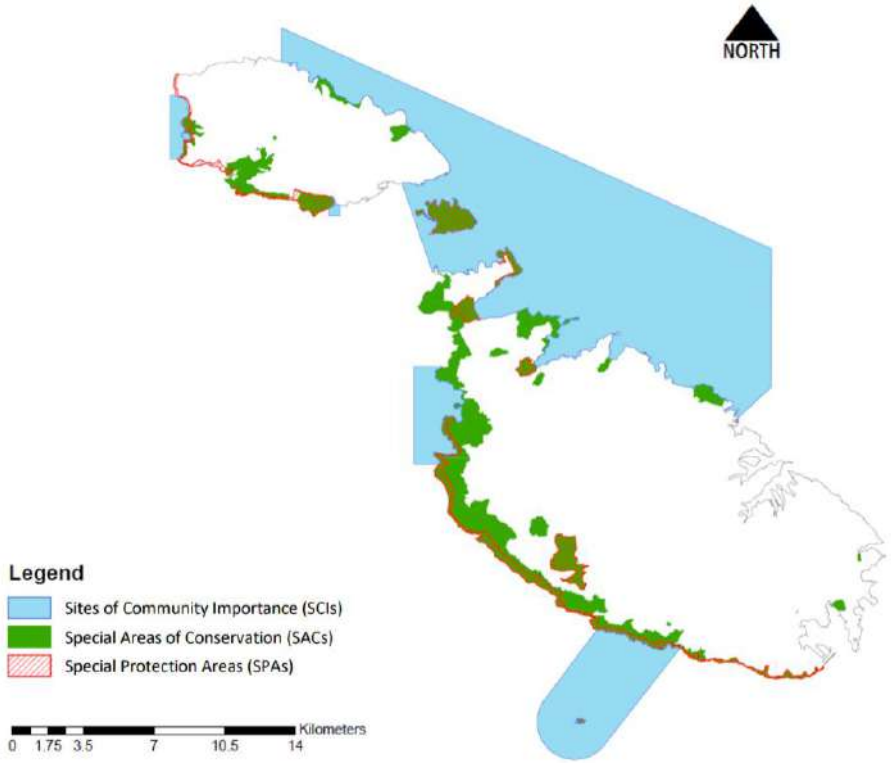

FIGURE 20: MALTESE NATURA 2000 NETWORK IN 2015[10]

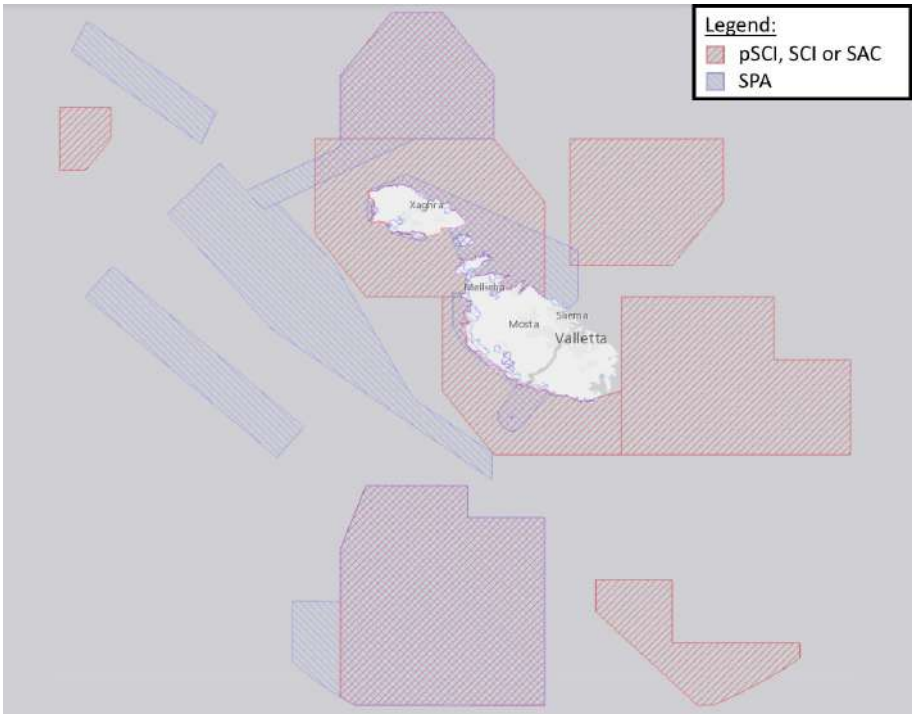

FIGURE 21: MALTESE NATURA 2000 NETWORK IN 2018 (BLUE HATCHING: HABITATS DIRECTIVE SITES; RED HATCHING: BIRDS DIRECTIVE SITES)[24]

[24] EEA (2022). Natura 2000. http://natura2000.eea.europa.eu/

There are several laws which protect certain plants, animals and habitats. Therefore, any development proposals need to take into account the potential effects on protected species and habitats. Moreover, parts of the countryside where special statutory designations apply, development control decisions need to take full account of the features or qualities which justify the designation of the area. The ERA may request an Appropriate Assessment during the planning phase of any proposed development located within sensitive ecological area. This process helps ensure that the integrity of the vulnerable areas is not jeopardised.

5.2.2.2 National Designations

Local legislation transposes the EU directives into the local context. This ensures that the Maltese designated Natura 2000 Network site (pSCIs, SCIs, SACs & SPAs) are adequately protected. The local legislation also encompasses additional sites which are not of international importance; namely:

- Areas of Ecological Importance (AEIs)
- Sites of Scientific Importance (SSIs)
- Nature Reserves
- Tree Protection Areas
- Historical Trees having an Antiquarian Importance
- Bird Sanctuaries
- Protected Beaches

Between 2011 and 2020, the number of Areas of Ecological Importance (AEIs) increased from 20 to 24, while the number of Sites of Scientific Importance (SSIs) increased from 8 to 10. In 2011, MEPA published the boundaries for 30 tree protection areas, covering 5.35km^2, with the aim of enhancing protection of Malta's important terrestrial ecosystems. Between 2011 and the time of writing, the number of tree protection sites has increased to 60.[10]

Malta has designated 3 nature reserves which afford protection to islets, as well as 26 bird sanctuaries. Since 2007, all beaches and swimming areas in close proximity to urban areas or major roads, including 11 specifically named beaches, were legally protected from hunting. Since 2011, ERA did not designate new nature reserves, bird sanctuaries and protected beaches.[10]

5.2.3 Protected Species

Some of the vast array of species that inhabit the Maltese islands are endemic to the islands, i.e., they occur in the Maltese Islands due to long-term isolation and evolution. Some species inhabit an even smaller area, such as *Helichrysum melitense* which only inhabits the western cliffs of Gozo. Other species which occur in the Maltese Islands may occur only in the Mediterranean region, or parts thereof, rather than being specific to Malta; such species are endemic to their specific area of occupation.

Endemic species, while being of significance to Malta's biodiversity and natural heritage, are inherently vulnerable to pressures/threats since they require specific environmental conditions to survive, which are characteristically rare.

Similar to protected sites, some species are protected by both international and national legislation, while others are only protected for their national importance (refer to Table 9).

TABLE 9: PROTECTED SPECIES IN MALTA AND THEIR LEGISLATIVE FRAMEWORKS[7,25]

DESCRIPTION	HABITATS DIRECTIVE	S.L. 549.44
Animal and plant species of community interest whose conservation requires the designation of Special Areas of Conservation	Annex II	Schedule II
Animal and plant species of national interest whose conservation requires the designation of Special Areas of Conservation	N/A	Schedule III
Animal and plant species of community interest in need of strict protection	Annex IV	Schedule V
Animal and plant species of national interest in need of strict protection	N/A	Schedule VI
Animal and plant species of community interest whose taking in the wild and exploitation may be subject to management measures	Annex V	Schedule VII
Animal and plant species of national interest whose taking in the wild and exploitation may be subject to management measures	N/A	Schedule VIII

5.2.4 Conservation Status

The 2018 SoER compared the overall conservation status of protected species in Malta over two assessment periods, namely 2001-2006 (published in 2007) and 2007-2012 (published in 2013), as shown in Figure 22.[10]

The 2018 SoER stated that the improvement in habitat conservation status between the two assessment periods are mostly attributable to reduction in knowledge gaps, rather than an actual improvement in status. The report considers only 3% of the changes as authentic status changes, as discussed in the following subsections.[10]

[25] Flora, Fauna and Natural Habitats Protection Regulations (S.L. 549.44). https://legislation.mt/eli/sl/549.44/eng/pdf

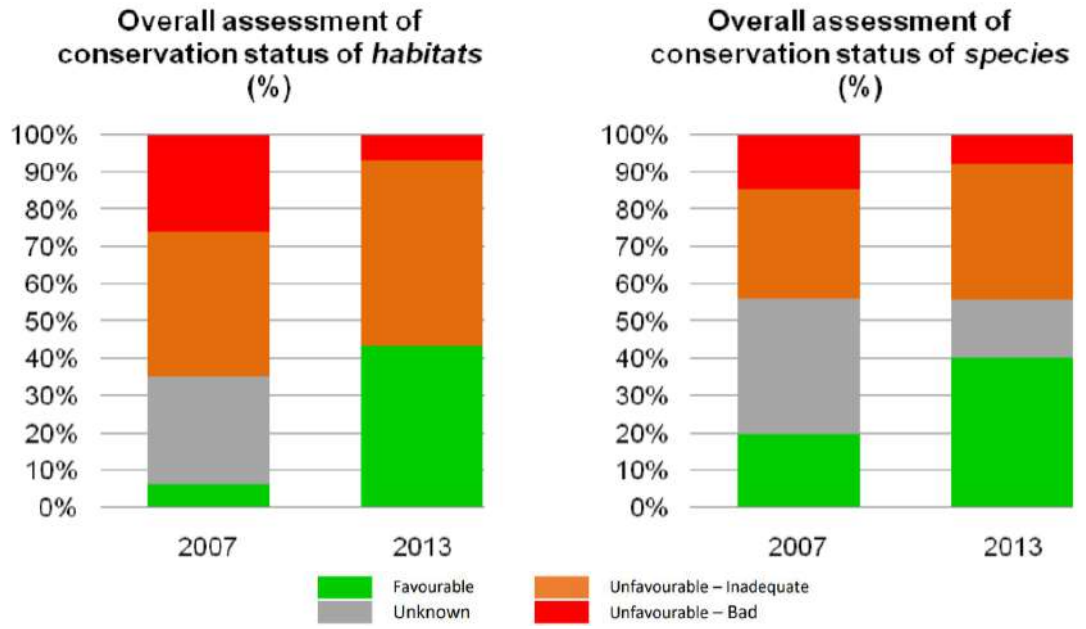

FIGURE 22: CONSERVATION STATUS OF MALTESE HABITATS AND SPECIES[10]

5.2.4.1 Habitats Conservation Status

The conservation status study assessed 31 habitats of community importance in 2007 and 30 in the 2013 exercise. The 2018 SoER classified the conservation status of each of the habitats as unknown, favourable, unfavourable: inadequate and unfavourable: bad (refer to Figure 23). The study revealed an increased in terrestrial sites with favourable conservation statues from 6% in 2007 to 43% in 2013. This equates to an increase in favourable habitats from 1 to 9. There was an additional 15% reduction in habitats in bad/inadequate status (from 20 to 17 sites).[10]

Knowledge about the status of the marine environment improved notedly between 2007 and 2013. In 2007, the conservation status study showed that only one habitat was in good status, while the statuses of the remaining sites were unknown. In 2013, all statuses indicated that protected marine sites had a favourable status, with none remaining unknown.[10]

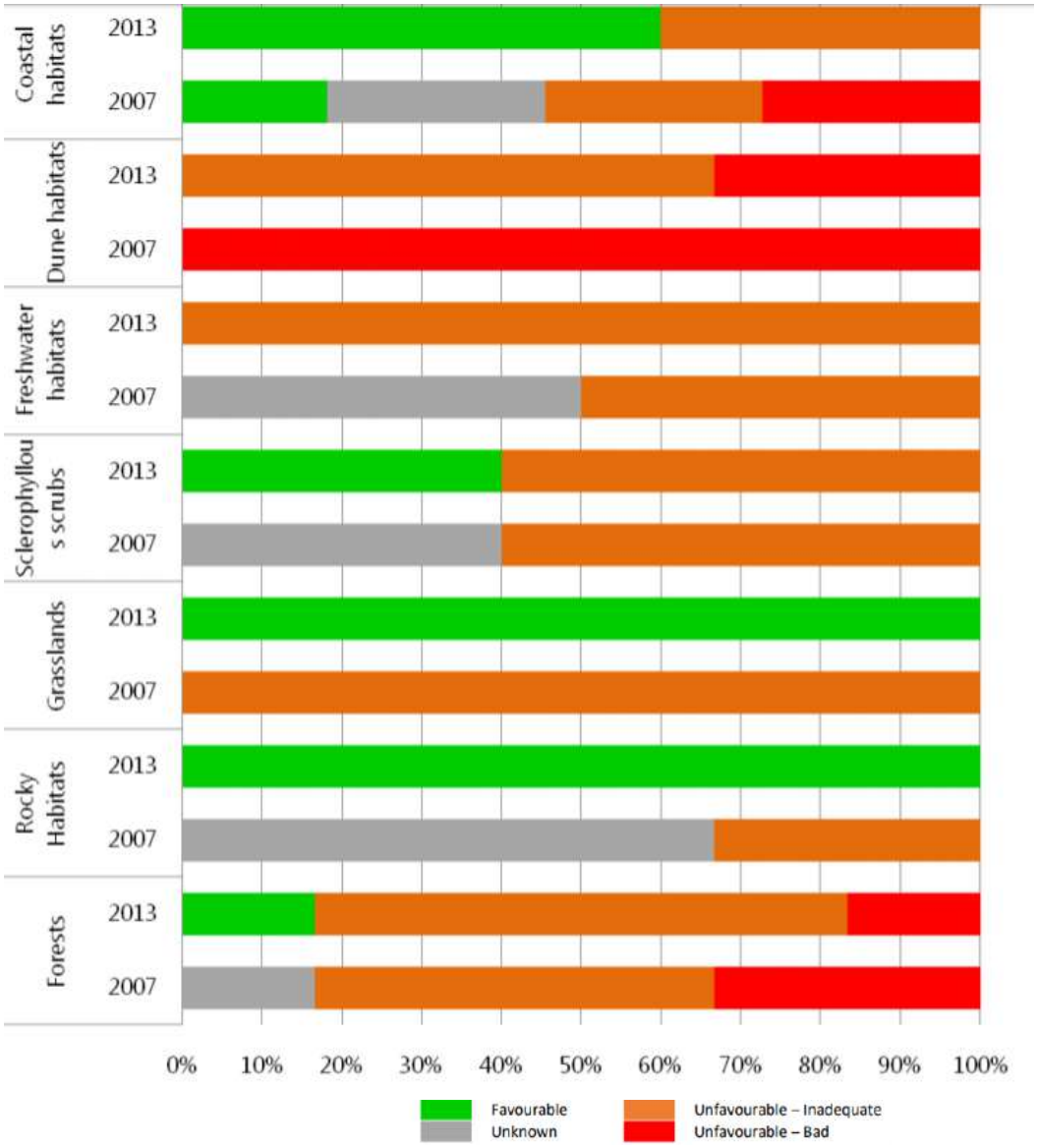

FIGURE 23: HABITAT CONSERVATION STATUS GROUPED BY TYPE[10]

5.2.4.2 Species Conservation Status

The 2018 SoER also assessed species of community importance (55 species in 2007 and 52 species in 2013). The report highlights a variety of important conclusions regarding the conservation status of the species and habitats (vide Figure 24). The most prominent being the highlights increase in species in favourable conservation status from 20% in 2007 to 40% in 2013.[10]

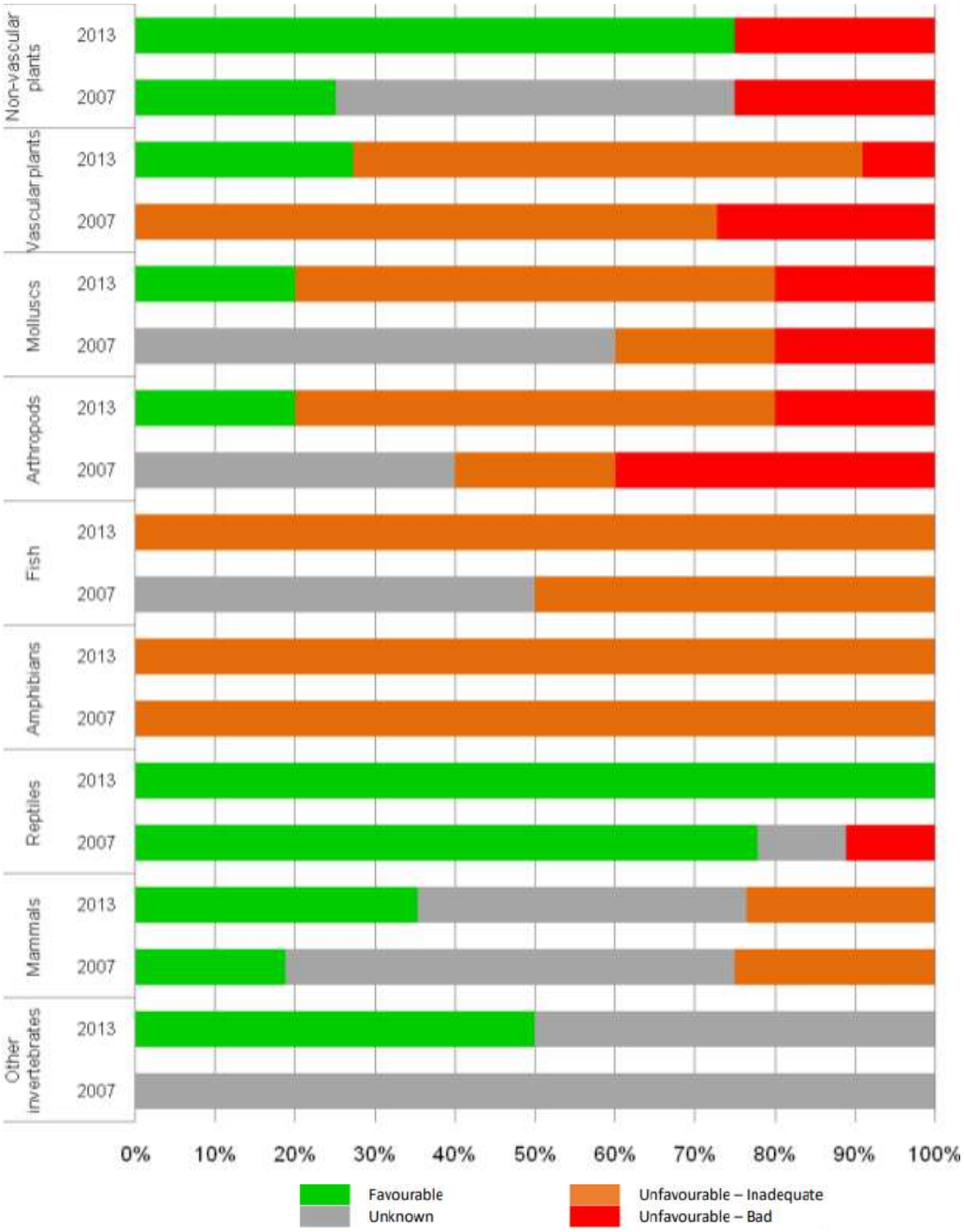

FIGURE 24: SPECIES CONSERVATION STATUS GROUPED BY TAXONOMY[10]

Around 35% of the protected species showed a change in conservation status between the two assessment periods; however, this change is mostly attributable to an increase in knowledge or change in thresholds.[10] The report only considers 4% of these changes to be genuine, such as the improvement of the status of *Brachytrupes megacephalus* (subterranean cricket) and *Psudoseriscius cameroni* (endemic tenebrionid beetle).[10] The assessment considers 15% of the protected species to be unknown, the majority of which are marine. The percentage of those species with unfavourable status remained the same in the two periods (44%).[10] In contrast, the percentage of species in bad status decreased from 15% in 2007 to 8% in 2013.[10] The study classified the remaining 7% to be of unfavourable inadequate status.[10] Government entities need to implement stringent measures to help attain favourable

status for all species and commission surveys to access the those with unknown status.[10]

5.2.4.3 Pressures and Threats to Conservation Status

The 2018 SoER report highlights the pressures and threats to Malta's biodiversity and their frequency of occurrence, as presented in Figure 25 and Figure 26.

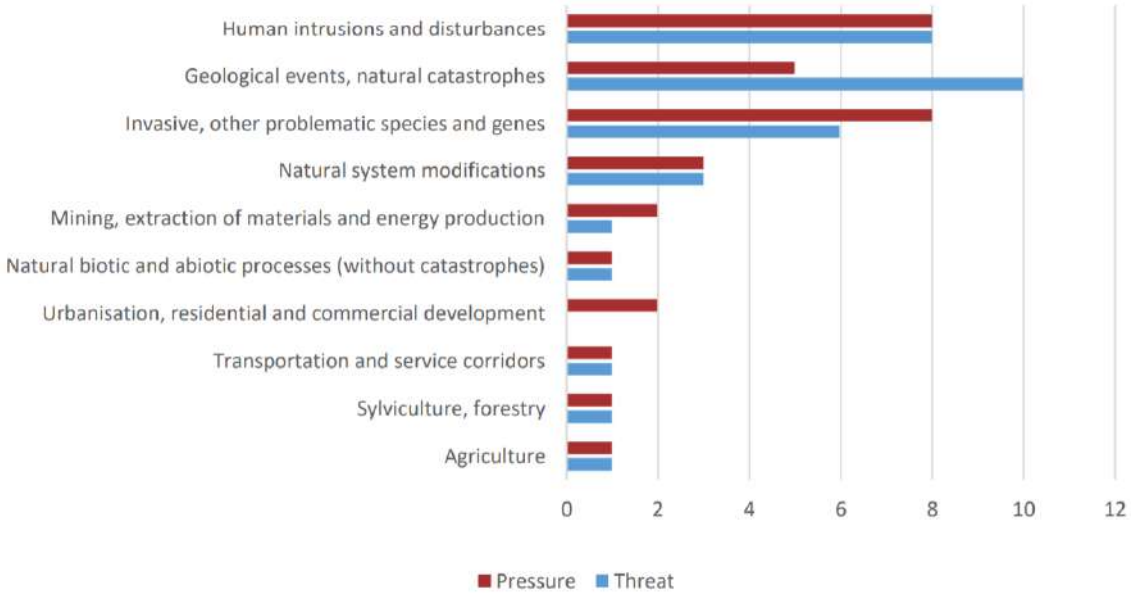

FIGURE 25: FREQUENCY OF PRESSURES AND THREATS TO MALTA'S HABITATS[10]

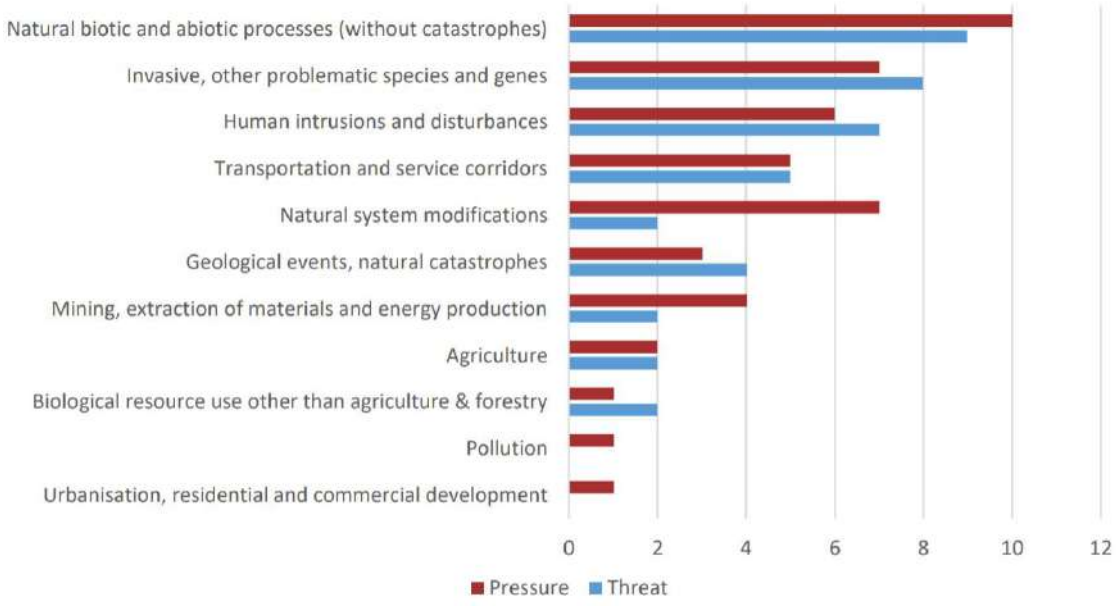

FIGURE 26: FREQUENCY OF PRESSURES AND THREATS TO MALTA'S SPECIES[10]

Pressures on the Maltese marine environment are investigated through existing national monitoring programmes. In line with MSFD and WFD requirements, relevant parameters are measured and monitored every few years to determine the ecological status of the water bodies. Relevant MSFD parameters are covered by the following descriptors:

- Biodiversity (Descriptor 1)
- Non-indigenous species (Descriptor 2)
- Commercial fish species (Descriptor 3)
- Food webs (Descriptor 4)
- Seafloor integrity (Descriptor 6)
- Contaminants in seafood (Descriptor 9)
- Marine litter (Descriptor 10)[26]

The results from the last MSFD cycle are shown in Figure 27 to Figure 30.[27] The results show that Maltese waters are in good status for biodiversity, seafloor integrity, and marine litter, but in not good status for non-indigenous species and contaminants in seafood. Descriptors 3 and 4 were not assessed as part of that cycle.

[26] Directive 2008/56/EC of the European Parliament and of the Council of 17 June 2008 establishing a framework for community action in the field of marine environmental policy (Marine Strategy Framework Directive). https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32008L0056&from=EN

[27] Borja, A., J. Franco, J.M. Garmendia, J. Larreta, I. Menchaca, Y. Sagarminaga, Y. Schembri, O. Solaun, A. Uriarte, M.C. Uyarra, 2019. *Assessment of environmental status of Malta's Marine Waters.* As per Tender for the Implementation and Updating of Marine Monitoring Programmes, Assessment of Environmental Status and Development of a Marine Database System. 70 pp. https://era.org.mt/wp-content/uploads/2020/08/Final-Monitoring-Report_CT3031_2016.pdf

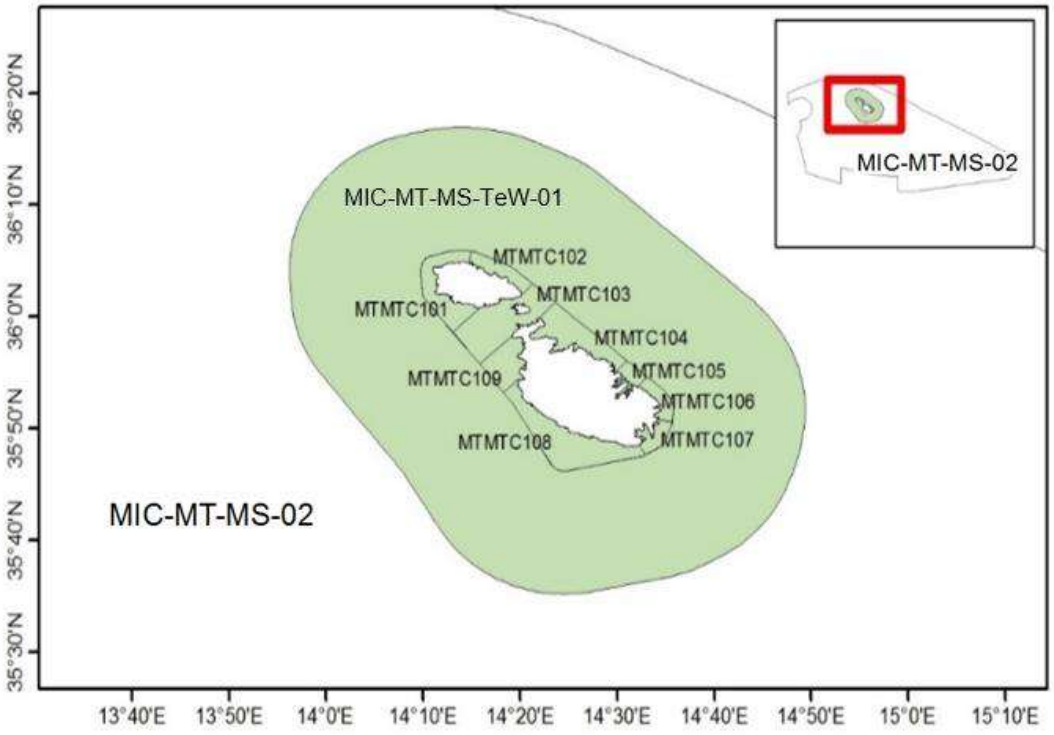

FIGURE 27: MAP SHOWING THE ENVIRONMENTAL STATUS FOR DESCRIPTOR 1 AND DESCRIPTOR 6 (GREEN: GOOD STATUS; PINK: NOT GOOD)

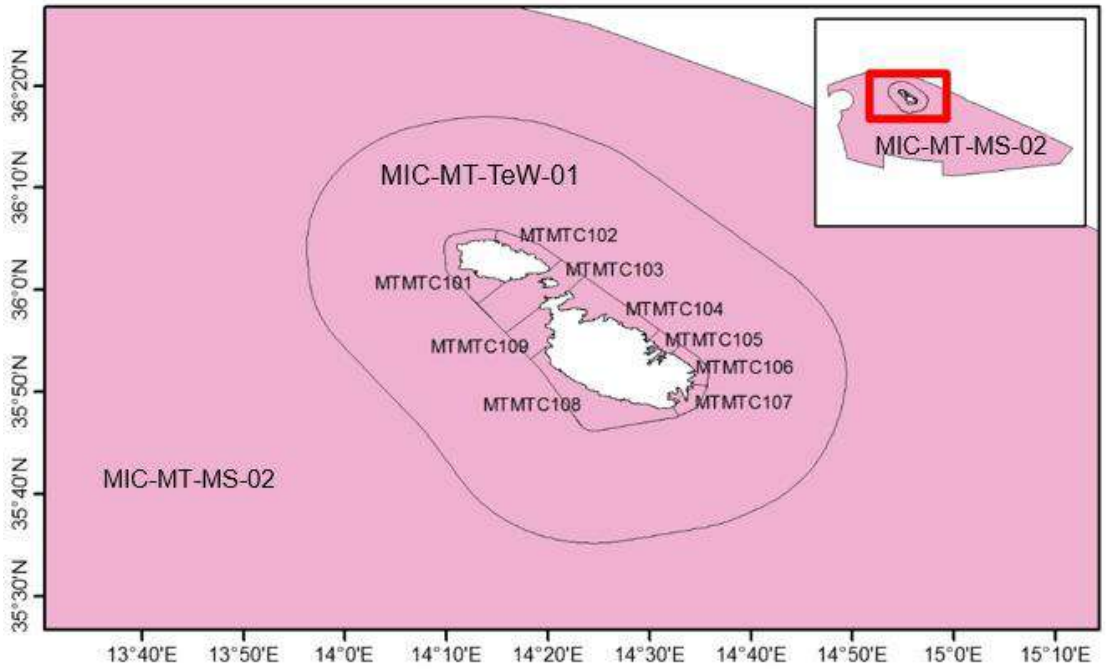

FIGURE 28: MAP SHOWING ENVIRONMENTAL STATUS FOR DESCRIPTOR 2 (GREEN: GOOD STATUS; PINK: NOT GOOD)

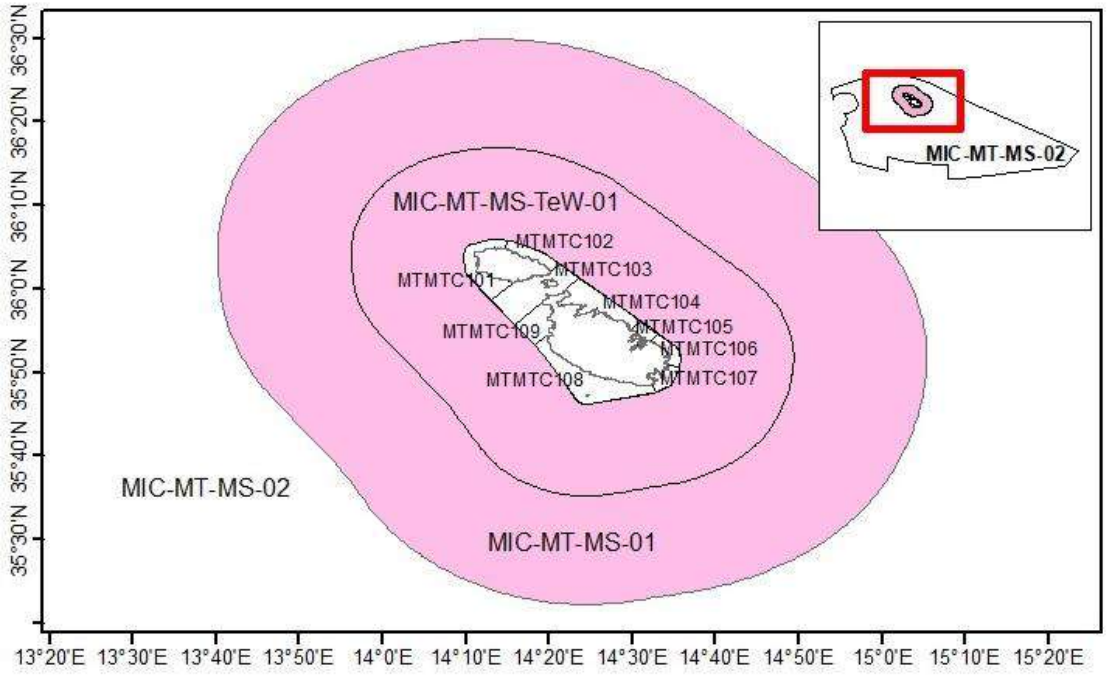

FIGURE 29: MAP SHOWING ENVIRONMENTAL STATUS FOR DESCRIPTOR 9 (GREEN: GOOD STATUS; PINK: NOT GOOD)

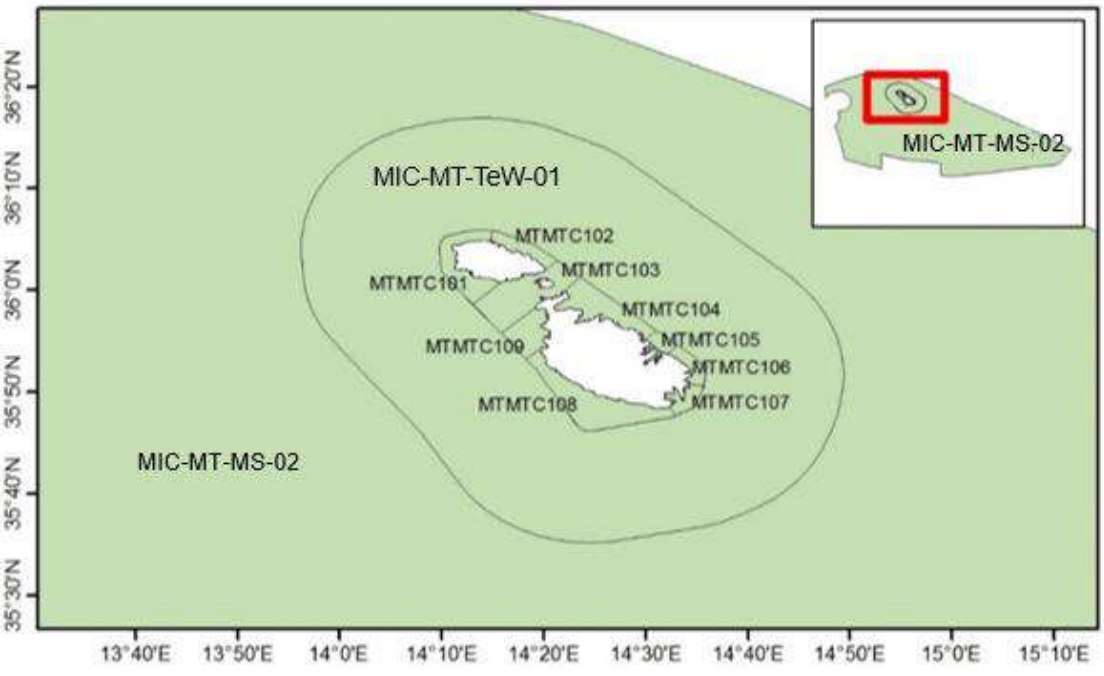

FIGURE 30: MAP SHOWING ENVIRONMENTAL STATUS FOR DESCRIPTOR 10 (GREEN: GOOD STATUS; PINK: NOT GOOD)

Invasive alien species (IAS) represent a serious pressure and threat to Malta's biodiversity. The introduction of IAS threatens our biodiversity primarily because of the subsequent decrease in biodiversity which occurs, even if the number of species increases overall. The function of the ecosystem is inhibited by the presence of IAS on different levels (sometimes more than one), namely through:

- Competing for the same limited resources
- Predation
- Spreading diseases and parasites
- Cross-breeding with native species in the wild
- Change the food chain structure, thus destabilising the ecosystem

5.2.5 Other Habitats

The Maltese terrestrial and marine habitats are important constituents of our natural heritage, even if not protected by national or international legislation. The ecological and environmental conservation status assessment is carried out in line with the relevant directives, which in turn designate the terrestrial and marine habitats. Nevertheless, the ecological and environmental health of habitats such as valleys and watercourses are also important. In fact, the ERA has designated many valleys and watercourses as important features in our national heritage as AEIs and SSIs. The habitats are therefore protected in accordance with various governmental notices in Maltese legislation.

5.2.6 Other Environmental Factors

The health of an ecosystem is dependent on both the biological (in terms of ecological relationships, biodiversity, presence of alien species, etc.) and environmental (in terms of chemical pollutants, physical functionality, etc.) factors of the area under study. For example, increases in chemical pollutants are likely to affect the ecological conservation status of inland waters, transitional waters and coastal waters. This SEA considers the biological, physical and chemical characteristics of the habitats.

5.3 LAND USES AND LANDSCAPE

5.3.1 Land Uses

According to land cover statistics presented by Eurostat in 2018[28], the Maltese islands comprise of 16.9% woodland and shrubland, 28.7% cropland, 18.5% grassland, 8.4% water bodies and 27.5% artificial. When compared to other EU countries, Malta has the highest percentage share of artificial land cover. This percentage is further subdivided between built-up artificial areas, which comprise 17.9% of the total national footprint, and 9.6% for non-built up artificial areas.

The 2018 SoeR also highlights the trends in land uses based on the number of approved development permits issued between 2009 and 2015. The number of approved dwellings, both inside and outside of the designated development zone exhibited a declining trend between 2008 and 2013, before undergoing a contradictory increase (Figure 31).[10] Throughout the study period apartments remained the most popular type of residential property. Of the national dwelling

[28] Eurostat, 20-18. Land cover in EU Member States. Source: https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Land_cover_statistics#Land_cover_in_the_EU_Member_States

stock, a substantial proportion remains vacant. In 2011, 18.4% of all residential property was empty (excluding the additional 13.3% which are used seasonally).[10]

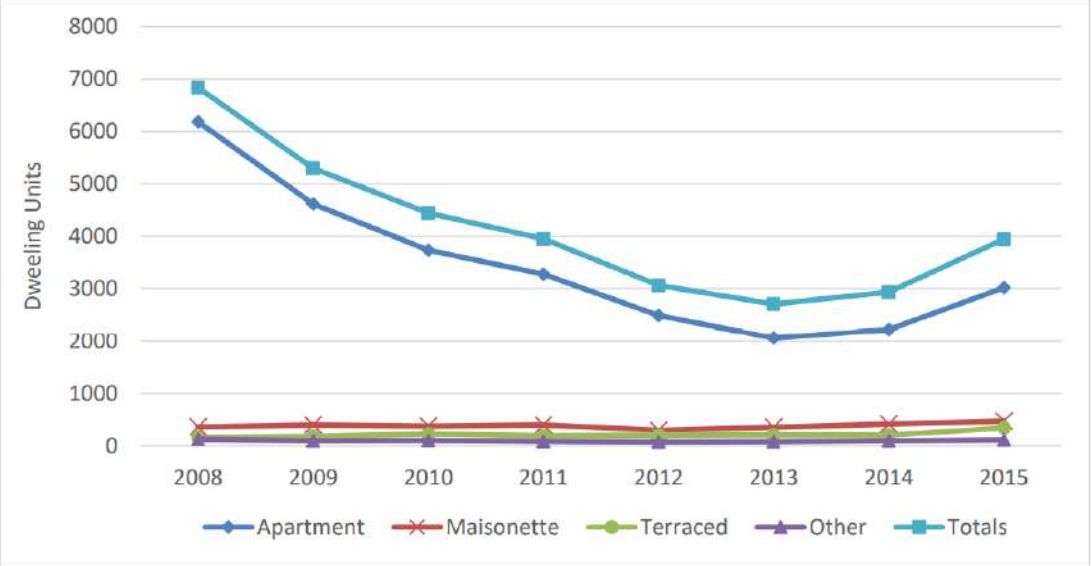

FIGURE 31: NUMBER OF APPROVED DWELLING UNITS BY THE MEPA BETWEEN 2008 AND 2015[10]

A variety of other non-dwelling land uses comprise the remaining built-up environment. Between the years of 2008 and 2015, the most dominant type of new development applications were related to environmental leisure (30%). This value was followed by office (13%), warehousing (13%) and leisure development (10%); of which 39%, 9%, 30% and 56% respectively were outside of the designated development zone (ODZ).[10]

The most dominant approved new non-dwelling land uses along the urban coasts are cultural (18.8%), warehousing (17.7%) and leisure projects (13.5%). This contrasts to the rural coastlines, which are mainly characterised by environmental leisure activity applications (91.5% of approved developments).

5.3.2 Sea Uses

The Maltese islands have a strong strategic position in the centre of the Mediterranean Sea. Located 93 km from the south of Sicily and 290 km from the north of Africa, Malta has historically been a country with significant historic maritime importance. In fact, the earliest shipyard facility in the Maltese islands was constructed by the Order of St John back to the early 1500s to boost the country's maritime prominence. Once the British conquered the Maltese Islands, the archipelago was used as a maritime hub for the British empire for about 150 years. Since gaining its independence in 1964, Malta has continued to realise its maritime potential by maintaining well-equipped ports, adept seamen and boosting its role in international trade.

Malta's marine waters are split as follows:

- Malta's area of Internal waters is approximately 199 km²

- Malta's area of Territorial waters is approximately 3,830 km²
- Malta's area of Contiguous Zone is approximately 10,762 km².
- Malta's area of the Continental Shelf is approximately 75,779 km².
- Malta has not yet declared an Exclusive Economic Zone.
- Area of the Fisheries Management Conservation Zone (FMCZ) which extends up to 25 nm is approximately 11,480 km².

Malta has not designated a maritime spatial plan.[29] Maritime uses around the Maltese Islands are mapped in the 2nd Water Catchment Management Plan, as reproduced in Figure 32.[30] Such uses include aquaculture zones, swimming zones, trawling areas, bunkering areas, and a spoil dump ground. Cables along the seabed are mapped in Figure 33, as extracted from the EMODnet platform.[31]

[29] European MSP Platform (2022). Malta: Which Maritime Spatial Plans exist? https://maritime-spatial-planning.ec.europa.eu/sites/default/files/download/malta_february_2022_0.pdf

[30] Environment & Resources Authority (2015). *The 2nd Water Catchment Management Plan for the Malta Water Catchment District 2015 – 2021.*

[31] EMODnet (2022). Human activities. https://www.emodnet-humanactivities.eu/view-data.php.

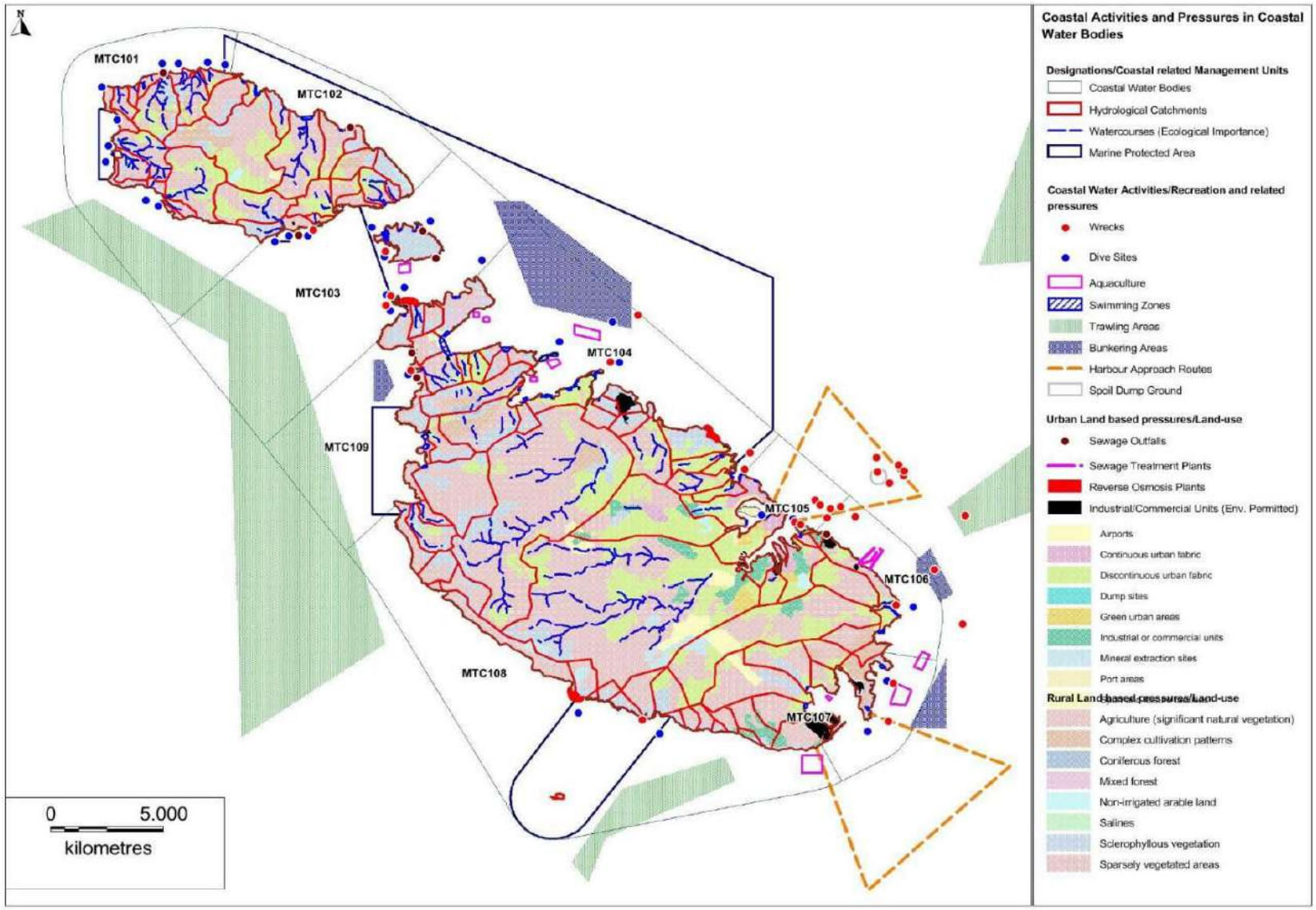

FIGURE 32: HUMAN PRESSURES IN THE MALTESE WATERS[30]

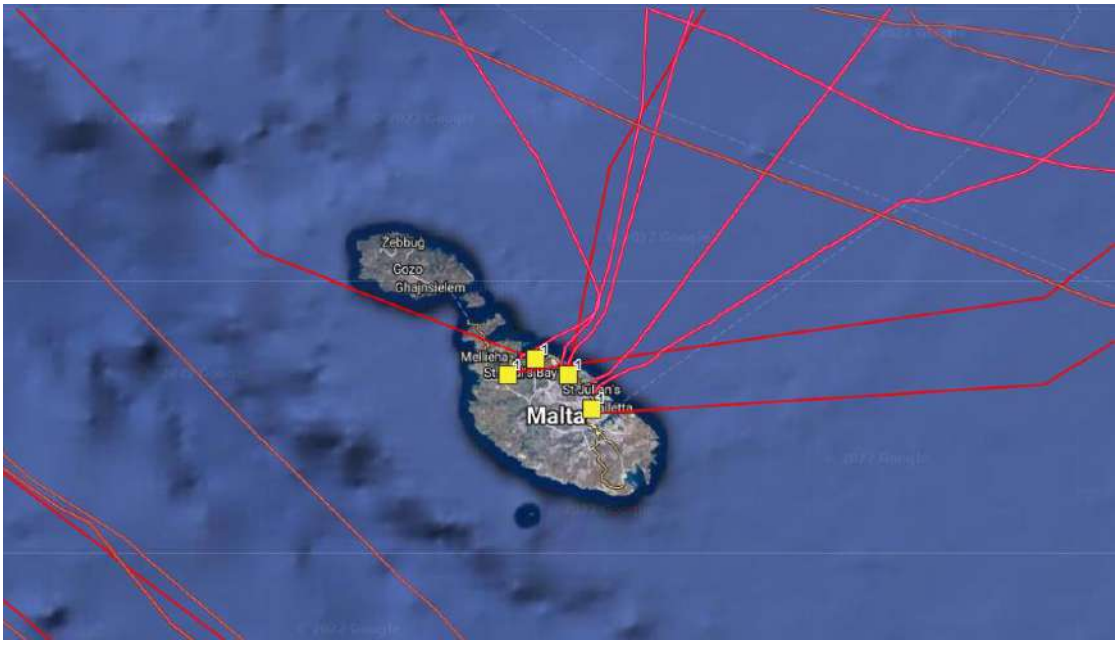

FIGURE 33: CABLES (RED) AND LANDING SITES (YELLOW) AROUND MALTA[31]

Figure 34 and Figure 35 describe the size of the Maltese fleet, expressed in gross tonnage, and the type of vessels in the fleet, respectively. There has been a relatively steady increase in the gross tonnage of the Maltese fleet since 1987, with the 2000-2004 and 2011-2012 showing a decrease in the fleet. The total number of vessels registered in Malta in 2019 amounted to 8,594 (gross tonnage of 82.93 million). Malta is the largest register of vessels in Europe, and the sixth largest in terms of gross tonnage.[32]

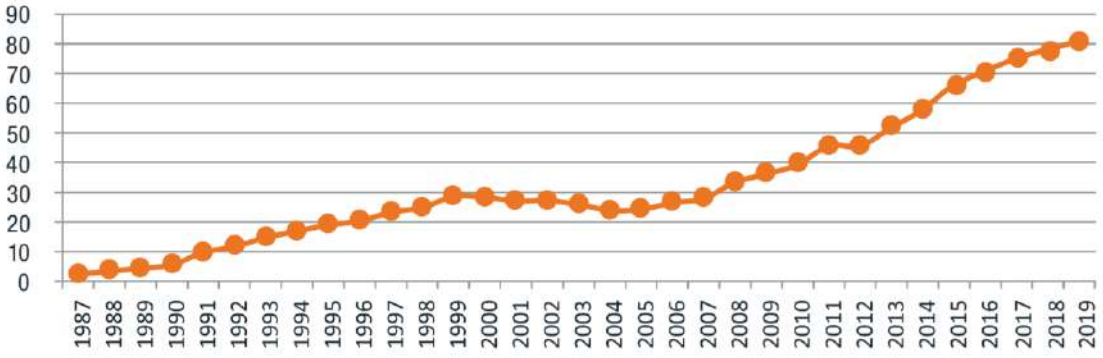

FIGURE 34: GROSS TONNAGE OF REGISTERED VESSELS IN THE MALTESE FLEET (1987-2019)[32]

[32] TM (2020). *Annual Report 2019.* https://www.transport.gov.mt/0011-Transport-Malta-Annual-Report-2019-web.pdf-f5200.

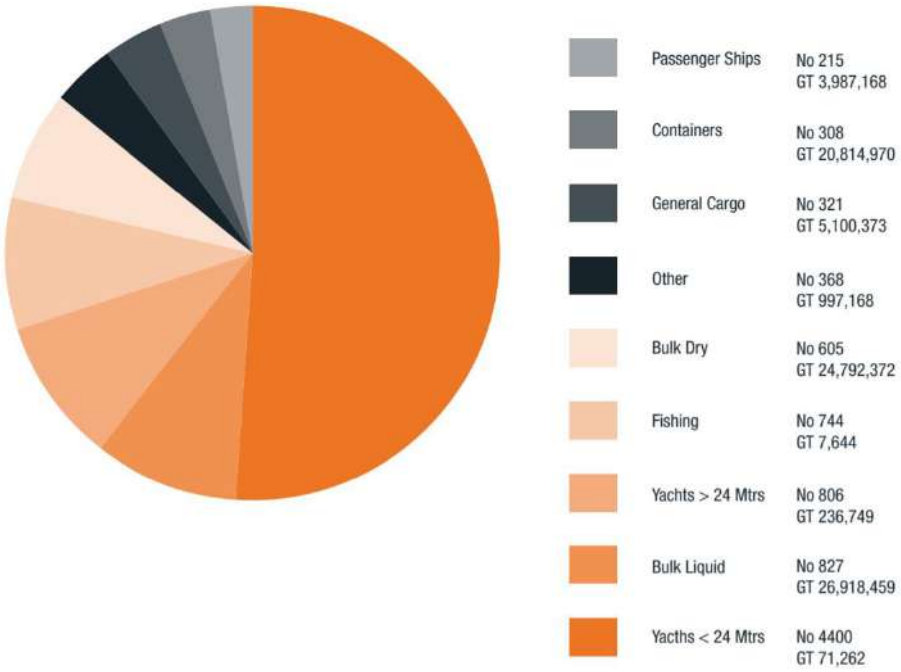

FIGURE 35: VESSELS BY TYPE REGISTERED IN MALTESE FLEET (2018)[32]

Density of marine vessels for 2020 has been extracted from the EMODnet platform, as shown in Figure 36. The map indicates that the highest vessel density is closest to the shore and in the harbour approach area off the east coast of Malta.

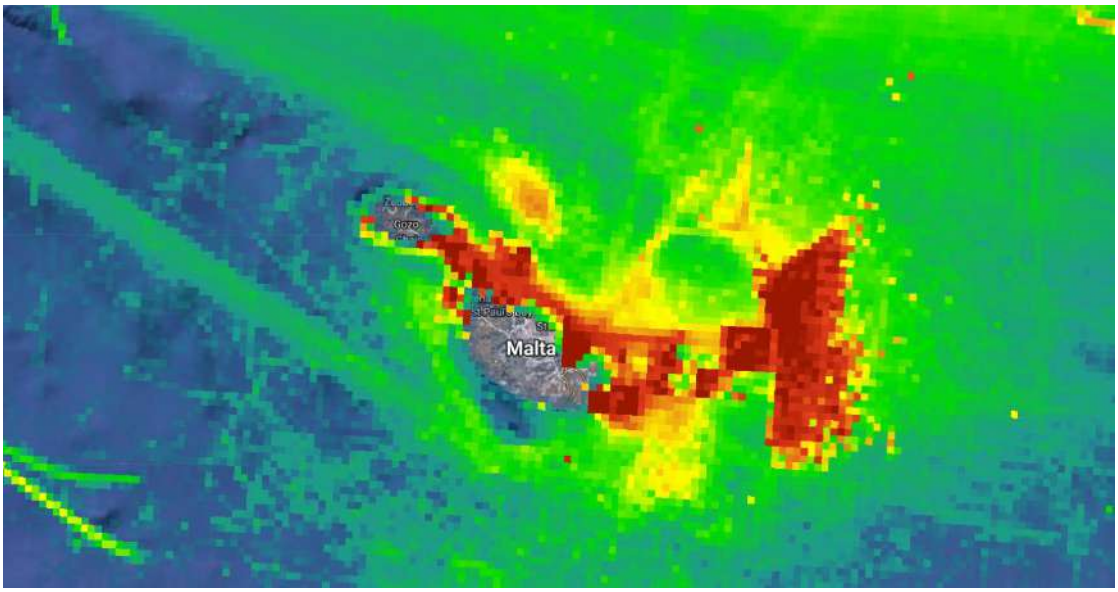

FIGURE 36: VESSEL DENSITY AROUND MALTA (2022)[31]

5.3.3 Landscape

The European landscape Convention defines landscape as "*an area, as perceived by people, whose character is the result of the action and interaction of natural and/or*

human factors".[33] Landscape does not only comprise of visual aspects of the environment, but also includes the character of an area perceived through the remaining four senses. For example, the aromas of local flora and the sound/smell of the sea also contribute to the beauty of a location. Studies which assess the impact of a feature/development on landscape relay heavily on visual aspects.

As described in the Landscape Assessment of the Maltese lands Islands (LAMI) , the quality of a landscape and its uniqueness aid in:

- Bestowing a sense of place and identity by distinguishing the area from all others and rendering the area special and important;
- Inspiring relaxation and improving the perceivers' state-of-mind;
- Promoting enjoyable experiences with recreational, inspiration and educational potential by instilling a sense of awe and wonder; and
- Increasing employment through the tourism industry.[34]

The Maltese Islands are comprised of three main inhabited islands and numerous small uninhabited ones which lie in the centre of the Mediterranean. Malta's natural landscape is characterised by terraced fields, dry vegetation, rock and limestone, largely due to the long hours of sunshine throughout the year. Karstic rock formations with nearby water bodies, Mediterranean flora and fauna prevail in the natural areas. The local landscape also includes many interspersed vantage points providing panoramic views, vertical cliffs and a varied scenery, along with numerous valleys and waterways.

High-density development dominates the urban landscape, interspersed with a variety of historical features and occasional pockets of landscaped gardens. Due to Malta's topography, the sea is visible from the majority of areas of the Islands, which has an overall positive effect on the local landscape.

Contributors to the Maltese natural landscape are listed hereunder:

1. **Geomorphology**: Low bathymetric depth along the North East coast of Malta and in many of the bays introduces shades of colour to the water body; and offshore islands tend to greatly enhance the quality of a coastal landscape, especially when these islands lie within the visibility radius of an observation point.

2. **Climate**: Typical of the central Mediterranean, as the year is split into two main seasons, namely hot dry summers and mild cool winters. The overall mild climate contributes to the aesthetic appeal of the Islands.

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[33] Council of Europe (2002). European Landscape Convention. Florence, 20.X.2000. https://www.coe.int/en/web/landscape/home

[34] MEPA (2004). Landscape Assessment Study of the Maltese Islands. https://era.org.mt/en/Documents/LandscapeAssessment-MalteseIslands-MEPA-2004.pdf

3. **Vegetation**: Natural vegetation with endemic species and scarce woodland areas (less than 0.5% coverage) which have mostly been created or augmented through human intervention.

Landscape sensitivity in the Maltese Islands is characterised into five hierarchal levels with decreasing sensitivity as listed hereunder and mapped in Figure 37.[35]

- Category 1: Area of Very High Landscape Sensitivity (AVHLS)
- Category 2: Area of High Landscape Sensitivity (AHLS)
- Category 3: Area of Significant Landscape Sensitivity (ASLS)
- Category 4: Area of Moderate Landscape Sensitivity (AMLS)
- Category 5: Areas Requiring Landscape Upgrading (ARLU)

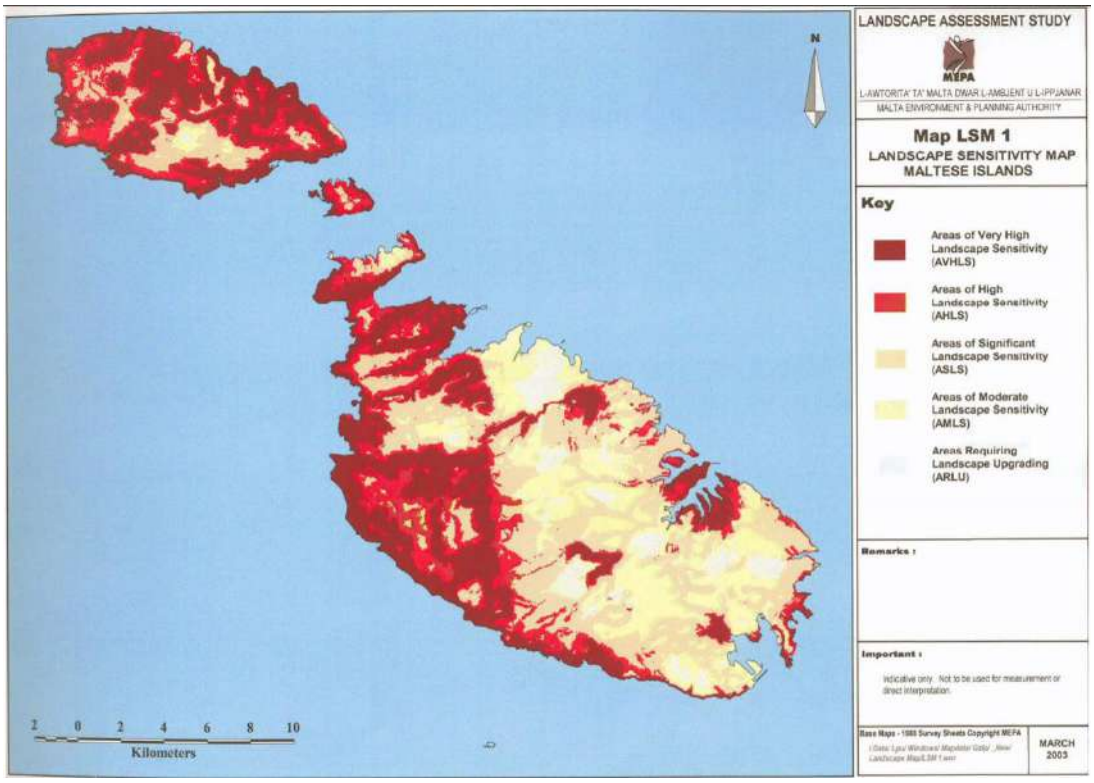

FIGURE 37: LANDSCAPE SENSITIVITY MAP FOR THE MALTESE ISLANDS[34]

The Landscape chapter of the 2005 SoER highlights scheduled areas of high landscape value, protected landscape features and protected sites for cultural heritage including sites of archaeological importance & scheduled buildings (Figure 38). A total of 51% of Malta's land area was characterised as being of high or very high landscape sensitivity in the Landscape Assessment Study of 2004.[36] AHLVs,

[35] MEPA (2004). Landscape Assessment Study of the Maltese Islands. https://era.org.mt/en/Documents/LandscapeAssessment-MalteseIslands-MEPA-2004.pdf

[36] MEPA (2006). LS1: Areas protected for landscape value. https://era.org.mt/wp-content/uploads/2019/05/LS1ProtectedAreas-LandscapeValue-MEPA-2006.pdf

which cover 12% of the Maltese Islands, were scheduled by local legislation between 1996 and 2000.[37] During 2006, the extent of AHLVs increased to 33% covering 106km^2 of the Maltese Islands, equating to almost three times as much as 2000.[36]

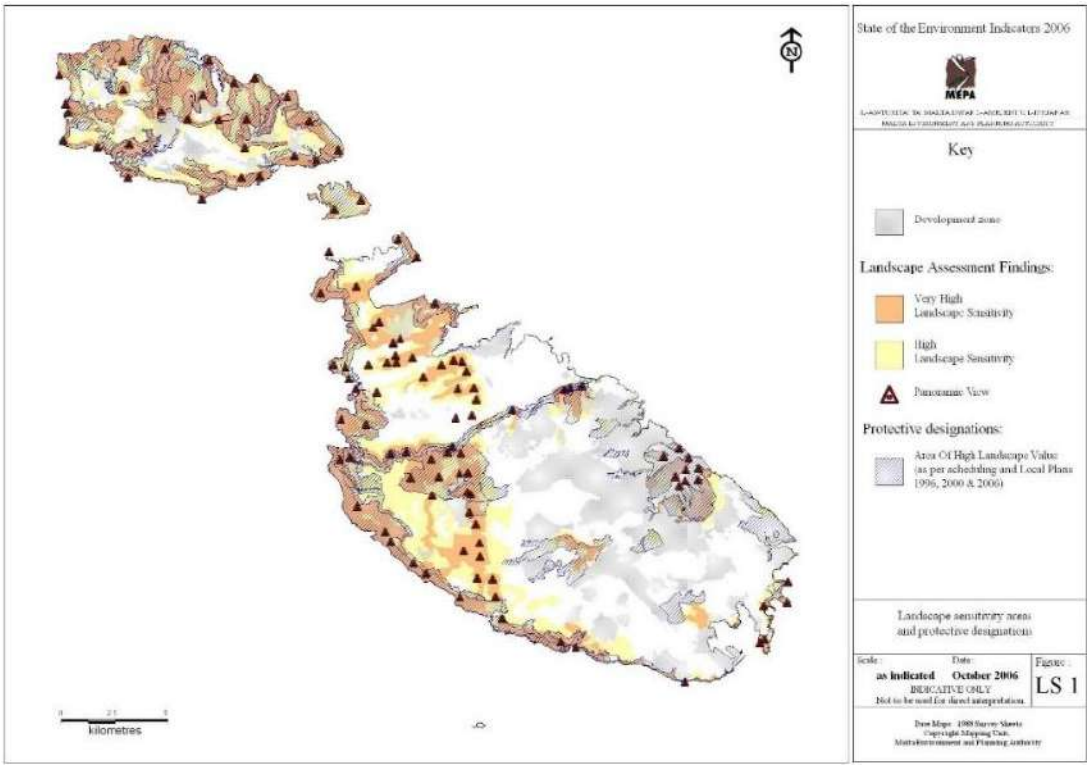

FIGURE 38: LANDSCAPE SENSITIVITY AREAS AND PROTECTIVE DESIGNATIONS[36]

Threats to the Maltese landscape include the increased take-up of open spaces for urban and coastal development, taller buildings on urban fringes which obstruct views of historic centres, modern agricultural practices and increased vehicular access.

5.4 CULTURAL HERITAGE

Falser (2015) defines cultural heritage as the "*legacy of physical artefacts and intangible attributes of a group or society that is inherited from past generations*".[38] The method used by archaeologists to classify artifacts artefacts or features as "heritage" is not set in stone, but depends on the societal context in which the evaluation is taking place.

In terms of immovable heritage (i.e. buildings/architectural structures), the Superintendence of Cultural Heritage (SCH) launched its National Inventory in 2011. Since then, various features of cultural importance have been published on the

[37] MEPA, State of the Environment Report 2005 https://era.org.mt/en/Documents/SOER_05.pdf

[38] Falser, M. (2015). Cultural Heritage as Civilizing Mission. New York: Heidelberg. ISBN 978-3-319-13638-7.

Government Gazette and publicised on the online National Inventory.[39] These cultural features are classified as follows:[39]

- Historical, military and archaeological sites (HMAS)
- Historical and archaeological sites (HAS)
- Chapels and niches (CN)
- Scheduled architecture (SA)
- Knights period fortifications (KPF)

Such features are protected in accordance with local legislation. A total of 2,412 features are currently scheduled, as shown in Figure 39.[40] No new protected features have been added to the inventory since 2014 because the SCH have been occupied with other work, namely related to its participation in EU projects, its monitoring of the increased number of developments in Malta and conversion of the national inventory into spatial data available on a GIS.[40]

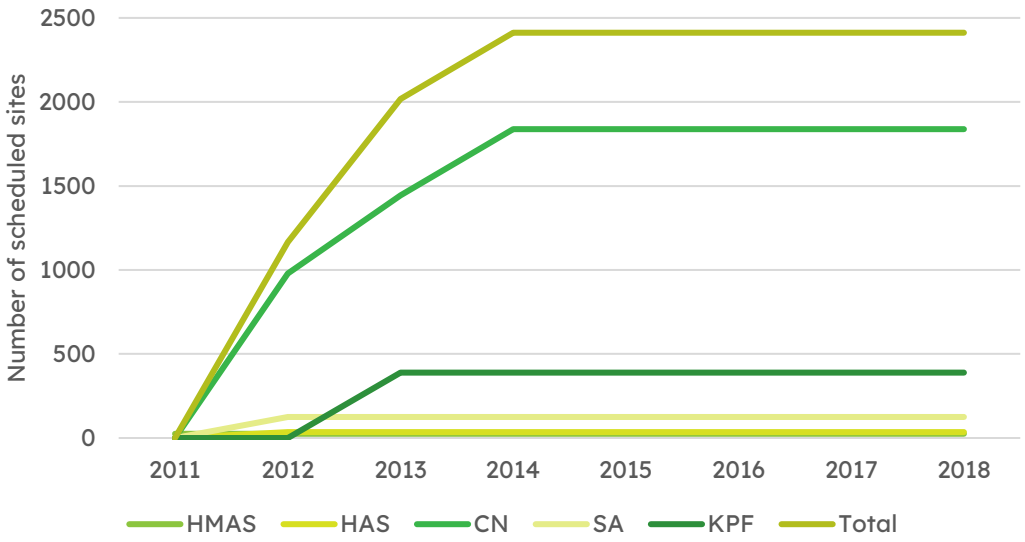

FIGURE 39: NUMBER OF SCHEDULED SITES BY TYPE ON THE NATIONAL INVENTORY[41]

5.4.1 Marine Archaeology

During the Last Glacial Maximum (LGM) the Maltese Islands were connected directly to Sicily via a land-bridge, as shown in Figure 40. Malta became cut off from

[39] Superintendence of Cultural Heritage – National Inventory. https://culture.gov.mt/en/culturalheritage/Pages/National%20Inventory.aspx

[40] Superintendence of Cultural Heritage. *Annual Report 2015.* https://culture.gov.mt/en/culturalheritage/Documents/form/SCHAnnualReport2015.pdf

[41] Superintendence of Cultural Heritage. *Annual Report 2014.* https://culture.gov.mt/en/culturalheritage/Documents/form/SCHAnnualReport2014.pdf

mainland Europe ca. 14,500 years BP ago when the sea levels rose substantially.[42, 43] Evidence for this drastic change in the Malta-Sicily Channel is supported by prehistoric shipwrecks off the coast of Pantelleria and a submerged monolith from the Mesolithic period within the channel.[44,45]

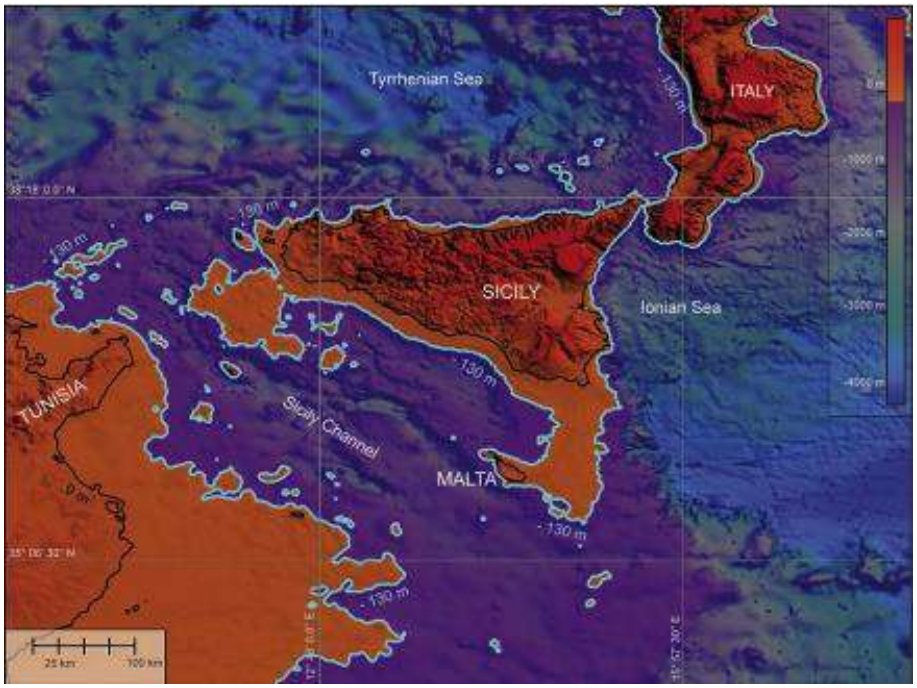

FIGURE 40: LAND BRIDGE BETWEEN SICILY AND MALTA[35]

Malta is located along an ideal shipping route for vessels crossing the Mediterranean Sea, as demonstrated by the materials found inside shipwrecks in the vicinity of the Maltese Islands. The use of Malta's natural harbours dates back to antiquity, when Diodorus Siculus described their use in the mid-first century BC.

Malta was frequently invaded and colonised by various groups throughout the Middle Ages, including Norman invaders led by Roger I in the early 1000s and Muslim invaders originating from North Africa in the 1800s.[46] The invaders used the water surrounding the Maltese Islands and the Malta-Sicily channel as a means of transport

[42] Alexander, D., (1988). A review of the physical geography of Malta and its significance for tectonic geomorphology. *Quaternary Science Reviews, 7*(1), pp. 41-53.

[43] Furlani, S., et al., (2013). Holocene sea level change. *Quaternary International, 288,* pp.146-57.

[44] Abelli, L., *et al.*, (2014). Marine geological and archaeological evidence of a possible pre-Neolithic site in Pantelleria Island, Central Mediterranean Sea. In: Harff, J., Bailey, G., & Lüth, F., (eds.), *Geology and Archaeology: submerged landscapes of the continental shelf.* Geological Society, London, Special Publications 411.

[45] Lodolo, E., & Ben-Avraham, Z., (2015). A submerged monolith in the Sicilian Channel (central Mediterranean Sea): Evidence for Mesolithic human activity. Journal of *Archaeological Science: Reports, 3,* pp. 398-407.

[46] Atauz, A.D., (2004). *Trade, piracy and naval warfare in the central Mediterranean: the maritime history and archaeology of Malta.* Dissertation of Doctor of Philosophy: Texas A&M University.

of goods and services. Such use is evidenced by shipwrecks from this period such as the Contrada Bambina located to the south of Marsala, which contains a bronze pail with an Arabic inscription from the Qur'an.[47,48]

Malta's use a maritime hub in the Medieval period is evidenced by the oldest portolan which forms part of the Greenwich Maritime Museum collection. The portolan, which dates to 1456, portrays Malta at the centre of the map, demonstrating Malta's importance in Mediterranean maritime activities at this time (Figure 41).[49]

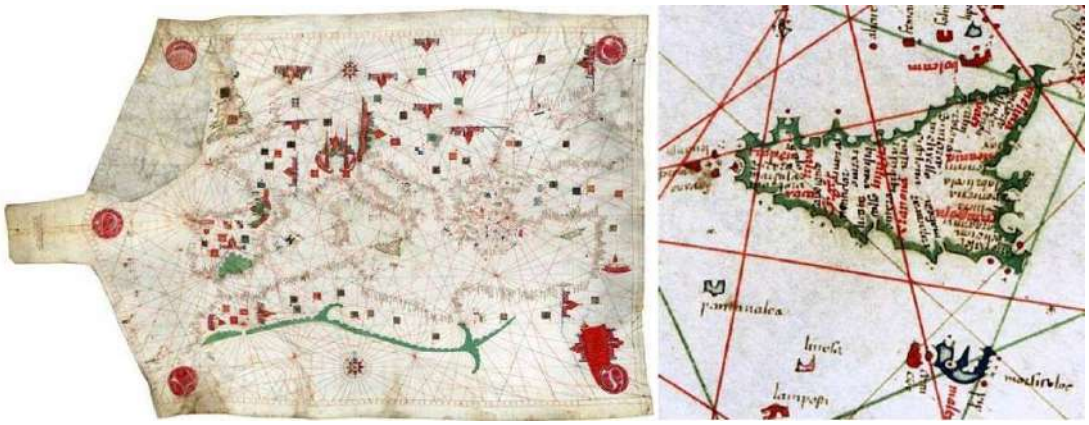

FIGURE 41: PORTOLAN DEPICTS MALTA AND SICILY DRAWN ON VELLUM[49]

Considering that Malta was one of the most intensively bombed areas in the world during World War II, encountering UXOs and other munitions on or within underwater sediments is likely. Disturbance of underwater bombs could possibly detonate such features, particularly if shipwrecks or crashed aircrafts are encountered.

5.5 WASTE MANAGEMENT

5.5.1 Waste Generation

Waste generation represents a loss of resources, and the management of waste places pressure on the environment in terms of air, water quality and land take-up. In line with relevant EU regulations, waste is divided into 4 categories:

1. Hazardous waste;
2. Non-hazardous mineral waste;
3. Non-hazardous secondary waste; and
4. Other non-hazardous waste.

[47] Bramoullé, D., et al, (2017). Le mobilier céramique dans la Méditerranée des Xth-XIIth siècles. Annales *Islamologiques, 51*, p.191-221, [In French].

[48] Ashmolean Museum of Art and Archaeology, (2016). *Storms, war and shipwrecks: Treasures from the Sicilian seas.* https://www.ashmolean.org/sites/default/files/ashmolean/documents/media/stormswarsandshipwrecksteachernotes.pdf>.

[49] Gambin, T., (2008). The maritime cartography of the Sicily-Malta Channel, In: *Malta and Sicily: Miscellaneous Research Projects*, Bonanno, A., (Ed.). KASA.

Contra to the historic trend of increasing waste generation in the Maltese Islands, the quantity of waste generated between 2016 and 2020 has fluctuated, as illustrated in Figure 42. Waste generated between 2019 and 2020 decreased by 19.8%.[50] This decrease needs to be treated with caution in light of the Covid-19 pandemic and associated repercussions. There was a particularly large decrease in the quantity of mineral waste, which decreased by almost 533,563 tonnes.

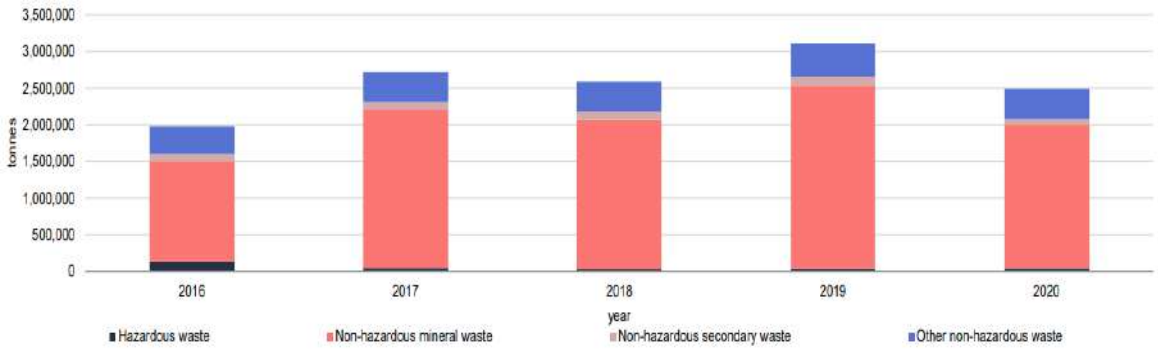

FIGURE 42: ANNUAL WASTE GENERATION BY CATEGORY (2016 - 2020)[50]

The quantity of municipal waste generation has steadily increased between 2016 to 2019. Similarly, to the overall waste generation, it decreased by 5.6% from 2019 and 2020.[51] This decrease needs to be treated with caution as it may be partially attributable to the reduced numbers of tourists visiting the islands due to the Covid-19 pandemic. It is evidently clear that mixed municipal waste still makes up the largest percentage of municipal waste.

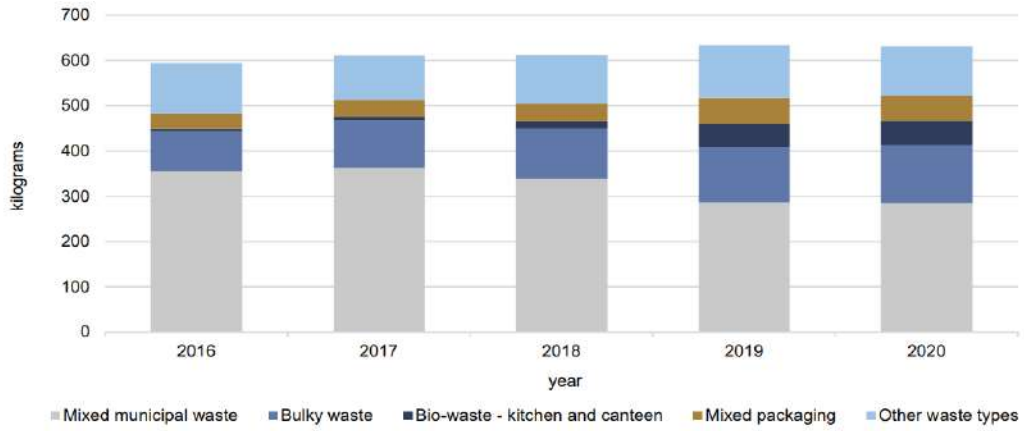

FIGURE 43: MUNICIPAL WASTE GENERATION PER CAPITA (2016 - 2020)[51]

The Long Term Waste Management Plan 2021 – 2030: Consultation Document published by MECP provided a detailed overview of historic trends of waste generation based on the main waste streams. Table 10 provides a summary of the

[50] NSO (2022). New Release: Solid Waste Management: 2020. https://nso.gov.mt/en/News_Releases/Documents/2022/02/News2022_021.pdf

[51] NSO (2021). News Release: Municipal Waste: 2020 News2021_222.pdf (gov.mt)

recent trends for each of the major waste streams in the Maltese Islands. These trends are also presented graphically in Figure 44 to Figure 54.

TABLE 10: WASTE GENERATION RECENT TRENDS FOR INDIVIDUAL WASTE STREAMS[52]

WASTE STREAM	RECENT TREND BETWEEN 2011 AND 2018
Mixed municipal	Increase of 5% between 2011 and 2018 from 247,000 tonnes to 306,000
Food	Increase between 2011 and 2018
Plastic	Increase from 63.0kg per capita in 2011 to 67.1kg per capita in 2018
Textile	Increase between 2011 and 2018. By 2018, a total of ca. 1,200 tonnes were collected. Significant increase in 2017 and 2018, attributed to the introduction of a new collection system (private initiative)
Packaging	Increase of ca. 30% between 2011 and 2017 from 53,000 tonnes to 69,000 tonnes
WEEE	Increase between 2011 and 2017 of WEEE and low collection rates
ELVs	Increase between 2011 and 2016 Sharp increase in Certificates of Destruction (CoDs) in 2015 and 2016 due to the increased number of Authorised Treatment Facilities.
Batteries and Accumulators	Placing on the market of portable batteries and accumulators has remained relatively stable between 2011 and 2018 fluctuating between 80 and 100 tonnes a year.
Commercial and Industrial	Fluctuations between 2011 and 2018 of commercial and Industrial waste consisting of Hazardous, Non-Hazardous waste and Sewage Sludge.
End-of-Life Tyres	Increase of ca. 35% between 2011 and 2018
Waste Oils	Average generation between 2011 and 2018: 13,000 tonnes
Construction and	Fluctuations between 2011 and 2018.

[52] MCEP (2020). Long Term Waste Management Plan 2021 – 2030: Consultation Document https://meae.gov.mt/en/Public_Consultations/MECP/PublishingImages/Pages/Consultations/LongTermWasteManagementPlan20212030/Long%20Term%20Waste%20Management%20Plan%20v1.2.pdf

WASTE STREAM	RECENT TREND BETWEEN 2011 AND 2018
Demolition Waste	In 2017 generated in excess of 2,000,000 tones

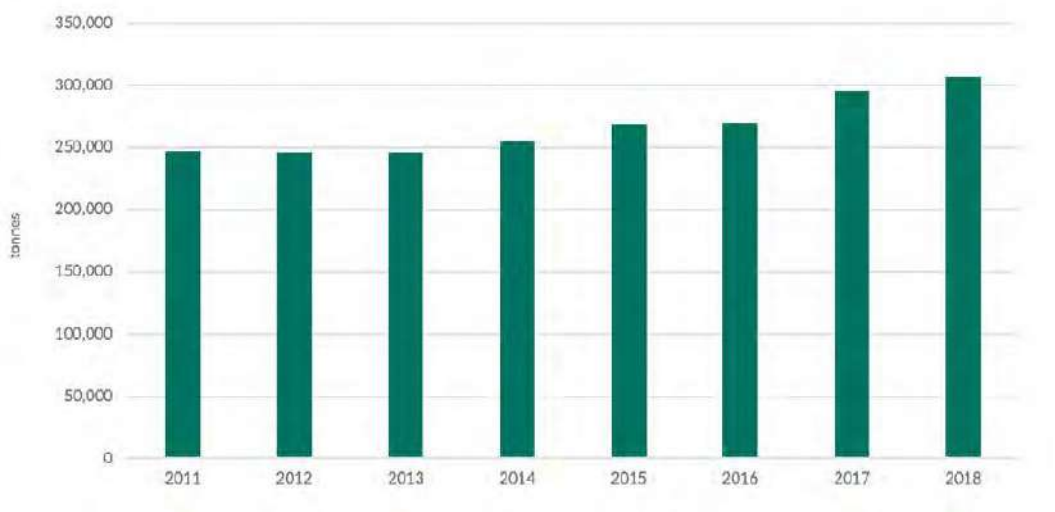

FIGURE 44: MIXED MUNICIPAL WASTE GENERATION (2011 – 2018)[52]

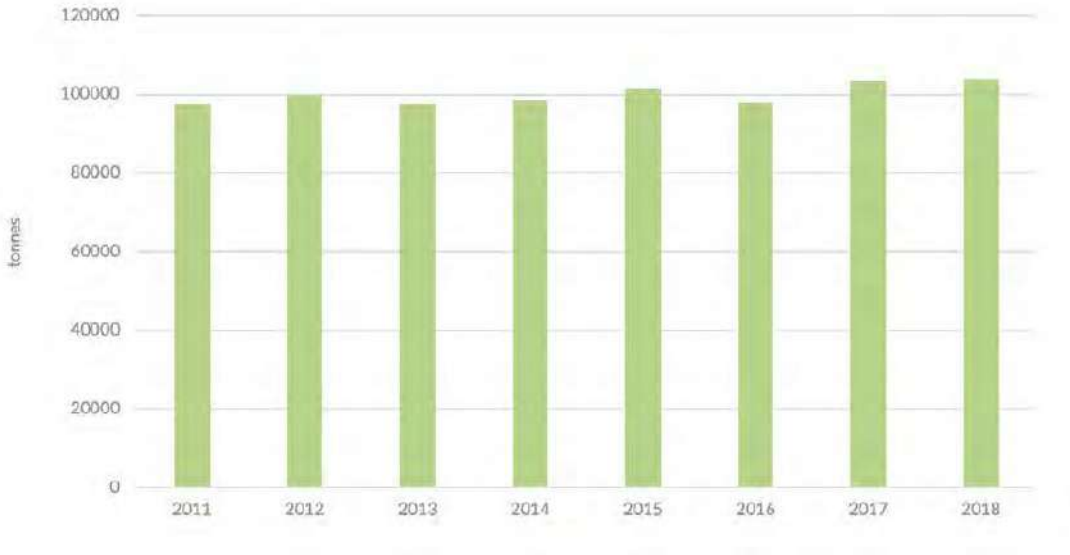

FIGURE 45: FOOD WASTE GENERATION (2011 – 2018)[52]

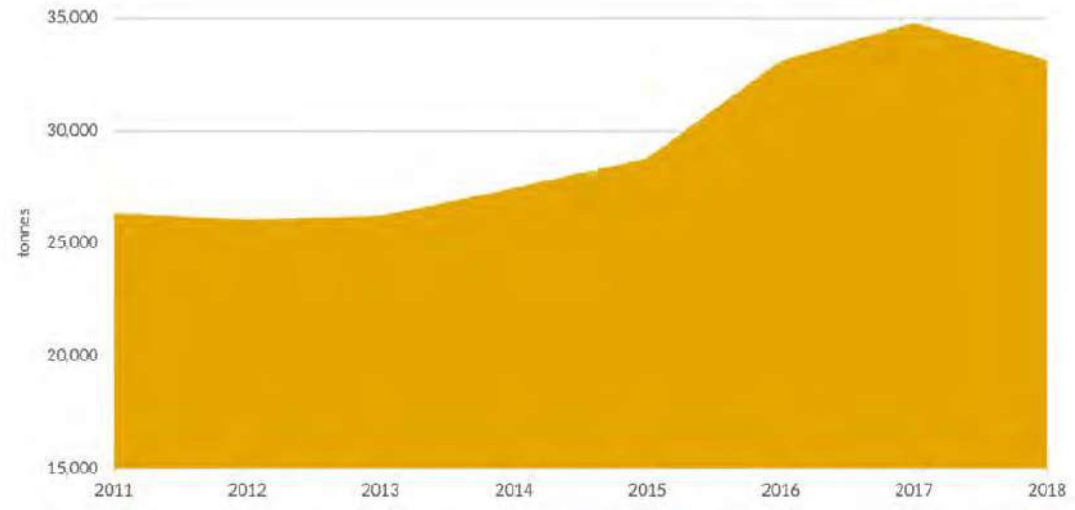

FIGURE 46: PLASTIC WASTE GENERATION (2011 – 2018)[52]

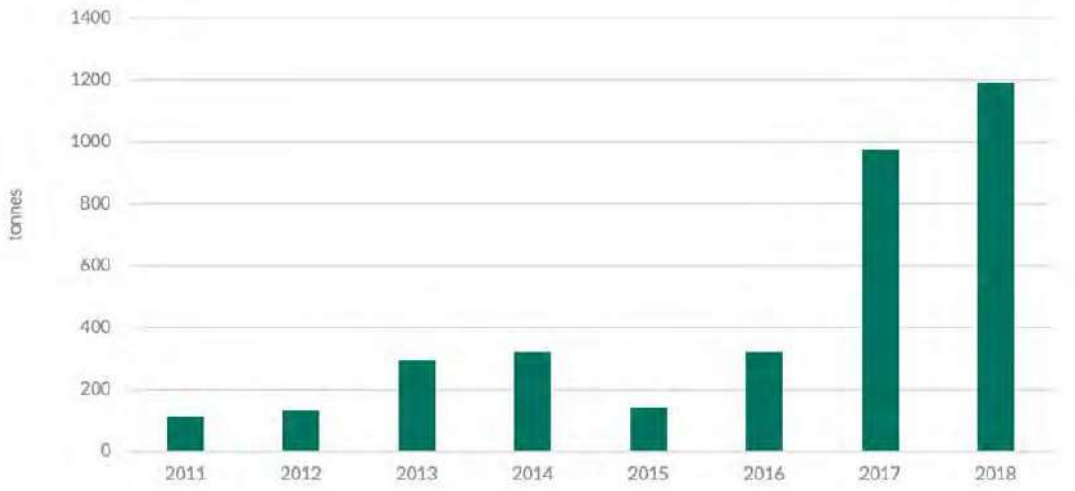

FIGURE 47: TEXTILES WASTE GENERATION (2011 – 2018)[44]

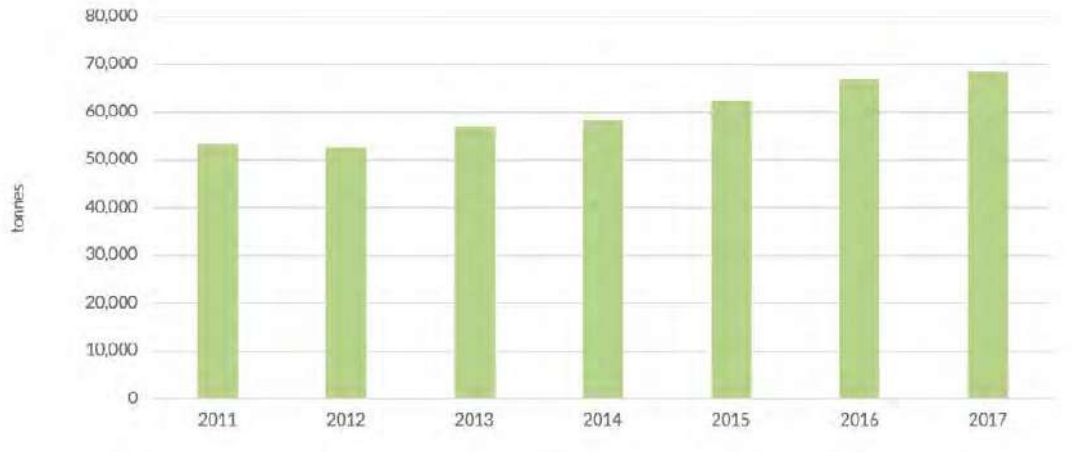

FIGURE 48: PACKAGING WASTE GENERATION (2011 – 2017)[44]

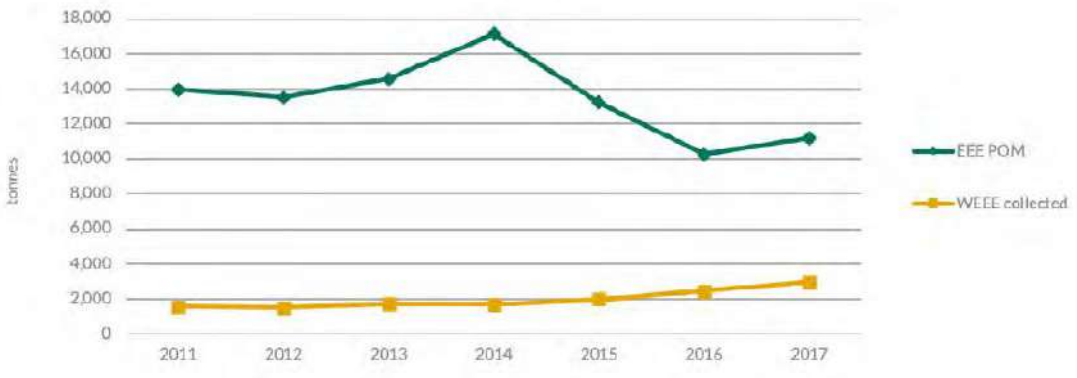

FIGURE 49: WEEE WASTE GENERATION (EEE POM = ELECTRICAL AND ELECTRONIC EQUIPMENT PLACE ON MARKET)[44]

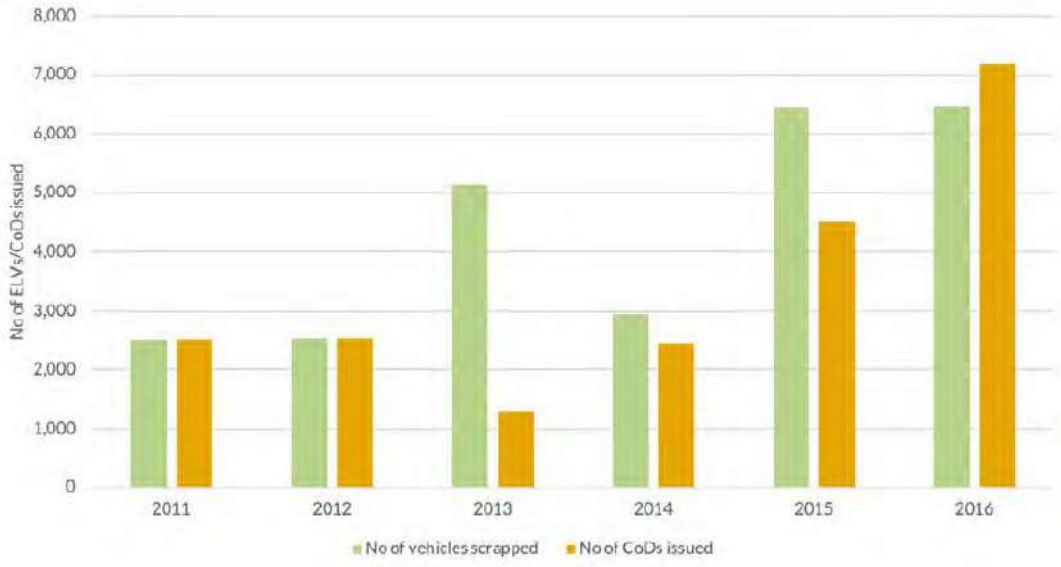

FIGURE 50: ELVS WASTE GENERATION (2011 – 2016)[44]

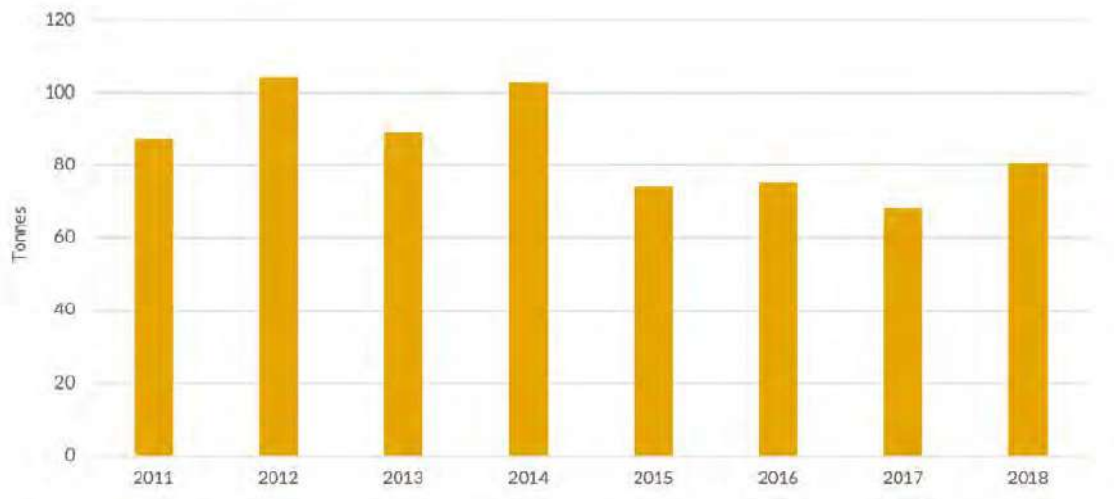

FIGURE 51: PORTABLE BATTERIES AND ACCUMULATORS PLACED ON THE MARKET (2011 – 2018)[44]

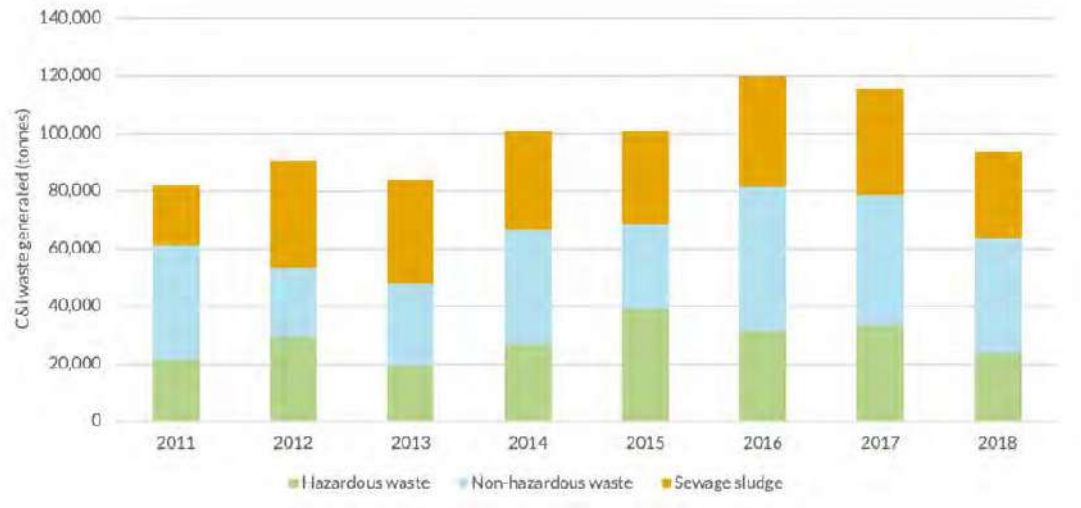

FIGURE 52: COMMERCIAL AND INDUSTRIAL WASTE GENERATION (2011 – 2018)[44]

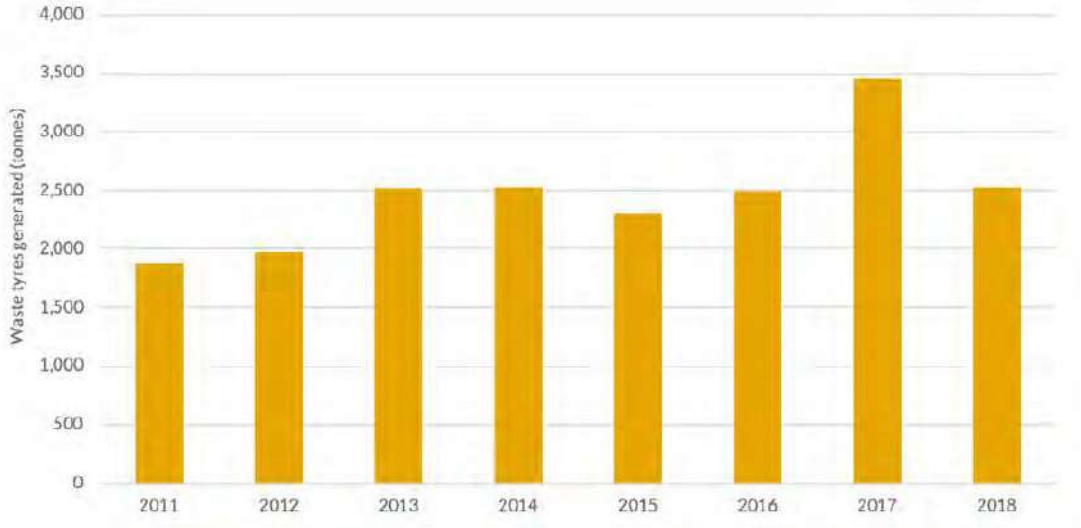

FIGURE 53: END-OF-LIFE TYRES WASTE GENERATION (2011 – 2018)[44]

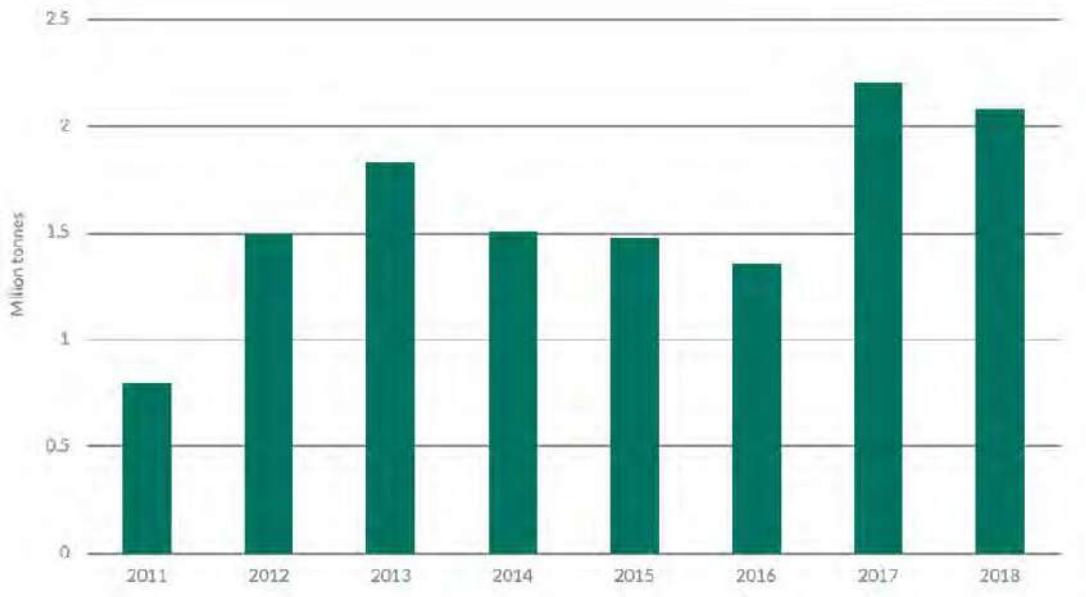

FIGURE 54: CONSTRUCTION AND DEMOLITION WASTE GENERATION (2011 – 2018)[44]

5.5.2 Fisheries Discards

Discards of fish catches are not significant in Maltese fisheries operations (see Figure 55[53]) mainly as a result of quotas being used up. Data are based on discards from bottom otter trawlers and drifting longlines which target demersal and pelagic species respectively. Bottom otter trawl fisheries mainly discard commercial species which were either below marketable size or too damaged to be sold. These discards ranged between 3.1% and 9.6% from the total catches in 2009.[54]

Conversely, discards originating from longlines predominantly comprise non-commercial species, including turtles, seabirds and sharks. Between 2008 and 2010, logger head turtles comprised the main species of by-catch for surface long-lining (see Figure 56), whereas sharks comprised the main species of by-catch for bottom long-lining (see Figure 57).[53]

[53] European Parliament (2014). Directorate-General for Internal Policies. Policy Department B: Structural and Cohesion Policies. Fisheries. The Obligation to Land All Catches - Consequences for The Mediterranean.

[54] ERA (2013). MSFD Initial Assessment. Extraction of species: Fisheries. https://era.org.mt/wp-content/uploads/2019/05/MSFD-InitialAssessment-Fisheries.pdf

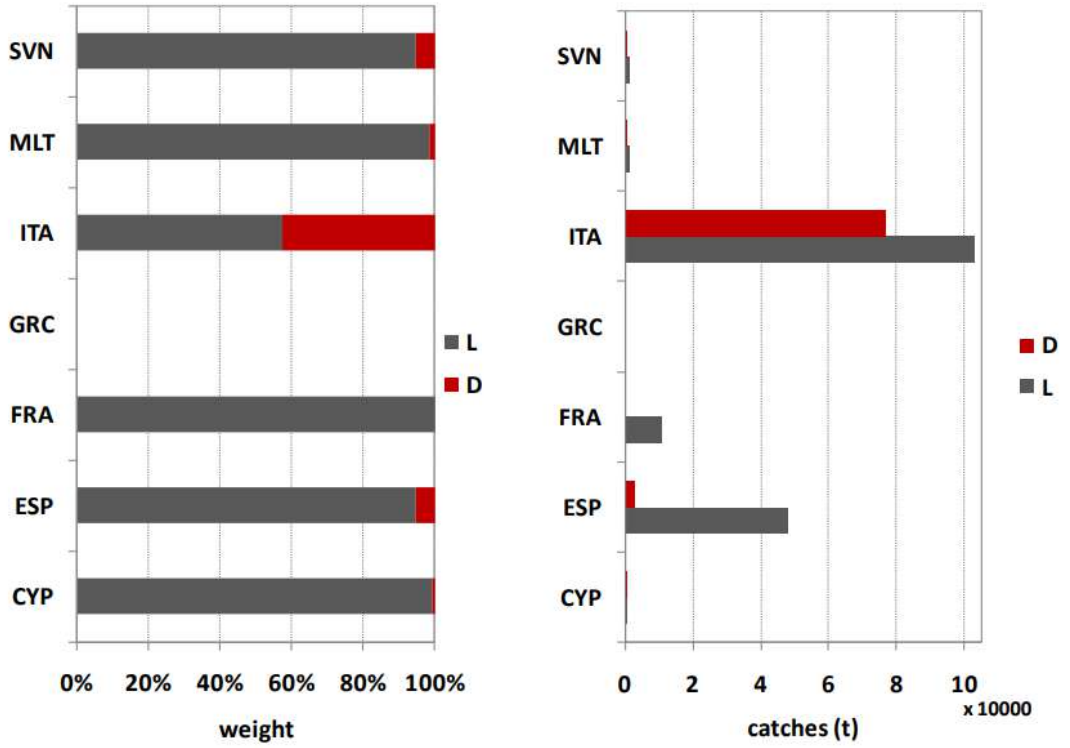

FIGURE 55: PROPORTION OF COMMERCIAL AND DISCARDED FRACTIONS IN EU MEMBER STATES[53]

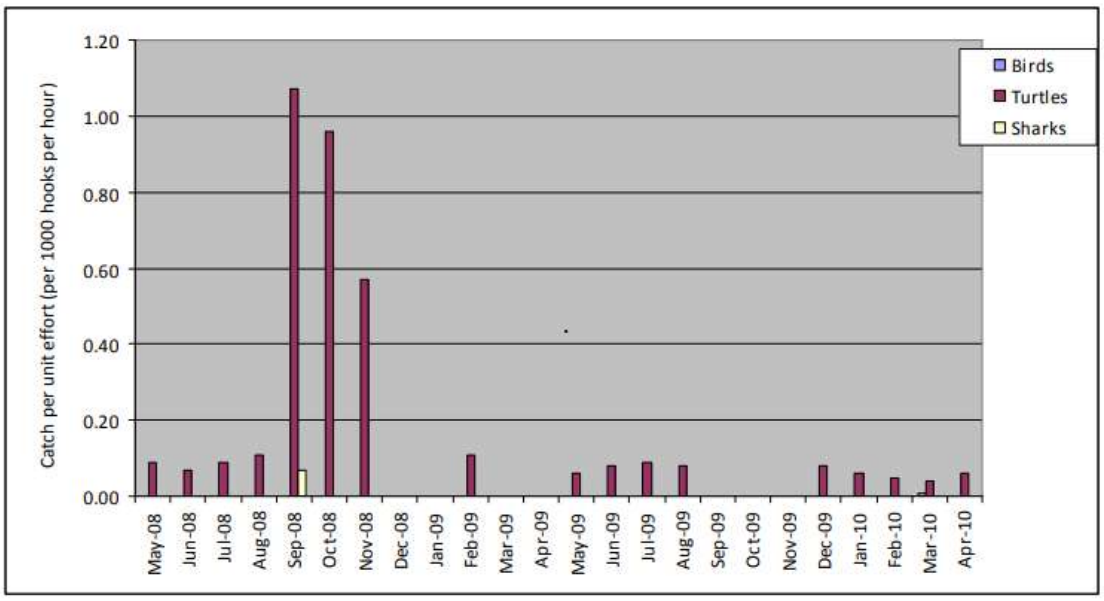

FIGURE 56: BIRDS, TURTLE AND SHARK BY-CATCH PER UNIT EFFORT OF SURFACE LONG-LINING[54]

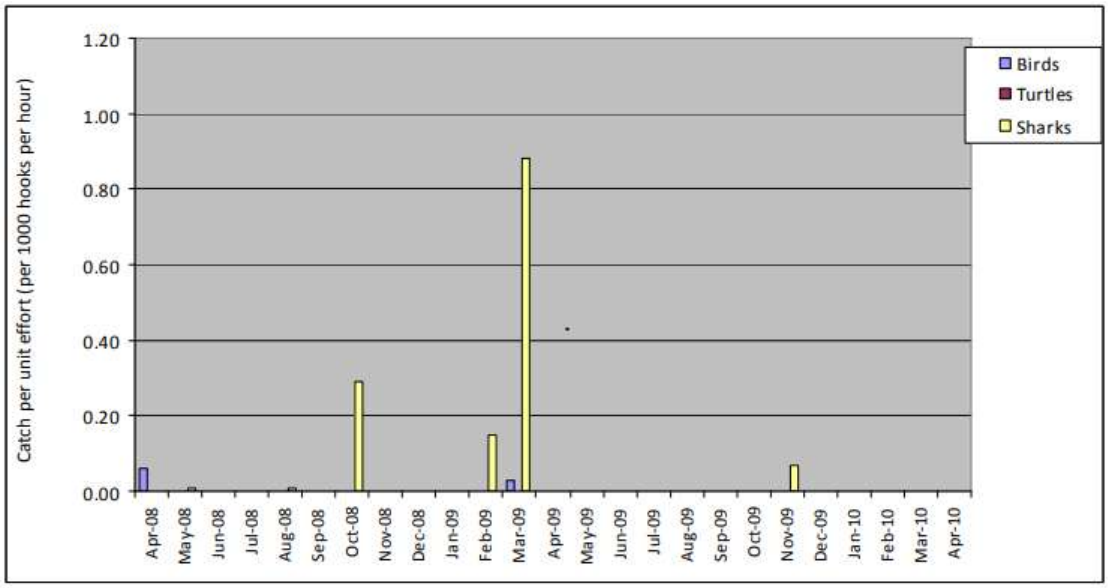

FIGURE 57: BIRDS, TURTLE AND SHARK BY-CATCH PER UNIT EFFORT OF BOTTOM LONG-LINING[54]

5.5.3 Marine Litter

In line with the MSFD, Malta is required to monitor multiple descriptors, including marine litter. The second cycle MSFD monitoring exercise for the Maltese Islands carried out between 2017 and 2019 investigated marine litter on beaches, in the water column and on the seabed.[55] The surveys identified artificial polymers as the most common litter types in all areas. This material represented 84-95% of beach litter, over 82% of floating litter in shallow waters and 38% of litter settled on infralittoral seabed.

The beach surveys revealed that one of Malta's most popular beaches (Għajn Tuffieħa) had the highest quantity of litter (average of 0.187 items per m^2); in this location, cigarette butts and filters were the predominant litter type, representing 40.2% of all litter. In relation to item sources and pathways, the data revealed that the main sources of litter on the beach are public litter (61%), followed by shipping and fishing (13% and 10%, respectively).

Conversely, the shallow water surveys identified Fomm ir-Riħ as the most polluted in terms of floating litter (average of 0.0024 items per m^2), with bags being the predominant type (42.5%). In relation to item sources and pathways, the data identified public litter as the main source of litter in the water column close to the beach (68%), followed by shipping and fishing (14 and 11%, respectively). Litter on the seabed was of four types: artificial items, paper/carboard, metal and textiles, with artificial polymers items being the main litter type in all areas (0.025 items m^{-2}).

[55] Borja, A., Franco, J., Garmendia, J. M. Larreta, J., Menchaca, I., Sagarminaga, Y., Schembri, Y., Solaun, O., Uriarte, A. and Uyarra, M. C. (2019). *Monitoring report & update to existing monitoring programme: As per Tender for the Implementation and Updating of Marine Monitoring Programmes, Assessment of Environmental Status and Development of a Marine Database System.* Malta Marine Monitoring Consortium, Fgura, Malta.

Figure 58 to Figure 61 show the composition of marine litter noted during the MSFD second cycle project.[55]

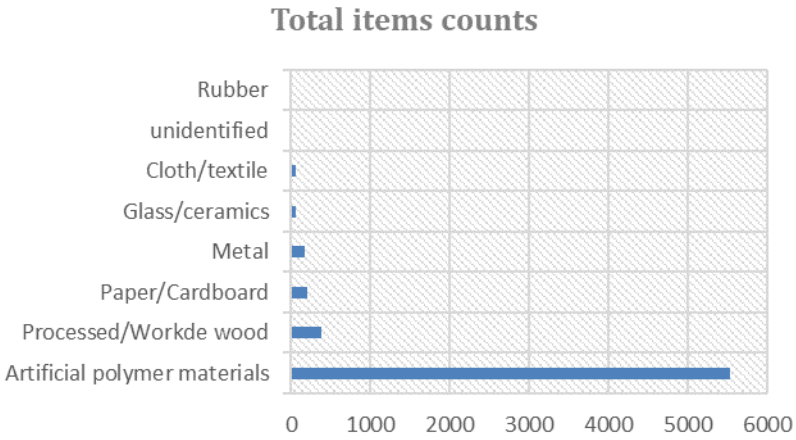

FIGURE 58: COMPOSITION OF LITTER IN BEACHES[55]

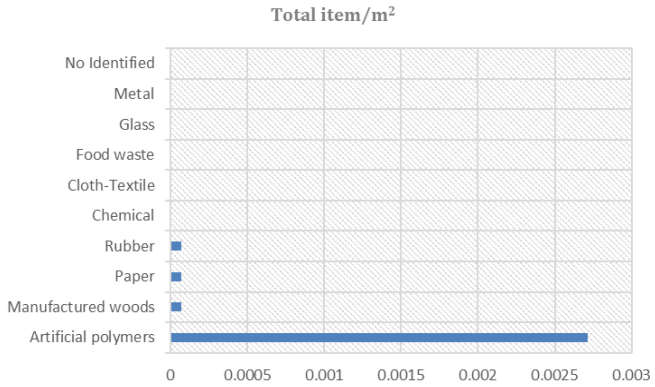

FIGURE 59: COMPOSITION OF LITTER IN THE WATER COLUMN, AS VIEWED FROM BEACHES[55]

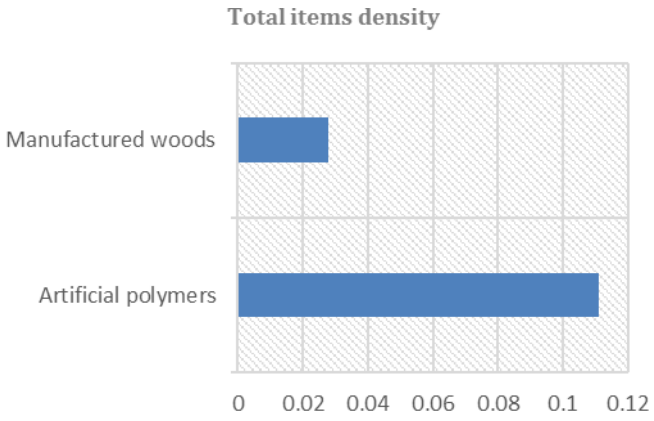

FIGURE 60: COMPOSITION OF LITTER IN TERRITORIAL WATERS[55]

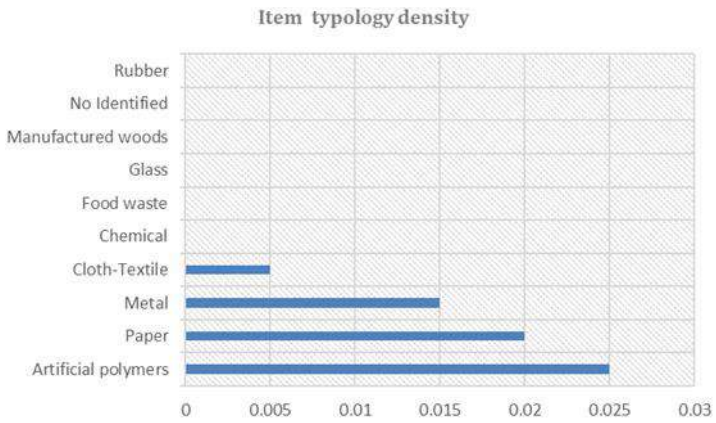

FIGURE 61: COMPOSITION OF LITTER ON SHALLOW SEABED[55]

A study on macrolitter on Maltese infralittoral seabed in the vicinity of *Posidonia oceanica* meadows noted that large litter fragments accumulated along the landside edges of seagrass meadows.[56] The study also found that the quantity of litter increased three-fold after heavy rainfall events, pointing to surface water runoff as the predominant litter source.[56]

5.5.4 Waste Treatment

The majority of waste generated within the Maltese Islands is landfilled. In 2020, the total amount of material dumped into local landfills totalled 303,917 tonnes.[42] This was contra to the trend of increasing landfilling quantities between 2016 and 2019. The quantities of material backfilled into quarries and recycled within the Maltese Islands also showed the same trend, with annual increases between 2016 and 2019; before a decrease in 2020.[42]

In contrast to the other waste treatment methods, waste incineration in the Maltese Islands decreased between 2016 and 2017, and has since continued to increase steadily from 5,322 tonnes in 2017 to 6,011 tonnes in 2020.[42]

The quantities of inert mineral waste from construction sites which is dumped at the designed offshore spoiling zone has varied significantly over the recent years.[50] This is because it is highly dependent on the nature of the construction works taking place.

Some of the waste generated locally is transported abroad for treatment/disposal. Such waste includes that to be landfilled, incinerated, energy recovery and recycled.

[56] Navarette-Fernández, T., Bermejo, R., Hernández, I., Deidun, A., Andreu-Cazenave, M. and Cózar, A. (2022). The role of seagrass meadows in the coastal trapping of litter. Marine Pollution Bulletin, vol. 174, p. 113299.

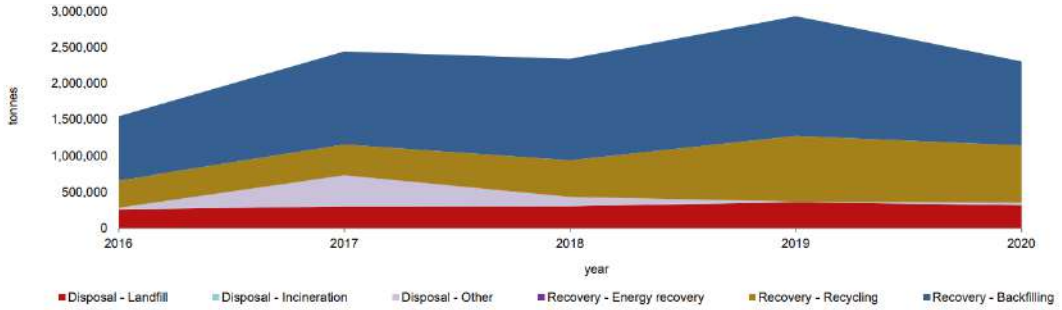

FIGURE 62: ANNUAL WASTE TREATMENT BY OPERATION (2017 – 2020)[50]

The consultation document for the Waste Management Plan provides a detailed breakdown of the treatment on the individual waste streams between 2011 and 2018 (vide Table 11). It is evident that Malta is currently failing to achieve the EU targets/standards when it comes to the treatment of several different waste streams.

TABLE 11: TREATMENT OF WASTE INDIVIDUAL WASTE STREAMS[52]

WASTE STREAM	TREATMENT AND STATUS
Municipal solid	Majority is landfilled with only relatively small quantities being recycled. Recycling rate has remined stable between 2011 and 2018 (only 15% in 2018).
Biodegradable Municipal (BMW)	Majority is landfilled, with a small percentage being recovered. Failing to meet EU 2020 target for quantities of landfilled BMW waste.
Food	Until recently, the majority was landfilled. Since 2018, all waste collected via the new household organic waste collection service has been treated by anaerobic digestion for the production of renewable energy.
Plastic	70% between 2011 and 2018 was landfilled and 28*% exported abroad for recycling or reached end-of-waste status in Malta.
Textile	No information available.
Packaging	Low levels of recycling. Failed to meet EU target of 55% recycling.
WEEE	In 2017 met 3 out of the 10 EU WEEE recycling targets. Recycling rates are limited by the capacity of local

WASTE STREAM	TREATMENT AND STATUS
	facilities and demand abroad for exported WEEE.
End-of-life Vehicles	Failing to meet EU targets for reuse/recycling and reuse/recovery.
Batteries and Accumulators	Successfully achieved the EU collection target in 2013 and 2016. However, the target was increased in 2016 and Malta has failed to reach the new standard.
Commercial and Industrial	Range of treatments including recycling (33.4%), recovery (13%), landfilling (39.3%) and incineration. All sewage sludge is currently landfilled (ca. 14% of landfilled waste). Majority of hazardous waste is exported abroad for treatment. Small amount incinerated, without any energy recovery.
End-of-life Tyres	Majority are exported outside of the EU for recycling and recovery. Landfill regulations prohibit the dumping of tyres (whole or shredded) into landfills.
Oils	Relay heavily on exportation abroad as no local facilities permitted to recover the waste stream.
Construction and Demolition Waste	Majority is backfilled, especially since 2013 when backfilling was reclassified as a recovery operation. Remaining waste is recycled (ca. 15%) or dumped.

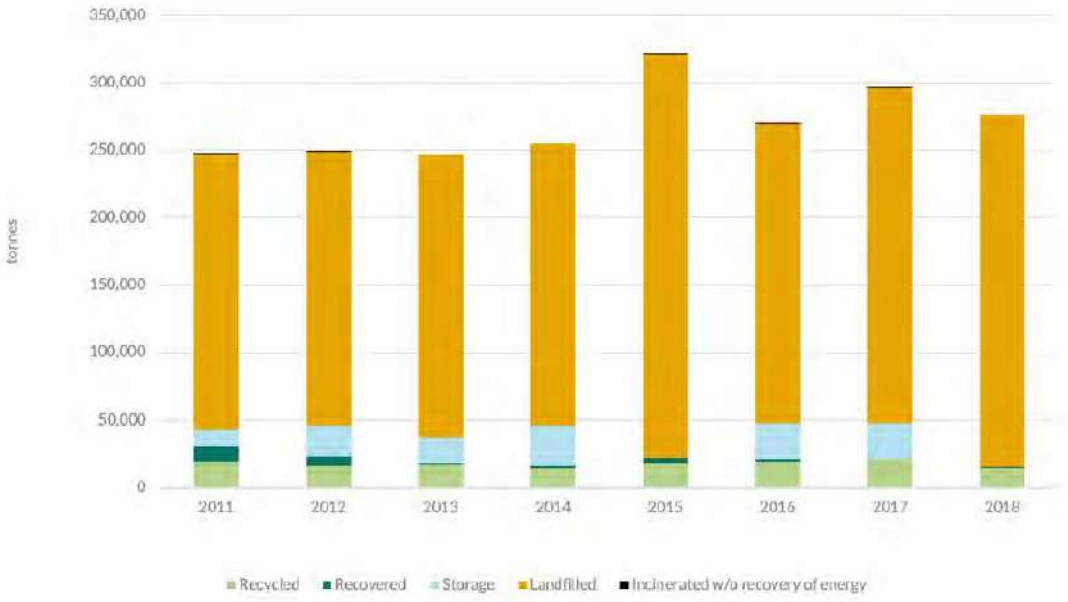

FIGURE 63: MUNICIPAL SOLID WASTE TREATMENT (2011 - 2018)[44]

FIGURE 64: TREATMENT OF BIODEGRADABLE MUNICIPAL WASTE (2011 – 2018)[44]

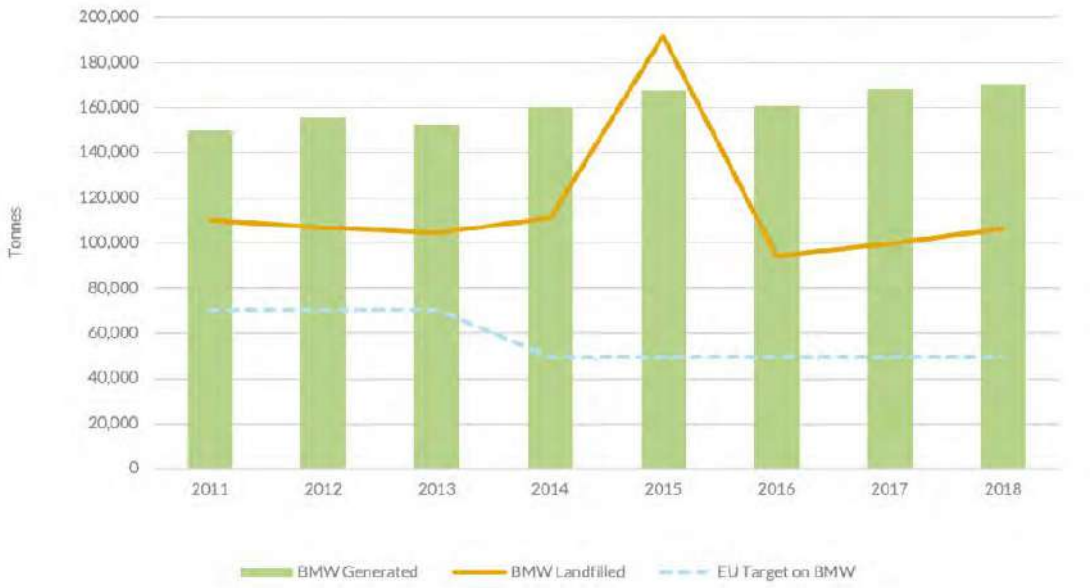

FIGURE 65: PROGRESS TOWARDS REACHING EU 2020 LANDFILLING TARGET FOR LANDFILLING OF BIODEGRADABLE MUNICIPAL WASTE[44]

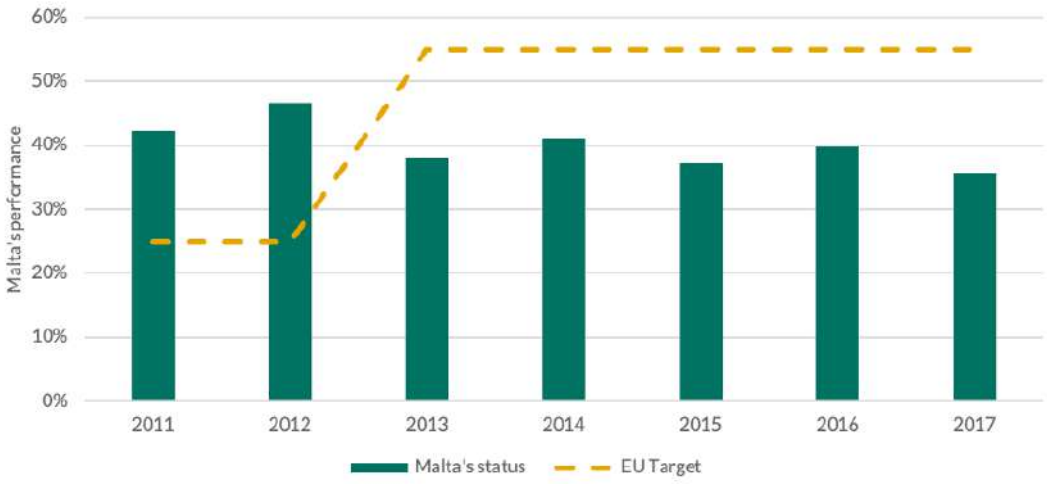

FIGURE 66: PROGRESS TOWARDS REACHING EU 2020 RECYCLING TARGET FOR PACKAGING WASTE (2011 – 2017)[44]

FIGURE 67: WEEE RECYCLING PERFORMANCE COMPARED TO EU TARGETS (2017)[44]

FIGURE 68: ELVS TREATMENT PERFORMANCE COMPARED TO EU TARGETS (2011 – 2016)[44]

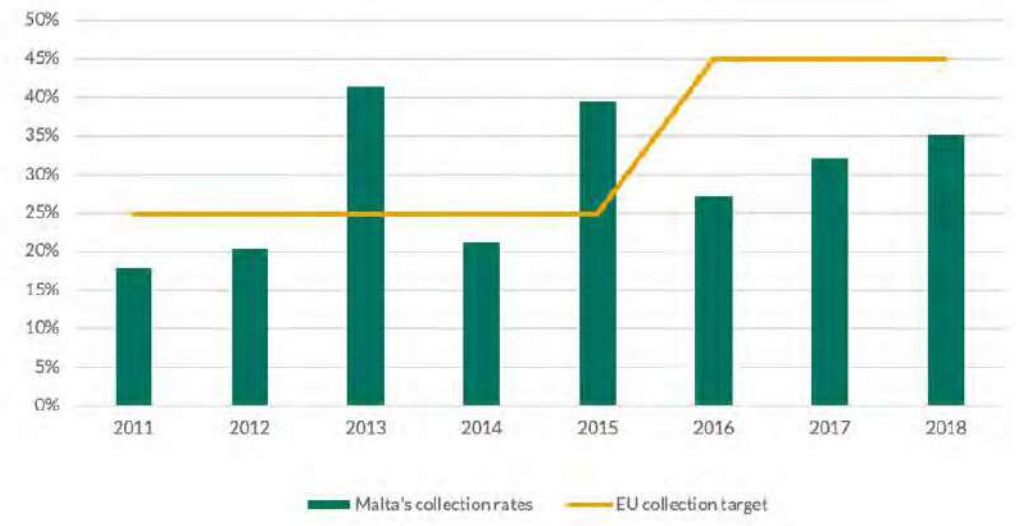

FIGURE 69: BATTERY AND ACCUMULATOR COLLECTION RATES IN RELATION TO EU TARGETS (2011 – 2018)[44]

FIGURE 70: COMMERCIAL AND INDUSTRIAL WASTE TREATMENT (2011 - 2018)[44]

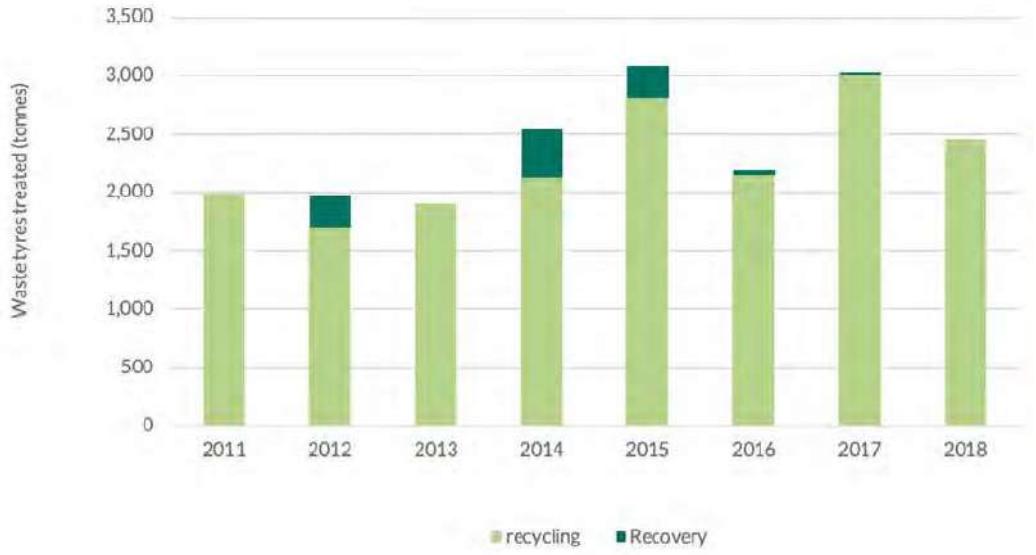

FIGURE 71: TREATMENT OF TYRES (2011 - 2018)[44]

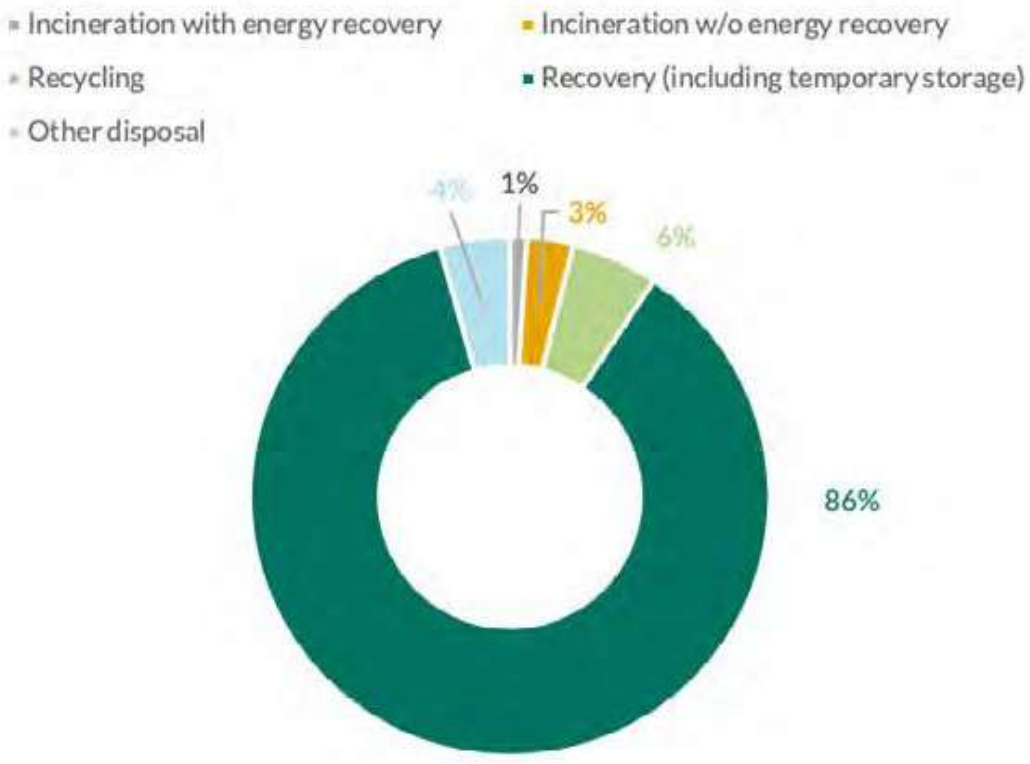

FIGURE 72: TREATMENT OF WASTE OILS (2011 - 2018) [44]

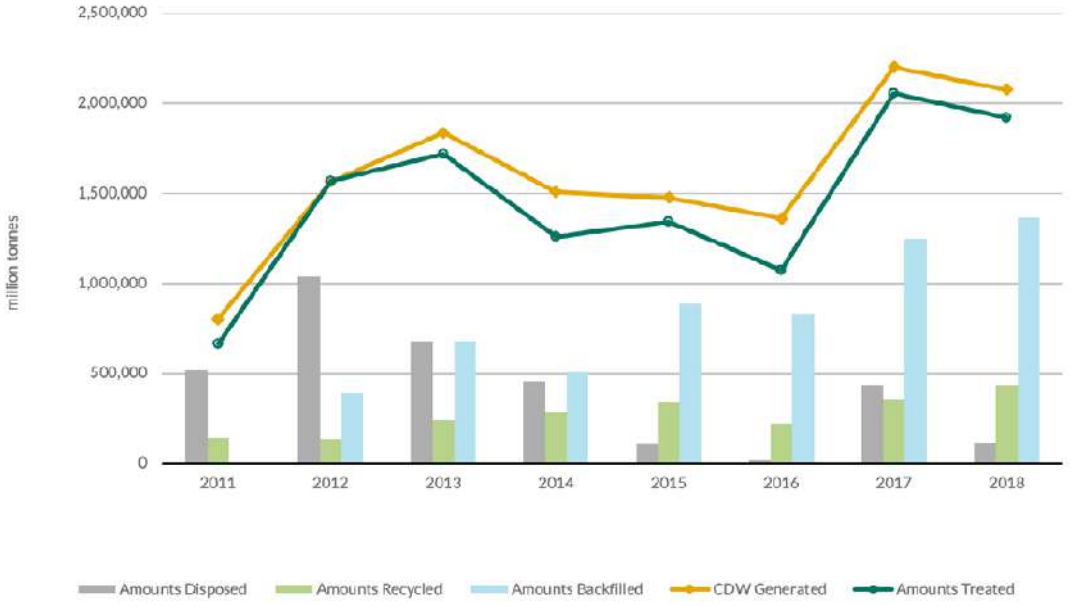

FIGURE 73: TREATMENT OF CONSTRUCTION AND DEMOLITION WASTE (2011 – 2018) [44]

6 ALTERNATIVE SCENARIOS

The EMFAF Programme 2021-2027 includes proposed policies and measures (Measures) which make use of European funds dedicated to the Common Fisheries Policy (CFP) and the Integrated Maritime Policy (IMP).

The SEA process provides an environmental assessment of three alternative scenarios, as listed hereunder:

Alternative 0:	Zero-option
Alternative 1:	Minimum scenario which satisfies the total financial allocations as per EMFAF Regulations
Alternative 2:	As proposed in the EMFAF Programme 2021-2027

The zero-option (Alternative 0) represents a theoretical alternative where no funds are allocated under these regulations. This Alternative is purely theoretical since the allocation of funds is required by legislation and represents a scenario as to how the fisheries and aquaculture sector would be affected in the absence of the implementation of the EMFAF programme. The minimum intervention scenario (Alternative 1) represents a scenario in which the minimum funds are allocated to the environment, as outlined in Table 12.

Alternative 2 assumes full implementation of the proposed measures in the draft programme and indicates that for climate change contribution, the EMFAF programme will exceed the requirements of the EMFAF Regulation 2021/1139 by allocating a significantly higher amount to climate change measures as opposed to 30 %.

TABLE 12: SEA ALTERNATIVES

TOTAL FINANCIAL ALLOCATIONS AS PER EMFAF REGULATION	PERCENTAGE BUDGETARY ALLOCATIONS		
	ALT 0	ALT 1	ALT 2
Article 5 (4) 15 % allocated to the specific objective referred to in Article 14(1) (d) fostering efficient fisheries control and enforcement, including fighting against IUU fishing, as well as reliable data for knowledge-based decision making	0%	15%	30%
Article 5 (5) The Union financial support from the EMFAF allocated per Member State to the total sum of the support referred to in Articles 17 to 21 shall not exceed the higher of the following thresholds:	0%	(a) EUR 6 000 000; or (b) 15 % of the Union financial support allocated per Member State	EUR 420,000 (2%)

TOTAL FINANCIAL ALLOCATIONS AS PER EMFAF REGULATION	PERCENTAGE BUDGETARY ALLOCATIONS		
	ALT 0	ALT 1	ALT 2
(a) EUR 6 000 000; or (b) 15 % of the Union financial support allocated per Member State			
Recital (30) Climate Change Contribution: 30% contribution to climate objectives	0%	30%	66%

7 IMPACT ASSESSMENT

The Consultants have carried out an impact assessment on the proposed EMFAF Programme 2021-2027 measures and the two alternative scenarios (refer to Section 6 for further details) in accordance with SL 549.61 (the SEA DIRECTIVE). This section presents the results of the assessment.

7.1 ASSESSMENT CRITERIA

The exercise utilised various techniques to assess the significance of each of the identified impacts. Such techniques included the use of expert judgements, the use of thresholds, EU and international legislation as required, and consultation with stakeholders. The assessment factors have been classed as follows:

- **Effect:** neutral, adverse and beneficial
- **Probability:** remote, unlikely, possible, likely and certain
- **Duration:** permanent and temporary
- **Frequency:** permanent, regular, frequent, infrequent and rare
- **Reversibility:** reversible and irreversible
- **Cumulative effects:** remote, unlikely, possible, likely and certain
- **Transboundary effects:** remote, unlikely, possible, likely and certain
- **Magnitude**: high, medium and low
- **Spatial extent:** description as applicable
- **Value and vulnerability:** high, medium and low
- **Significance**: described in Table 13

TABLE 13: LEGEND FOR THE IMPACT EFFECT AND SIGNIFICANCE

EFFECT	SIGNIFICANCE	GRADING
Adverse	Major	
	Moderate	
	Minor	
Negligible/No Impact		
Beneficial	Minor	
	Moderate	
	Major	
Unclassified		?

7.2 EFFECT ON ENVIRONMENTAL THEMES

The following subsections outline the effects of the proposed measures (Alternative 2) on each of the environmental themes. The impact assessment results for the other alternatives are discussed in Section 6.

7.2.1 Air Quality

The Consultants have assessed the impacts of the measures on this environmental theme in accordance with SL 549.61 (the SEA DIRECTIVE). Atmospheric emissions are generated on a daily basis from a multitude of sources. In Malta, the primary threats to air quality include emissions from internal combustion engines (ICE) in vehicles from road traffic and, to a lesser extent, on ships/vessels. Other sources include waste incineration, rubber tyre wear and road wear. For the purposes of this SEA, air pollution has been assessed in terms of particulate matter, ozone, benzene & VOCs, nitrogen dioxide and sulphur dioxide.

In relation to the EMFAF programme, atmospheric impacts on a national scale primarily depend on the following factors:

- Energy efficiency of maritime vessels, including fishing vessels
- Time and effort spent fishing at sea, including distance covered;
- Electricity demand which exerts a load on the Delimara power station;
- Proportion of national electricity produced from renewable sources, an increase of which reduces the demand on the Delimara power station; and
- Electricity efficiency, an increase of which reduces the demand on the Delimara power station.

The extent (or significance) of the impact for each measure on air quality depends on the success of the measure and its ability to affect Malta's air quality on a national scale. The EMFAF programme is largely focused on improving marine biodiversity, meaning few of the measures have an effect on air quality. However, some measures aim to improve sustainability by modernising the fishing fleet. Such measures go hand-in-hand with air quality improvement. Only measures including the improvement and expanding of key fishing port/landing infrastructure are likely to have a minor detrimental effect on air quality; these measures will see construction works in areas which already suffer from poor air quality. These impacts are nevertheless temporary in duration and the projects will be subjected to separate EIA/AA studies at permitting stage, as required by legislation, to reduce the significance of these impacts.

Table 14: Final Assessment Matrix for the Measures (air quality)

Environmental theme: Air quality		Effect	Probability	Duration	Frequency	Reversibility	Cumulative effects	Transboundary effects	Magnitude	Spatial extent	Value and vulnerability	Significance	Justification
Priority 1: Fostering sustainable fisheries and the conservation of aquatic biological resources													
SO1.1	On-board fishing vessels investments	Beneficial	Likely	Permanent	Permanent	Irreversible	Likely	Remote	Low	Immediate surroundings	Low		Increased energy efficiency of on-board equipment, leading to lower vessel emissions
	Promoting skills, knowledge, innovation and capacity building	Unclassified	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	?	Effect dependent on nature and success of projects
	Advisory/consultancy services	Unclassified	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	?	Effect dependent on nature and success of services
	Diversification of fishing activities	Unclassified	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	?	Effect dependent on the change in distance and time at sea
	Improvement of key fishing port/landing infrastructure	Adverse	Possible	Temporary	Infrequent	Reversible	Possible	Remote	Low	Immediate surroundings	Low		Dust & traffic from construction works
	Improving research base of the local fisheries sector	Unclassified	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	?	Effect dependent on research outcomes and ultimate use
SO1.2	Support for engine replacement or modernisation	Beneficial	Likely	Permanent	Permanent	Reversible	Likely	Remote	Low	Immediate surroundings	Low		Increased energy efficiency of fishing vessels, leading to lower vessel emissions
SO1.3	Compensation for temporary cessation	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		No effect on air quality
SO1.4	Control and enforcement	Beneficial	Likely	Permanent	Regular	Reversible	Likely	Remote	Low	Immediate surroundings	Low		Increased energy efficiency from modernised vessels, leading to lower vessel emissions
	Collecting and processing data for fisheries and aquaculture management and scientific purposes	Unclassified	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	?	Effect dependent on nature of data use
SO1.6	Actions Addressing Marine Litter and Achieving Good Environmental Status	Adverse	Possible	Temporary	Infrequent	Reversible	Possible	Remote	Low	Immediate surroundings	Low		Dust & traffic from construction works

Environmental theme: Air quality		Effect	Probability	Duration	Frequency	Reversibility	Cumulative effects	Transboundary effects	Magnitude	Spatial extent	Value and vulnerability	Significance	Justification
	Actions addressing the conservation and restoration of Natura 2000 areas & Marine Protected Areas	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		No effect on air quality
Priority 2: Fostering sustainable aquaculture activities and processing and marketing of fisheries and aquaculture products													
SO2.1	Ensuring the environmental sustainability of the aquaculture industry	Beneficial	Possible	Permanent	Regular	Reversible	Likely	Remote	Medium	National	Medium		Reduction in carbon footprint of aquaculture
	Increasing resilience and competitiveness of the sector through enhanced investment including research and innovation	Unclassified	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	?	Effect dependent on research outcomes and ultimate use
	Knowledge and exchange	Unclassified	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	?	Effect dependent on applicability of knowledge to environmental aspects
SO2.2	Marketing Measures & Awareness-Raising Campaigns	Unclassified	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	?	Effect dependent on type of marketing campaigns and their success
	Compensation to operators in case of exceptional events	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		No effect on air quality
N/A	Technical assistance	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		No effect on air quality

7.2.2 Biodiversity

The Consultants have assessed the impacts of the measures on this environmental theme in accordance with SL 549.61 (the SEA DIRECTIVE). Biodiversity comprises all living native organisms and the diverse habitats in which they inhabit, and is also considered to be the natural heritage of that area/country. Threats to biodiversity generally include land take-up which cause direct loss of species and habitats and indirect impacts such as trampling, settlement of dust on habitats and dispersion of pollutants via land, water and air. For the purposes of this SEA, biodiversity has been assessed in terms of the statuses of local protected habitats & species, status of other habitats (valleys and watercourses) and status of environmental factors (coastal water, groundwater, geology and soil).

The extents of biodiversity impacts arising from the EMFAF programme measures primarily depend on the following factors:

- Effectivity and efficiency of Malta's fishing fleet;
- Effectivity and efficiency of control and enforcement practices, including monitoring practices;
- Ecological health of Natura 2000 sites and marine protected areas (MPAs), along with that of protected species/habitats;
- Quantity of marine litter and lost fishing gear;
- Ecological health of farmed species; and
- Ecological impacts of aquaculture farms.

The extent (or significance) of the impact for each measure on biodiversity depends on the success of the measure and its ability to affect Malta's biodiversity on a national scale. The Programme is largely focused on improving marine biodiversity, meaning most of the measures have a beneficial impact on biodiversity. Only one measure is likely to have a minor detrimental effect on biodiversity, which is the upgrading of port infrastructure; this measure will see construction works which could potentially involve land take-up or other impacts to nearby biodiversity. This impact is nevertheless temporary in duration and the projects will be subjected to separate EIA/AA studies at permitting stage, as required by legislation, to reduce the significance of these impacts.

Table 15: Final Assessment Matrix for the Measures (Biodiversity)

Environmental theme: Biodiversity		Effect	Probability	Duration	Frequency	Reversibility	Cumulative effects	Transboundary effects	Magnitude	Spatial extent	Value and vulnerability	Significance	Justification
Priority 1: Fostering sustainable fisheries and the conservation of aquatic biological resources													
SO1.1	On-board fishing vessels investments	Beneficial	Likely	Permanent	Permanent	Irreversible	Likely	Remote	Medium	National	Medium		Improved selectivity of on-board fishing gear
	Promoting skills, knowledge innovation and capacity building	Unclassified	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	?	Effect dependent on nature and success of projects
	Advisory/consultancy services	Unclassified	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	?	Effect dependent on nature and success of services
	Diversification of fishing activities	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		No effect on biodiversity
	Improvement of key fishing port/landing infrastructure	Adverse	Possible	Permanent	Infrequent	Reversible	Possible	Remote	Medium	Immediate surroundings	Low		Land and/or sea take-up causing habitat loss and/or fragmentation
	Improving research base of the local fisheries sector	Unclassified	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	?	Effect dependent on research outcomes and ultimate use
SO1.2	Support for engine replacement or modernisation	Beneficial	Likely	Permanent	Permanent	Reversible	Likely	Remote	Low	Immediate surroundings	Medium		Improved engine performance results in less oil leaks and emissions into the marine environment
SO1.3	Compensation for Temporary cessation	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		No effect on biodiversity
SO1.4	Control and enforcement	Beneficial	Likely	Permanent	Regular	Reversible	Likely	Remote	Medium	National	Low		Improved C&E leading to better management of resources
	Collecting and processing data for fisheries and aquaculture management and scientific purposes	Unclassified	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	?	Effect dependent on nature of data use
SO1.6	Actions Addressing Marine Litter and Achieving Good Environmental Status	Beneficial	Likely	Permanent	Permanent	Irreversible	Likely	Remote	High	National	High		Reduction in impacts from ghost fishing and litter ingestion
	Actions addressing the conservation and restoration of Natura 2000 areas & Marine	Beneficial	Certain	Permanent	Permanent	Irreversible	Likely	Remote	High	National	High		Improved ecological status

	Environmental theme: Biodiversity	Effect	Probability	Duration	Frequency	Reversibility	Cumulative effects	Transboundary effects	Magnitude	Spatial extent	Value and vulnerability	Significance	Justification
	Protected Areas												
	Priority 2: Fostering sustainable aquaculture activities and processing and marketing of fisheries and aquaculture products												
SO2.1	Ensuring the environmental sustainability of the aquaculture industry	Beneficial	Possible	Permanent	Regular	Reversible	Likely	Remote	Medium	National	Medium		Reduction in carbon footprint of aquaculture
	Increasing resilience and competitiveness of the sector through enhanced investment including research and innovation	Unclassified	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	?	Effect dependent on research outcomes and ultimate use
	Knowledge and exchange	Unclassified	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	?	Effect dependent on applicability of knowledge to environmental aspects
SO2.2	Marketing Measures & Awareness-Raising Campaigns	Unclassified	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	?	Effect dependent on type of marketing campaigns and their success
	Compensation to operators in case of exceptional events	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		No effect on biodiversity
N/A	Technical assistance	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		No effect on biodiversity

7.2.3 Land Uses and Landscape

The Consultants have assessed the impacts of the measures on this environmental theme in accordance with SL 549.61 (the SEA DIRECTIVE). Land uses describes the human use of land, designating activities such as agricultural, residential, industrial, and recreational uses that are practiced in a given area. For the purposes of this SEA, land uses will also include sea uses. Landscape is defined by the European Landscape Convention as "*an area, as perceived by people, whose character is the result of the action and interaction of natural and/or human factors*".[33] Landscape does not only comprise of visual aspects of the environment, but also includes the character of an area perceived through the remaining four senses. For the purposes of this SEA, landscape has been assessed from a visual perspective, in terms of the status of landform and topography, landscape, the natural beauty and scenic amenity of the landscape.

Land uses and landscape impacts of the EMFAF programme on a national scale primarily depend on the take-up of open spaces and/or marine areas which would have adverse impacts on the uses and landscape of the area. The extent (or significance) of impacts is dependent on the implementation location and area taken up by developments or maritime activities. The EMFAF programme is largely focused on improving marine biodiversity, meaning few of the measures have an effect on land uses and landscape. However, some measures aim to improve ecological status of marine protected areas (MPAs), as well as manage, restore and monitor them. Only two measures are likely to have a minor detrimental effect on landscape, which are the upgrades to port infrastructure; these measures will see construction works in areas which already suffer from poor landscape quality. These impacts are nevertheless temporary in duration.

Table 16: Final Assessment Matrix for the Measures (Land Uses and Landscape)

Environmental theme: Land Uses and Landscape		Effect	Probability	Duration	Frequency	Reversibility	Cumulative effects	Transboundary effects	Magnitude	Spatial extent	Value and vulnerability	Significance	Justification
Priority 1: Fostering sustainable fisheries and the conservation of aquatic biological resources													
SO1.1	On-board fishing vessels investments	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		No effect on land use & landscape
	Promoting skills, knowledge innovation and capacity building	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		No effect on land use & landscape
	Advisory/consultancy services	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		No effect on land use & landscape
	Diversification of fishing activities	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		No effect on land use & landscape
	Improvement of key fishing port/landing infrastructure	Adverse	Possible	Permanent	Infrequent	Reversible	Possible	Remote	Medium	Immediate surroundings	Low		Land and/or sea take-up, as well as construction equipment impeding landscape
	Improving research base of the local fisheries sector	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		No effect on land use & landscape
SO1.2	Support for engine replacement or modernisation	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		No effect on land use & landscape
SO1.3	Temporary cessation	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		No effect on land use & landscape
SO1.4	Control and enforcement	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		No effect on land use & landscape
	Collecting and processing data for fisheries and aquaculture management and scientific purposes	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		No effect on land use & landscape
SO1.6	Actions Addressing Marine Litter and Achieving Good Environmental Status	Adverse	Possible	Permanent	Infrequent	Reversible	Possible	Remote	Low	Immediate surroundings	Low		Construction equipment and/or reception facilities impeding landscape
	Actions addressing the conservation and restoration of Natura 2000 areas & Marine Protected Areas	Beneficial	Likely	Permanent	Permanent	Reversible	Likely	Remote	Low	National	Medium		Improved use and status of protected sites
Priority 2: Fostering sustainable aquaculture activities and processing and marketing of fisheries and aquaculture products													
SO2.1	Ensuring the environmental sustainability of the aquaculture industry	Beneficial	Possible	Permanent	Regular	Reversible	Likely	Remote	Medium	National	Medium		Minimising impacts by locating aquaculture facilities in most

Environmental theme: Land Uses and Landscape		Effect	Probability	Duration	Frequency	Reversibility	Cumulative effects	Transboundary effects	Magnitude	Spatial extent	Value and vulnerability	Significance	Justification
													suitable areas
	Increasing resilience and competitiveness of the sector through enhanced investment including research and innovation	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		No effect on land use & landscape
	Knowledge and exchange	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		No effect on land use & landscape
SO2.2	Marketing Measures & Awareness-Raising Campaigns	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		No effect on land use & landscape
	Compensation to operators in case of exceptional events	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		No effect on land use & landscape
N/A	Technical assistance	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		No effect on land uses & landscape

7.2.4 Cultural Heritage

The Consultants have assessed the impacts of the measures on this environmental theme in accordance with SL 549.61 (the SEA DIRECTIVE). Cultural heritage is defined as the "*legacy of physical artefacts and intangible attributes of a group or society that is inherited from past generations*".[32] Threats to cultural heritage generally include land or sea take-up which may uncover and potentially damage unknown cultural heritage features, along with accidental damage to known features on land or at sea. For the purposes of this SEA, cultural heritage has been defined in terms of the number and status of scheduled sites on land and at sea.

The extent of cultural heritage impacts primarily depend on the following factors:

- Impact type such as excavation or dredging which could uncover and potentially damage unknown archaeological features;
- Location of the works, particularly relating to the likelihood of archaeological discoveries;
- Cultural importance of the features present, both known and unknown, and their designation by law; and
- The physical distance between the impact source and the cultural heritage receptor.

Reducing the extent of the impacts can be achieved by limiting the extent of land take-up, limiting the impact duration and maximising the distance from the impact source. The EMFAF programme is largely focused on improving marine biodiversity, meaning most of the measures have no effect on cultural heritage, and none of the measures beneficially affect cultural heritage. Only two measures are likely to have a minor detrimental effect on landscape, which are the upgrades to port infrastructure; these measures will see construction works which could potentially involve excavation and/or dredging. These impacts are nevertheless temporary in duration.

Table 17: Final Assessment Matrix for the Measures (Cultural Heritage)

Environmental theme: Cultural Heritage		Effect	Probability	Duration	Frequency	Reversibility	Cumulative effects	Transboundary effects	Magnitude	Spatial extent	Value and vulnerability	Significance	Justification
Priority 1: Fostering sustainable fisheries and the conservation of aquatic biological resources													
SO1.1	On-board fishing vessels investments	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		No effect on cultural heritage
	Promoting skills, knowledge innovation and capacity building	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		No effect on cultural heritage
	Advisory/consultancy services	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		No effect on cultural heritage
	Diversification of fishing activities	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		No effect on cultural heritage
	Improvement of key fishing port/landing infrastructure	Adverse	Possible	Temporary	Permanent	Reversible	Possible	Remote	Low	Immediate surroundings	Low		Possible damage to unknown cultural heritage features
	Improving research base of the local fisheries sector	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		No effect on cultural heritage
SO1.2	Support for engine replacement or modernisation	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		No effect on cultural heritage
SO1.3	Temporary cessation	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		No effect on cultural heritage
SO1.4	Control and enforcement	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		No effect on cultural heritage
	Collecting and processing data for fisheries and aquaculture management and scientific purposes	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		No effect on cultural heritage
SO1.6	Actions Addressing Marine Litter and Achieving Good Environmental Status	Adverse	Possible	Temporary	Permanent	Reversible	Possible	Remote	Low	Immediate surroundings	Low		Possible damage to unknown cultural heritage features
	Actions addressing the conservation and restoration of Natura 2000 areas & Marine Protected Areas	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		No effect on cultural heritage
Priority 2: Fostering sustainable aquaculture activities and processing and marketing of fisheries and aquaculture products													
SO2.1	Ensuring the environmental sustainability of the aquaculture industry	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		No effect on cultural heritage
	Increasing resilience and competitiveness of the sector through enhanced investment including research and innovation	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		No effect on cultural heritage

Environmental theme: Cultural Heritage		Effect	Probability	Duration	Frequency	Reversibility	Cumulative effects	Transboundary effects	Magnitude	Spatial extent	Value and vulnerability	Significance	Justification
	Knowledge and exchange	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		No effect on cultural heritage
SO2.2	Marketing Measures & Awareness-Raising Campaigns	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		No effect on cultural heritage
	Compensation to operators in case of exceptional events	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		No effect on cultural heritage
N/A	Technical assistance	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		No effect on cultural heritage

7.2.5 Waste Management

The Consultants have assessed the impacts of the measures on this environmental theme in accordance with SL 549.61 (the SEA DIRECTIVE). Waste generation represents a loss of resources, and the management of waste places pressure on the environment in terms of air, water quality and land take-up. For the purposes of this SEA, the quantity of waste generated by type and the proportion of waste separation and recycling have been used as indicators.

Impacts on waste management on a national scale primarily depend on the amount of waste generated and the amount of litter recovered from the environment. The extent (or significance) of the impact for each measure depends on the success of the measure and its ability to affect Malta's waste system on a national scale. The EMFAF programme is largely focused on improving marine biodiversity, meaning most of the measures have no effect on waste management. A few of the measures involve upgrades to on-board fishing vessels which would reduce the quantity of discards, thereby yielding positive impacts on waste management. Two other measures aim to encourage fishers to passively recover and dispose of marine litter and lost fishing gear, also yielding a positive impact on waste management. The measure which aims to upgrade fishing port infrastructure would likely result in demolition, excavation and/or dredging waste which would need to be disposed; this constitutes a negative impact on waste management. The measures which aim to modernise the fishing fleet and replace other on-board equipment would generate additional Waste from Electrical and Electronic Equipment (WEEE), which would also require disposal.

Table 18: Final Assessment Matrix for the Measures (Waste Management)

Environmental theme: Waste Management		Effect	Probability	Duration	Frequency	Reversibility	Cumulative effects	Transboundary effects	Magnitude	Spatial extent	Value and vulnerability	Significance	Justification
Priority 1: Fostering sustainable fisheries and the conservation of aquatic biological resources													
SO1.1	On-board fishing vessels investments	Beneficial	Likely	Permanent	Frequent	Reversible	Likely	Remote	Low	National	Medium		Improved fishing size selectivity, reducing discards
	Promoting skills, knowledge, innovation and capacity building	Unclassified	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	?	Effect dependent on nature and success of projects
	Advisory/consultancy services	Unclassified	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	?	Effect dependent on nature and success of services
	Diversification of fishing activities	Unclassified	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	?	Effect dependent on whether diversification causes an increase or decrease in discards
	Improvement of key fishing port/landing infrastructure	Adverse	Likely	Temporary	Permanent	Irreversible	Likely	Remote	Medium	Immediate surroundings	Medium		Demolition, excavation and/or dredging waste
	Improving research base of the local fisheries sector	Unclassified	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	?	Effect dependent on research outcomes and ultimate use
SO1.2	Support for engine replacement or modernisation	Beneficial	Likely	Temporary	Infrequent	Reversible	None	None	Low	Immediate surroundings	Low		Improved engines generate less residual wastes from maintenance and operation
SO1.3	Temporary cessation	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		No effect on waste management
SO1.4	Control and enforcement	Adverse	Likely	Temporary	Infrequent	Reversible	Likely	Remote	Low	Immediate surroundings	Medium		Generation of waste from upgrading of patrol vessels
	Collecting and processing data for fisheries and aquaculture management and scientific purposes	Unclassified	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	?	Effect dependent on nature of data use
SO1.6	Actions Addressing Marine Litter and Achieving Good Environmental Status	Beneficial	Likely	Permanent	Frequent	Reversible	Likely	Remote	Medium	National	Medium		Reduced marine litter and lost fishing gear
	Actions addressing the conservation and restoration of	Beneficial	Possible	Temporary	Infrequent	Reversible	Possible	Remote	Low	National	Medium		Restoration is likely to include clean ups,

Environmental theme: Waste Management		Effect	Probability	Duration	Frequency	Reversibility	Cumulative effects	Transboundary effects	Magnitude	Spatial extent	Value and vulnerability	Significance	Justification
	Natura 2000 areas & Marine Protected Areas												which improve handling of waste
Priority 2: Fostering sustainable aquaculture activities and processing and marketing of fisheries and aquaculture products													
SO2.1	Ensuring the environmental sustainability of the aquaculture industry	Beneficial	Possible	Temporary	Infrequent	Reversible	Possible	Remote	Low	National	Medium		Reduced discards
	Increasing resilience and competitiveness of the sector through enhanced investment including research and innovation	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		No effect on waste management
	Knowledge and exchange	Unclassified	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	?	Effect dependent on applicability of knowledge to environmental aspects
SO2.2	Marketing Measures & Awareness-Raising Campaigns	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		No effect on waste management
	Compensation to operators in case of exceptional events	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		No effect on waste management
N/A	Technical assistance	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		No effect on waste management

7.2.6 Transboundary impacts

No transboundary implications are foreseen from the implementation of the EMFAF Programme in view of the fact that the measures proposed will take place within the territory of the Maltese Islands. The measures will have no bearing on the territory of another country.[57]

7.3 ASSESSMENT OF ALTERNATIVES

Comparing the proposed programme with alternative scenarios is a vital part of the SEA process since it allows the identification of potential recommendations and improvements which could mitigate any adverse impacts. This stage in the process focuses on identifying alternative approaches which could give better environmental conditions.

Three alternatives are used in this SEA, as outlined in Section 6:

Alternative 0:	Zero-option
Alternative 1:	Minimum scenario which satisfies the total financial allocations as per EMFAF Regulations 2021/1139
Alternative 2:	As proposed in the EMFAF Programme 2021-2027

The selection of these alternatives took into account that the budgets and priority areas are defined by the Regulation (EU) 2021/1139 of the European Parliament and of the Council of 7 July 2021 establishing the EMFAF and amending Regulations (EU) 2017/1004 and the Partnership Agreement. The zero-option (Alternative 0) represents a theoretical alternative where no funds are allocated under these regulations. This Alternative is purely theoretical since the allocation of funds is required by legislation. Alternative 2 assumes full implementation of the policy according to the proposed measures in the draft programme and indicates that for climate change contribution, the EMFAF programme will exceed the requirements of the EMFAF Regulation 2021/1139 by allocating a significantly higher amount to climate change measures as opposed to 30%. The minimum intervention scenario (Alternative 1) represents a scenario in which the minimum funds are allocated to the environment.

The vast majority of the measures included in the EMFAF Programme 2021-2027 have either no effect or a positive effect on the environmental themes studied. The only measures which show an adverse effect on the environment are those which involve construction works (measures including the improvement and expanding of key fishing port/landing infrastructure on air quality, biodiversity, land uses & landscape, cultural heritage and waste management) and increase in WEEE from modernisation of the fishing fleet. Impacts from construction works should be assessed in detail as part of the EIA process, to identify project-specific impacts and applicable mitigation

[57] Considerations have been taken in line with the Strategic Environmental Assessment Regulations S.L.549.61 article 8.

measures. Impacts from WEEE in relation to onboard investment can be mitigated by appropriate handling of the waste, including recycling wherever possible.[58]

Since the majority of the proposed measures yield positive impacts on the environment, the do-nothing scenario (Alternative 0) will have the least beneficial impact on the environment from the three possible scenarios. In the absence of the EMFAF programme (Alternative 0), the fisheries sector may not have the possibility to receive the funds/measures to invest in energy efficient equipment, thus resulting in further pollution and less climate consideration. Resources to assist the aquaculture sector may not currently be available, preventing the sector from decreasing its carbon footprint and possibly lead to unsustainable practises that may have adverse effects on climate/environment.

Both the do-minimum scenario (Alternative 1) and the as-proposed scenario (Alternative 2) will give rise to positive impacts on the environment, particularly with regards to marine biodiversity. However, Alternative 1 offers less than half the budgets allocated for the fostering of efficient fisheries control and enforcement [including fighting against illegal, unreported and unregulated fishing (IUU) fishing and climate objectives] when compared to Alternative 2. This would mean that either the funds are obtained from national budgets, or some of the projects may not be implemented to the same extent or if at all. In the former case, Alternative 1 and 2 would yield the same environmental effects, while in the latter, the Alternative 1 scenario would therefore yield less beneficial effects on the environment than Alternative 2.

Alternative 2 is the most suited alternative since it will exceed the requirements of the EMFAF regulation by allocating a significantly higher amount towards climate change prevention measures. The fishing and aquaculture sector will benefit from interventions that support better energy efficiency and less harmful practises. The marine environment will also stand to gain from practices addressing marine litter and better habitat and ecosystem management. In the absence of the EMFAF programme (Alternative 0), the aquaculture sector may not have the necessary resources for marketing and development of quality products, knowledge etc.

Comparison between the impacts of the three alternatives on the five environmental themes is summarised in Table 19.

[58] Such measures may be subject to conditions as required through the call for applications and grant agreement.

TABLE 19: SUMMARY OF ALTERNATIVES & THEIR ENVIRONMENTAL IMPACTS

ENV THEME	ALT 0		ALT 1		ALT 2	
	IMPACT		IMPACT		IMPACT	
	SHORT	LONG	SHORT	LONG	SHORT	LONG
Air quality						
Biodiversity						
Land uses & landscape						
Cultural heritage						
Waste management						

7.4 DATA GAPS AND OTHER DIFFICULTIES

The SEA made use of data relevant to the national context which is available in the public domain. Data on the baseline conditions in the national context was available and no data gaps were encountered in extracting information on the SEA's indicators. Nevertheless, the baseline conditions are established on current environmental conditions and likely trends of the environmental themes and indicators with time. While this provides the most likely scenario, the actual outcome from the actions which are already being planned might be different from those estimated. Since it is unreasonable and misleading to quantify impacts on many of the environmental themes, the SEA was carried out on a qualitative basis, based on available data and the consultants' expertise.

Given that the EMFAF Programme will operate at a national scale, collecting and analysing information on successful implementation brings about a number of limitations. In accordance with the regulations and practice guidance on SEA, the assessment has taken into account the level of detail presented in the draft EMFAF Programme. At this stage, limited detail on the measures, such as location, timings and duration of certain works is available. In line with best practice techniques, a risk-based approach has been taken, in which we assumed the worst-case scenario from an environmental impact point of view. In certain instances, mitigation measures have been determined to induce both an adverse and a beneficial impact on specific environmental themes, thus also causing an uncertain impact.

Nevertheless, the impacts arising from the implementation of the measures may differ from those predicted in this SEA. Some measures were categorised as "unclassified" due to their ambiguous nature, with some having numerous possible outcomes. Table 20 provides a summary of these unclassified measures, as well as a justification.

TABLE 20: POLICY MEASURES WITH UNCLASSIFIED IMPACTS

MEASURE	UNCLASSIFIED ENV. THEMES	JUSTIFICATION
Promoting skills, knowledge, innovation and capacity building	Air quality, biodiversity and waste management	Effect dependent on nature and success of projects
Advisory/consultancy services	Air quality, biodiversity and waste management	Effect dependent on nature and success of services
Diversification of fishing activities	Air quality	Effect dependent on the change in distance and time at sea
Improving research base of the local fisheries sector	Air quality, biodiversity and waste management	Effect dependent on research outcomes and ultimate use
Collecting and processing data for fisheries and aquaculture management and scientific purposes	Air quality, biodiversity and waste management	Effect dependent on nature of data use
Investments in ports or other infrastructure to provide adequate reception facilities for lost fishing gear and marine litter	Waste management	Effect dependent on balance between increased C&D waste and decreased litter
Increasing resilience and competitiveness of the sector through enhanced investment including research and innovation	Air quality and biodiversity	Effect dependent on research outcomes and ultimate use
Knowledge and exchange	Air quality, biodiversity and waste management	Effect dependent on applicability of knowledge to environmental aspects
Marketing Measures & Awareness-Raising Campaigns	Air quality and biodiversity	Effect dependent on type of marketing campaigns and their success

8 SHORTCOMINGS AND RECOMMENDATIONS

Following the preparation of the final SEA, the consultants have identified seven aspects which are recommended for inclusion in the EMFAF Programme 2021-2027. The omission of the below measures from the current EMFAF Programme is not considered as an adverse impact. Nevertheless, the Programme has the opportunity to fund projects that make Malta's fishing industry more sustainable and bring it closer to circular economy, thus enriching the Programme.

Alternative fishing techniques

The programme successfully offers funding for low-carbon alternatives in terms of equipment/fishing gear upgrades to improve size selectivity and reduce/eliminate unwanted catches, diversification of farmed species and sustainable feed. Nevertheless, one of the methods to reduce environmental impacts of fisheries is to shift away from impactful fishing techniques to alternatives that are less damaging to biodiversity and have a lower carbon footprint. Fishing techniques such as beam trawling and bottom trawling severely and permanently destroy benthic habitats and species, as well as catching a large number of non-target species. Furthermore, due to the friction of the net against the seabed, these techniques are also fuel-intensive and possess a large carbon footprint. Encouraging the shift to alternative techniques such as trap fishing, seine fishing and gillnet fishing should be further encouraged to reduce biodiversity impacts and improve the industry's sustainability through the programmed training initiatives, advisory services and upgrades of fishing gear.

Handling of fish offals

Aquaculture farms and their land-based facilities generate fish offals as a by-product. This material is currently either disposed offshore or exported for use as a raw material in the production of fish meal and fish oil. Facilities which convert aquaculture by-products to raw materials would reduce the carbon footprint and atmospheric emissions of this aspect of the aquaculture industry, as well as improving management of this waste stream on a national scale. Projects which promote increased environmental contribution, including through the local handling of aquaculture waste, should be viewed favourably.

Linking research to blue economy

The Programme will provide support for research into sustainability of fisheries, research surveys at sea and restoration measures for important habitats and species. Information on the way the research results will be used to benefit the maritime, fisheries and aquaculture sectors and increase the sustainability of these sectors is nevertheless limited. Linking the research goals to their implementation in the sectors would be of great benefit.

Consideration of microplastics

EMFAF is targeted towards restoration of biodiversity and ecosystems. Two of the measures included in the programme encourage fishers to collect marine litter and lost fishing gear. Nevertheless, the Programme does not mention microplastics and their threats to the marine ecosystem, of which there are numerous.[59] The Programme would be improved by expanding research funding opportunities to include studies on microplastics in local seafood, as well as techniques for their removal from the marine environment which will contribute to maintaining a good environmental status in the marine environment, as set out in Article 1(1) of Directive 2008/56/EC and article 25 (2) (c) of Regulation 2021/1139.

Selection of projects addressing environmental concerns

A further recommendation emerging from the SEA is the need to ensure that, during project selection, proposals/initiatives that address a number of environmental concerns should be given priority over those that do not. Environmental requirements during project selection should be allocated enough weighting potentially through eligibility and selection criteria to ensure that project proponents actively pursue environmental requirements.

Locating interventions in a way to avoid significant impacts

In agreement with ERA's comments during public consultation, we recommend that physical interventions such as the upgrading of port infrastructure and the installation of storage facilities for fishing gear and marine litter are located in areas which avoid significant impacts on natural sites, landscape and seascape, undeveloped rural land, biodiversity, cultural heritage and their context. Preference should therefore be made to proposed developments that are least harmful to the environment, primarily directed towards areas already designated for development and similarly committed sites, away from important environmental areas such as valleys, ridge-edges, cliffs, escarpments, natural habitats and sites, natural coast, important seabed habitats, etc. Furthermore, preference should be given to projects which minimise the generation of waste as much as possible, and implement the waste hierarchy. Suitable abatement measures should also be considered as part of the design of the development and its implementation, in order to minimise noise and air emissions.

Locating aquaculture areas in a way to avoid significant impacts

In agreement with ERA's comments during public consultation, we recommend that the Programme should ensure that aquaculture zones and related operations do not result in adverse impacts on natural sites, seabed, the conservation status of important natural habitats and species, protected areas and important landscapes

[59] Andrady, A. (2011). Microplastics in the marine environment. *Marine Pollution Bulletin*, *62*(8), 1596-1605. doi: 10.1016/j.marpolbul.2011.05.030.

and seascapes. Particular consideration needs to be made to sensitive seabed habitats (ex: maerl beds and *Posidonia* meadows), shallow waters, natural coasts and coastal landscapes/seascapes. Suitable buffer zones should be established from such sensitive areas where no fish farming operations and/or facilities should be considered.

9 MONITORING REQUIREMENTS

Periodic monitoring and review of the Programme is necessary to enable continued success of the strategy. The monitoring plan is set to reflect the changes in national patterns for all environmental themes, technology development and ongoing discussions at European level relating to the EMFAF Programme 2021-2027.

Measurable indicators are necessary to quantitatively assess the strategy's implementation success. In fact, such indicators have been used to predict how the five environmental themes will be affected by the realisation of the measures. Making use of the same indicators to monitor the effectiveness of the Programme would facilitate the interpretation of the results.

In most cases, the indicators can be obtained from existing programmes/datasets gathered as a result of environmental permitting, environmental assessments and/or other national monitoring programmes which are associated with the implementation of environmental obligations. In this way, duplication of efforts is avoided. The aim of the monitoring programme within this environment report is to have a consistent set of data upon which potential adverse environmental impacts can be identified.

There are also project-level mechanisms that are in place to protect the environment, such as detailed EIAs in line with the EIA Regulations and environmental/industrial permitting. Such mechanisms should also be considered so as to ensure that the Programme measures are implemented without having, individually or cumulatively, significant adverse environmental impacts.

The following subsections outline the monitoring and measurements recommended for the implementation stage of the EMFAF Programme 2021-2027.

9.1 AIR QUALITY

Monitoring of air quality during construction works may help to assess the adverse impacts arising from the measures relating to port infrastructure upgrades. The Programme's measures do not include the construction of new facilities which release atmospheric pollutants. In case such facilities are included, these facilities should be monitored through their operational permit conditions.

The chemical parameters considered as part of this SEA are regularly being monitored by the ERA in relation to national monitoring programmes; such data can be made use of for air quality monitoring purposes, as referenced in Section 5.1.

9.2 BIODIVERSITY

Criteria for biodiversity ensure that the ecological status of Maltese waters is maintained and safeguarded. This is measurable by observing trends of parameters which are already being monitored in line with the MSFD and WFD. In this case, relevant parameters include the good environmental status of Malta's water bodies in terms of biodiversity (Descriptor 1), non-indigenous species (Descriptor 2), commercial fish species (Descriptor 3), food webs (Descriptor 4), seafloor integrity (Descriptor 6), contaminants in seafood (Descriptor 9) and marine litter (Descriptor

10). Parameters include the contaminant levels in seafood and geographical distribution of indicator species such as *Posidonia oceanica*. Since these parameters are assessed through existing national monitoring programmes, such data is readily available from the ERA, as referenced in Section 5.2.

Any developments which are funded under the Programme that could have a significant adverse impact on Special Areas of Conservation (SACs) and/or Special Protection Areas (SPAs) will also require an Appropriate Assessment in line with the FLORA, FAUNA AND NATURAL HABITATS PROTECTION REGULATIONS, TREES AND WOODLANDS PROTECTION REGULATIONS and CONSERVATION OF WILD BIRDS REGULATIONS (Section 4.3.5). This exercise would help to more specifically identify biodiversity impacts and a monitoring programme at project-level.

9.3 LAND USES AND LANDSCAPE

The developments being proposed by the Programme (notably the port infrastructural upgrades) are likely to have an adverse effect on the Maltese land use and landscape. Such impacts would arise both due to the presence of machinery during the construction works, and due to permanent structures during the operational phase. Although impacts on landscape are difficult to quantify, indicators such as the extent of Areas of Very High Landscape Sensitivity (AHLVs) can be indirectly used to monitor and measure these impacts; such data is readily available from the ERA, as referenced in Section 5.3. Reduced AHLVs indicate that the landscape has been negatively impacted.

Furthermore, sea uses can be monitored through the assessment of maritime traffic and through the implementation of a national maritime spatial plan, which has not yet been established by Malta.[29] Such a plan should be detailed enough to designate certain zones which should be used for one or a few specific activities.

9.4 CULTURAL HERITAGE

Maintaining the conservation status of cultural heritage can be achieved by protecting scheduled and designated areas from various threats such as take-up of virgin land and land reclamation which may damage archaeological features of national importance. Monitoring the success of this criterion involves the assessment of the number of complaints relating to features of cultural heritage affected by the measures, along with the archaeological monitoring of such developments to properly document any discoveries.

9.5 WASTE MANAGEMENT

Efficient resource management is achieved through the promotion of sustainable waste management by following the waste hierarchy. Measures which are expected to increase waste generation, such as construction works (port infrastructure upgrades) and measures which would generate WEEE (outdated hardware), should be monitored. Monitoring parameters to assess the success of waste management include measurement of waste generation of different streams, evaluating the recycling rates for WEEE, the volume of Construction & Demolition waste generated

and disposed of (not reused). Such datasets are readily available from MEEE and Wasteserv, as referenced in Section 5.5.

Waste generated from the fishing and aquaculture industries, including discards and aquaculture offals, should also be monitored. This data would be available from reporting requirements from environmental permits, as well as data from the Department of Fisheries and Aquaculture.

10 NON-TECHNICAL SUMMARY

AIS Environment completed a SEA on the European Maritime, Fisheries and Aquaculture Fund (EMFAF) Programme 2021-2027. The SEA evaluates the environmental impacts of the Programme on a national scale. Funds allocated through this Programme cover fisheries, aquaculture and the maritime sector. Measures related to scientific input, enforcement, market intelligence and others also fall under this Programme.

The EMFAF aims to reduce the carbon footprint and environmental impacts of the maritime, fisheries and aquaculture sectors. Most of the measures are therefore beneficial to the marine environment. Beneficial measures include:

- Compensation for fishers who collect marine litter and lost fishing gear;
- Support for fishers to replace their fishing gear with equipment aimed at reducing/eliminating discards and improving size selectivity;
- Assistance for the protection of important natural areas; and the restoration of important habitats and species.

Some negative impacts might arise from the Programme measures. Impactful measures are those involving construction works such as port infrastructure upgrades and increased generation of electronic waste such as modernisation of the fishing fleet. However, at implementation stage such projects will be subject to an EIA and planning permits as required by local legislation. Such studies which will delineate the necessary requirements to mitigate such impacts.

The SEA compares three alternative theoretical scenarios of the Programme. The zero-option (Alternative 0) represents a theoretical alternative where no funds are allocated under these regulations. This Alternative is purely theoretical since the allocation of funds is required by legislation. Alternative 2 assumes full implementation of the policy according to the proposed measures in the draft programme and indicates that for climate change contribution, the EMFAF programme will exceed the requirements of the EMFAF Regulation 2021/1139 by allocating a significantly higher amount to climate change measures as opposed to 30%. The minimum intervention scenario (Alternative 1) represents a scenario in which the minimum funds are allocated to the environment.

Since the majority of the proposed measures yield positive impacts on the environment, the do-nothing scenario (Alternative 0) will have the least beneficial impact on the environment from the three possible scenarios, since less funding is available for the fisheries sector to invest in energy-efficient equipment and reduce its carbon footprint. Both the do-minimum scenario (Alternative 1) and the as-proposed scenario (Alternative 2) will give rise to positive impacts on the environment, particularly with regards to marine biodiversity. However, Alternative 1 offers less budgets than Alternative 2. Alternative 2 is the most suited alternative since it will exceed the requirements of the EMFAF regulation by allocating a significantly higher amount towards climate change prevention measures. The fishing

and aquaculture sector will benefit from interventions that support better energy efficiency and less harmful practises. The marine environment will also stand to gain from practices addressing marine litter and better habitat and ecosystem management.

The Consultants put forward seven recommendations to boost the beneficial environmental effects of the Programme. Firstly, high-impact fishing techniques such as bottom trawling could slowly be phased out, and more sustainable practises may be further encouraged to reduce biodiversity impacts and improve the industry's sustainability through the programmed training initiatives, advisory services and actions targeting the use of sustainable fishing gear. Projects which would see the conversion of aquaculture by-products such as fish offals into raw materials should be viewed favourably, since such material is either discarded offshore or exported for recycling. Although the Programme includes funding for multiple research projects, there is no information on how the outcomes from the research projects will be used to improve the maritime, fisheries and aquaculture sectors in practice. Furthermore, the Programme considers marine litter but it does not mention microplastics, which are an area of concerning for the marine environment and human health. Projects which address environmental concerns in the fisheries and aquaculture sectors should be viewed favourably. Preference should also be made to developments that are least harmful to the environment, primarily directed towards areas already designated for development and similarly committed sites, away from important environmental areas such as valleys, ridge-edges, cliffs, escarpments, natural habitats and sites, natural coast, important seabed habitats, etc. Finally, the Programme should ensure that aquaculture zones and related operations do not result in adverse impacts on natural sites, seabed, the conservation status of important natural habitats and species, protected areas and important landscapes and seascapes. Including these recommendations would enrich the Programme.

This Environmental Report has been subjected to public consultation, and the comments received have been integrated into this final version of the Environmental Report. A Monitoring Report and Adoption Statement has been prepared on the basis of the SEA process and findings.

ANNEX 1: SCREENING & SCOPING REPORT

AIS ENVIRONMENT

Screening & Scoping Report

For the Provision of the SEA of the EMFAF Programme 2021-2027

Report

AIS ENVIRONMENT

SCREENING & SCOPING REPORT

AIS REF. NO: **PRJ-ENV564**

CLIENT REF. NO: **CT3000/2020/2**

EIGHTH VERSION

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DISCLAIMER

This report has been prepared by AIS Environment Limited with all reasonable skill, care and diligence, and taking account of the manpower and resources devoted to it by agreement with the client. Information reported herein is based on the interpretation of data collected and has been accepted in good faith as being accurate and valid.

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1 INTRODUCTION

The Strategy & Implementation Division (SID) within the Office of the Prime Minister has commissioned AIS Environment Ltd. through the public procurement system (CT3000/2020/2) to carry out a Strategic Environmental Assessment (SEA) of the EMFAF Programme 2021-2027.

The SEA will be carried out in accordance with local legislation S.L.549.61 (Environment Protection Act), and involves the following tasks as outlined in the TORs:

Task 1: Kick-off meeting
Task 2: Inception report
Task 3: Screening and scoping report
Task 4: Draft environmental report
Task 5: Public and stakeholder consultations
Task 6: Final environmental report
Task 7: Draft adoption and monitoring report
Task 8: Final adoption and monitoring report

This report achieves the requirements of Task 3.

1.1 WHAT IS SEA?

Strategic Environmental Assessment (SEA) is a process that is designed to safeguard the environment by including environmental considerations in the development of policy, plans and programmes. It is a decision-making tool that helps ensure that any policy/Programme has taken into account its wider environmental implications. A number of alternatives are assessed to ensure that the most appropriate measures are implemented.

The SEA process involves intensive consultation with stakeholders to ensure that all impacts and viewpoints are considered and evaluated. Overall, SEA aims to achieve a holistic approach to help countries strive towards achieving sustainable development through the implementation of environmentally sustainable practices and policies.

1.2 SEA LEGISLATION

The need to carry out SEA is provided in the EU Directive 2001/42/EC of 27th June, 2001. This EU Directive is transposed into national Maltese legislation in S.L. 435.64 (Strategic Environmental Assessment Regulations, 2010) of the Environment Protection Act (CAP. 435).

SEA is required to determine whether a policy or programme is expected to have a significant effect upon the environment. The SEA is applicable to all polices/programmes that relate to agriculture, forestry, fisheries, energy, industry, transport, waste management, water management, telecommunications, tourism, town and country planning and land use, which will set a precedent for the consent of future development projects.

1.3 THE SEA PROCESS

The requirement for an SEA is determined through the screening phase, governed by Article 5 Paragraph 1 of S.L. 549.61, which requires an assessment on whether a programme is envisaged to have "*significant environmental, including health, effects either through a case-by-case examination or by specifying types of plans and programmes or by combining both approaches.*" Furthermore, the relevant party is required to "*ensure that the environmental and health authorities referred to in article 9, paragraph 1, are consulted when applying the procedures referred to in paragraph 1 above*" in line with Article 5 Paragraph 2.

If the screening exercise concludes that an Environmental Report is required, the next step in the SEA process is referred to as scoping. Once the main visions of the programme/s have been determined, it is necessary to identify those environmental aspects that will have the largest role to play in the specific programme/s. Paragraph 2 of Article 6 of S.L. 549.61 requires that the scoping report is subjected to public and stakeholder consultation: "*the environmental and health authorities referred to in article 9, paragraph 1, are consulted when determining the relevant information to be included in the environmental report.*"

Once the environmental aspects to be considered as part of the SEA have been identified, the most prominent and relevant factors are selected to be used for the basis of the assessment process. The scoping process also involves the identification of EU, regional and national policies that need to be considered when designing the new programme/s. This is important to ensure that all polices are working together to achieve sustainable development and that they do not contradict one another.

After the scoping stage is concluded, the next stage involves the compilation of the environmental report. This comprises of assessing the role of the identified environmental factors in the formulation of the new programme/s and determining its impact on the environmental themes. The first stage is to carry out extensive research to establish the present conditions (baseline) and trends of each of the specific environmental factors. The baseline conditions and trends are subsequently used to assess the effect that the programme/s will have upon each of the environmental factors. The process involves the consideration of a number of alternatives. The impact of each of the individual environmental factors is assessed for each of the alternatives being considered in the drafting process of the respective programme/s. The significance of each impact is assessed in terms of whether it is positive or negative; permanent or temporary and short, medium or long term. Secondary, cumulative impacts are also considered.

After the assessment stage, the issue of environmental monitoring is tackled. Practical monitoring schemes are proposed for each of the identified environmental factors. Consultation with local authorities is required at this stage to establish the monitoring mechanisms are already in place to avoid duplication. This ensures the most efficient use of resources. It is important to have the monitoring methods in place by the time the programmes are finalised. This enables monitoring to begin as

soon as the programmes are implemented and if necessary, allows prompt action to be taken as necessary.

Once a thorough assessment of all the proposed measures and their impacts have been made, the environmental consultant is a position to provide an overall assessment of the effectiveness of such alternatives. At this stage the consultant also takes the opportunity to provide recommendations about the measures being assessed and any other relevant information that should be considered in the future.

Public and stakeholder consultation plays a very important role throughout the duration of the SEA process. They are regularly consulted to ensure that all viewpoints are being considered and that the proposed measures within the programmes are appropriate from an environmental point of view. Communication between the relevant authorities and the environmental consultants is therefore vital to produce the best possible draft. The communication between these two bodies must be two way and reciprocal.

Once the environmental report has been finalised and approved, if needed, the consultants, on behalf of the responsible authority, will provide a Statement of Adoption in connection with the outcome of the analysis carried out. The statement must outline how environmental factors were considered in the drafting of the programmes including; a summary of the consultations and findings presented in the environmental report; and justifications for choosing the final measures.

When the programmes implementation starts, it is important that the monitoring that was suggested in the environmental report is carried out. Such monitoring is an important aspect to the process to ensure that the programmes are having the desired effect environmentally and is not leading to any unforeseen adverse environmental effects.

1.4 OBJECTIVES OF THE SCREENING & SCOPING REPORT

The aim of the screening exercise is to determine whether a particular plan or programme requires an SEA, based on legislative guidance and requirements. The screening stage is decisive for the initiation of the entire SEA process. The Screening and Scoping Report, as presented, includes a clear recommendation on whether a SEA should be undertaken as well as the proposed measures that shall be discussed with the relevant stakeholders. While the experts have included a recommendation (vide Section 3.2), the ultimate decision on whether an SEA will be required falls within the remit of the SEA Focal Point.

Should the screening process determine that an SEA is required, the next phase would involve scoping (refer to Section 4), whereby the context for the assessment and methodology is set out. The scoping phase is one of the most important stages in the process, as it identifies the environmental issues for consideration in the SEA process in accordance with Directive 2001/42/EC on the Assessment of the Effects of Certain Plans and Programmes on the Environment. The aims of the scoping report are to provide a general background to the project and to outline the way forward

for the SEA of CT3000/2020/2 and to determine the potential environmental impacts of the Programme for consultation.

The first step in the scoping exercise will involve reviewing the proposed list of measures to be potentially included in the Programme, as provided by the Contracting Authority. The information will be used to feed into the screening report template provided by the SEA Focal Point. During the reviewing process, a number of key environmental themes that will need to be considered in the formulation of the Programme will be identified. Several criteria and indicators will be also be developed at this stage to assess the impact of the proposed strategy measures on the above environmental themes. These indicators are important in the assessment of the effectiveness of the strategy and in the monitoring stages once the strategy has been finalised and implemented. A list of stakeholders that will be involved in the consultation process shall be identified and presented to the CA for discussion.

The Screening and Scoping Report will then be subjected to the first session of stakeholder consultation, as required by Article 5 Paragraph 2 and Article 6 Paragraph 2 of S.L. 549.61. This first consultation period will engage all of the stakeholders who are deemed to be affected by the planning and implementation of the Programmes. The consultation period, in line with guidance provided by the SEA Focal Point, will allow interested stakeholders to provide feedback on the Programme vis-à-vis the environmental themes. The aim of this first consultation period is to ensure that all affected environmental areas have been highlighted and that all viewpoints are considered in the early stages of the SEA and Programme drafting.

Following the stakeholder consultation, a final list of environmental themes that will need to be assessed in relation to the development of the Programmes will be drawn up and included in the final version of the Screening and Scoping Report. The scoping report will act as a guide for the assessment of environmental themes and compilation of the Environmental Report.

2 OVERVIEW OF THE SECTOR PROGRAMME

2.1 INSTITUTIONAL AND LEGISLATIVE FRAMEWORK

Regulation (EU) 2021/1060 laying down common provisions on the European Regional Development Fund, the European Social Fund Plus, the Cohesion Fund, the Just Transition Fund and the European Maritime, Fisheries and Aquaculture Fund and financial rules for those and for the Asylum, Migration and Integration Fund, the Internal Security Fund and the Instrument for Financial Support for Border Management and Visa Policy and the European Maritime, Fisheries and Aquaculture Fund Regulation (EU) 2021/1139, require that a programme is prepared and submitted by Member States and adopted by the Commission as part of the programming process.

2.2 OVERVIEW OF THE PROGRAMME

The SEA covers one programme related to the use of European funds dedicated to the Common Fisheries Policy (CFP) and the Integrated Maritime Policy (IMP), called the European Maritime, Fisheries and Aquaculture Fund (EMFAF) 2021-2027. This funding programme is the successor to the European Maritime & Fisheries Fund (EMFF) 2014-2020.

Funds allocated through this Programme cover the management of fisheries, aquaculture and fishing fleets. Measures related to scientific input, controls and checks, market intelligence, amongst others, are also applicable under this programme.

The programme is foreseen to be divided into two Priority areas:

- Priority 1: Fostering sustainable fisheries and the conservation of aquatic biological Resources;
- Priority 2: Fostering sustainable aquaculture activities and processing and marketing of fisheries and aquaculture products, thus contributing to food security in the Union.

2.3 RESPONSIBLE AUTHORITIES/INSTITUTIONS

The Strategy & Implementation Division (SID) within the Office of the Prime Minister is the Contracting Authority and the Responsible Authority for the drafting of the EMFAF 2021-2027 Programme. AIS Environment has been contracted by the SID to carry out the Strategic Environmental Assessment in accordance with the SEA REGULATIONS (S.L. 549.61). The Responsible Authority governing the SEA process is the SEA Focal Point, which has been appointed in line with Regulation 15(1) of the SEA REGULATIONS (S.L. 549.61).

2.4 PROPOSED MEASURES

In accordance with Regulation 7(4) of the SEA Regulations (S.L. 549.61), "*the responsible authority shall make the plan or programme and its environmental report available to the public electronically and in published form for viewing at its offices for the purposes of sub-regulation (2).*" The Draft Programme was subject to a public

consultation exercise between September and October 2021 and may be accessed on www.eufunds.gov.mt.

The Programme will focus on enhanced sustainable management of the Maltese fisheries and aquaculture sectors by focusing on two (2) thematic priorities where resources shall be focused.[1] These Priorities have a total budget (EU+MT share) of some EUR 29 million and are:

- Priority 1: Fostering sustainable fisheries and the restoration and conservation of aquatic biological resources; and
- Priority 2: Fostering sustainable aquaculture activities, and processing and marketing of fisheries and aquaculture products, thus contributing to food security in the Union.

Investments supported under EMFAF shall particularly aim to foster sustainable fisheries and aquaculture, contribute to food security, restore and protect marine biodiversity whilst enabling the sustainable growth of the blue economy. The following types of initiatives under each priority have also been identified:

Priority 1:

- Actions addressing the promotion of skills, knowledge, innovation, and capacity building
- Actions targeting on board fishing vessels investment
- Diversification of fishing activities
- Actions aimed at improving and expanding key port/landing infrastructure
- Actions aimed at improving the research base of the local fisheries sector with the aim of increasing sustainability and resilience
- Temporary cessation aimed at contributing towards the sustainability of the sector
- Control and enforcement measures
- Collection, management, and processing of data for fisheries and aquaculture management and scientific purposes
- Actions Addressing Marine Litter and Achieving Good Environmental Status
- Actions addressing the conservation and restoration of Natura 2000 areas & Marine Protected Areas

Priority 2:

- Ensuring the environmental sustainability of the aquaculture industry
- Increasing resilience and competitiveness of the sector through enhanced investment including research and innovation
- Knowledge and Exchange measures
- Marketing Measures & Awareness-Raising Campaigns

[1] These thematic priorities exclude Technical Assistance.

3 SCREENING EXERCISE

3.1 COMPLETED SCREENING FORM

The screening template provided by the SEA Focal Point has been filled in with details on the EMFAF Programme 2021-2027, as presented in the following pages.

SEA Focal Point	SEA Screening Template Based on S.L. 549.61 (L.N. 497 of 2010, as amended by Act XXV of 2015 and LN82 of 2019)	April 2021

This screening template has been drafted by the SEA Focal Point based on the SEA Regulations and is being distributed in document format for ease of use. Submitted versions shall only be considered if they align with this original version also available on the SEA website.

Part A – Plan/Programme (PP) & Responsible Authority (RA)	
Title of PP: EMFAF Programme 2021-2027	
Responsible Authority: Strategy and Implementation Division, Office of the Prime Minister	
Contact Person: Maria Pia Pace	Position: Director General (Strategy and Implementation Division)
Contact Address: 32, House of Catalunya, Triq Marsamxett, Valletta, Malta	
Email: maria-pia.a.pace@gov.mt	Telephone: +356 22957620
Date: 26/01/2022	
As per S.L. 549.61, when more than one entity is responsible for the PP (or parts thereof), a single responsible authority should be nominated by agreement between the authorities responsible for the PP.	

Part B – General Information about the Plan/Programme (PP)
Purpose of PP: The PP represents an programme related to the use of European funds dedicated to the Common Fisheries Policy (CFP) and the Integrated Maritime Policy (IMP), called the European Maritime, Fisheries and Aquaculture Fund (EMFAF) 2021-2027. This programme is the successor to the European Maritime & Fisheries Fund (EMFF) 2014-2020. Funds allocated through this Programme cover the management of fisheries, aquaculture and fishing fleets. Measures related to scientific input, controls and checks, market intelligence, maritime surveillance and security are also applicable under this Programme. The programme is divided into two (2) thematic priority areas: • Priority 1: Fostering sustainable fisheries and the conservation of aquatic biological Resources; and • Priority 2: Fostering sustainable aquaculture activities and processing and marketing of fisheries and aquaculture products, thus contributing to food security in the Union.
Period Covered by PP: 2021-2027
Envisaged updates/modifications: N/A

Area covered by PP (also attach map): Malta (Figure 1)
Summary of PP content: Investments supported under EMFAF shall particularly aim to foster sustainable fisheries and aquaculture, contribute to food security, restore and protect marine biodiversity whilst enabling the sustainable growth of the blue economy. The following types of initiatives under each priority have also been identified: Priority 1: • Actions addressing the promotion of skills, knowledge, innovation, and capacity building • Actions targeting on board fishing vessels investment • Diversification of fishing activities • Actions aimed at improving and expanding key port/landing infrastructure • Actions aimed at improving the research base of the local fisheries sector with the aim of increasing sustainability and resilience • Temporary cessation aimed at contributing towards the sustainability of the sector • Control and enforcement measures • Collection, management, and processing of data for fisheries and aquaculture management and scientific purposes • Actions Addressing Marine Litter and Achieving Good Environmental Status • Actions addressing the conservation and restoration of Natura 2000 areas & Marine Protected Areas Priority 2: • Ensuring the environmental sustainability of the aquaculture industry • Increasing resilience and competitiveness of the sector through enhanced investment including research and innovation • Knowledge and Exchange measures • Marketing Measures & Awareness-Raising Campaigns

Part C – Applicability of the SEA Regulations

Criterion	Yes/No	Explanation
Exemptions – Regulation 4(9)		
Is the PP's sole purpose to serve national defence or civil emergency? **OR**	No	The PP's sole purpose is not to serve national defence or civil emergency.
Is this a financial or budget PP?	Yes	The PP is a programme which outlines measures that will make use of European funds dedicated

		to the Common Fisheries Policy and the Integrated Maritime Policy. The PP has been subjected to a screening exercise in order to determine whether the measures could have a significant effect on the environment.
Qualification of PP - Regulation 3		
Is the PP subject to preparation and/or adoption by a national, regional, or local authority? **OR**	Yes	Strategy and Implementation Division (SID) within the Office of the Prime Minister
Is the PP prepared by an authority for adoption through legislative procedure by Parliament or Government? **AND**	Yes	Regulation (EU) 2021/1060 laying down common provisions on the European Regional Development Fund, the European Social Fund Plus, the Cohesion Fund, the Just Transition Fund and the European Maritime, Fisheries and Aquaculture Fund and financial rules for those and for the Asylum, Migration and Integration Fund, the Internal Security Fund and the Instrument for Financial Support for Border Management and Visa Policy establishing the European Maritime, Fisheries and Aquaculture Fund through Regulation (EU) 2021/1139 require that programmes are submitted by Member States and adopted by the Commission as part of the programming process. The PP is being drawn up in order to fulfil these obligations.
Is the PP required by legislative, regulatory, or administrative provisions?	Yes	As above.
Regulations 4(1) to 4(4)		

The SEA Regulations require that a strategic environmental assessment, in accordance with regulations 5 to 10, shall be carried out by the responsible authority for PPs referred to in sub-regulations 4(2) to 4(4) which are likely to have significant environmental effects, as follows: (i) Regulation 4(2) identifies PPs that are already considered to have a significant environmental effect. Moreover, Regulation 4(2)(b) requires liaison with the Environment and Resources Authority (ERA) as the authority responsible for the Habitats Directive and protection of Special Areas of Conservation (SACs) and Special Protection Areas (SPAs). (ii) Responsible authorities should determine, in line with the provisions of the SEA Regulations, whether PPs identified in Regulations 4(3) to 4(4) are likely to have significant environmental effects [also see Regulation 4(5) below].		
Regulation 4(2) – SEA required automatically		
Is the PP prepared for agriculture, forestry, fisheries, energy, industry, transport, waste management, water management, telecommunications, tourism, town and country planning or land use? AND	Yes	The programme is being prepared for the Fisheries and Aquaculture sectors.
Does the PP set the framework for future development consent of projects listed in Annexes I and II to the EIA Directive (85/337/EEC – as updated by Directive 2014/52/EU). [These Annexes are transposed as Schedule 1 in the national EIA Regulations] OR	No	The PP represents a programme related to the use of European funds dedicated to the Common Fisheries Policy and Integrated Maritime Policy. The PP has no effect on the development consent of any projects listed in Annexes I and II to the EIA Directive (85/337/EEC – as updated by Directive 2014/52/EU). These Annexes are transposed as Schedule 1 in the national EIA Regulations. The projects included in the list of PP measures would still be subjected to planning

		development procedures and the provisions of the EIA Directive and local EIA regulations.
Will the PP, in view of its likely effect on sites, require an assessment (Appropriate Assessment) under Articles 6 or 7 of the Habitats Directive (92/43/EEC)?	No	The PP is an EU funded programme related to investment in the Fisheries and Aquaculture Sectors in Malta. While any development applications which are covered by the PP will be subjected to AA screening in line with the Habitats Directive, the AA procedure is not applicable to the PP itself.
Regulation 4(3) – Applied only for PPs referred in 4(2)		
Does the PP in 4(2) determine the use of small areas at a local level? **OR**	Yes	The PP includes measures which could determine the use of small land areas at a local level.
Is it a minor modification of a PP referred in 4(2)?	No	The PP represents a programme related to the use of European funds dedicated to the investment in the Fisheries and Aquaculture Sectors in Malta. The programme will target the needs of fishers and sector-related employees to ensure the provision of the necessary training. The programme will ensure that both the Fisheries and Aquaculture sectors are supported to foster growth and development through marketing campaigns and enhanced research, amongst others. The Programme will also modernise the sectors through innovation targeting new technology and equipment especially bearing in mind energy efficiency and reduced impact on the marine environment. Moreover, Programme aims to contribute towards enhanced knowledge of the marine environment and its ecosystems whilst also addressing marine litter, climate change and aquatic biodiversity impacts.

Regulation 4(4) – Applied only for PPs not referred in 4(2)		
Is the PP, which set the framework for future development consent of projects, likely to have a significant effect on the environment?	N/A	N/A since the PP is referred to in 4(2)

Part D – Determining the Likely Significance of Effects on the Environment referred to in Regulation 4(5) (Schedule II)

Regulation 4(5) – Applied for PPs referred to in 4(3) and 4(4)		
Criteria	**Likely to have significant environmental effects? Yes/No**	**Explanation on the significant environmental effects (both positive and negative)**
Characteristics of the PP		
The degree to which the PP sets a framework for projects and other activities, either with regard to the location, nature, size and operating condition; or by allocating resources	No	The PP allocates European funds to certain measures relating to the Common Fisheries Policy and the Integrated Maritime Policy. The assessment is based on the level of detail of the draft programme. The specific measures are yet to be determined at project level during the implementation of the programme. While the majority of the measures are non-physical, the measures relating to investments in ports, quay and repair of slipways and facilities are likely to involve physical interventions. While the PP allocates budgets for these projects/activities, the PP does not set a framework for the location, nature, size and operating condition of the developments.
The degree to which the PP influences	No	The PP allocates European funds to certain measures relating to the Common Fisheries

other plans and programmes including those in a hierarchy		Policy and the Integrated Maritime Policy. The measures do not influence other plans and programmes.
The relevance of the PP for the integration of environmental considerations in particular with a view to promoting sustainable development	Yes	The PP allocates European funds to certain measures relating to the Common Fisheries Policy and the Integrated Maritime Policy. The assessment is based on the level of detail of the draft programme. The specific measures are yet to be determined at project level during the implementation of the programme. The priority areas covered by this PP are fostering sustainable fisheries and the conservation of aquatic biological resources; and fostering sustainable aquaculture activities and processing and marketing of fisheries and aquaculture products. Consequently, some measures may integrate environmental considerations in particular with a view to promoting sustainable development.
Environmental problems relevant to the PP	No	The PP allocates European funds to certain measures relating to the Common Fisheries Policy and the Integrated Maritime Policy. No environmental problems are relevant to the PP.
The relevance of the PP for the implementation of community legislation on the environment (eg. PPs linked to waste	No	The PP allocates European funds to certain measures relating to the Common Fisheries Policy and the Integrated Maritime Policy. Funds allocated through this Programme cover the management of fisheries, aquaculture and fishing fleets. Measures

management or water protection)		related to scientific input, controls and checks, market intelligence, maritime surveillance and security are also applicable under this Programme. The PP has no influence on the implementation of community legislation on the environment, particularly in relation to the Waste Framework Directive 2008/98/EC (transposed in Malta by S.L. 549.63), the Habitats Directive 92/43/EEC (transposed in Malta by S.L. 549.44), Birds Directive 2009/147/EC (transposed in Malta by S.L. 549.42), Marine Strategy Framework Directive 2008/56/EC (transposed in Malta by S.L. 549.62). No changes to the international obligations that Malta has adopted and is currently implementing will arise from this PP.

Characteristics of the effects and area likely to be affected		
The probability, duration, frequency, and reversibility of the effects	Yes	The PP allocates European funds to certain measures relating to the Common Fisheries Policy and the Integrated Maritime Policy. While the measures may integrate environmental considerations, the majority of the measures are non-physical, which are not expected to have significant environmental effects. Investments in ports, quay and repair of slipways and facilities involve infrastructure upgrades which could have an effect on the environment, with variable probability, frequency and reversibility of the effects depending on the specifications of these projects, which are not available at this strategic stage.

		In order to take a precautionary approach, an SEA will be carried out to reasonably predict any environmental impacts from the implementation of the PP measures. The probability, duration, frequency, and reversibility of the effects will be extracted for each measure, as outlined in Section 4.
The cumulative nature of the effects	Yes	The PP allocates European funds to certain measures relating to the Common Fisheries Policy and the Integrated Maritime Policy. While the measures may integrate environmental considerations, the majority of the measures are non-physical, which are not expected to have significant environmental effects. Investments in ports, quay and repair of slipways and facilities involve infrastructure upgrades which could have an effect on the environment, with the possibility of cumulative effects if proximal developments are carried out simultaneously. The cumulative nature of the effects depends on the specifications of these projects, which are not available at this strategic stage. In order to take a precautionary approach, an SEA will be carried out to reasonably predict any environmental impacts from the implementation of the PP measures. The possibility of cumulative effects will be discussed for each measure, as outlined in Section 4.
The transboundary nature of the effects	No	The PP allocates European funds to certain measures relating to the Common Fisheries Policy and the Integrated Maritime Policy. The

		PP measures are confined to national waters and no transboundary effects are envisaged.
The risks to human health or the environment (eg. due to accidents)	Yes	The PP allocates European funds to certain measures relating to the Common Fisheries Policy and Integrated Maritime Policy. While the measures may integrate environmental considerations, the majority of the measures are non-physical, which are not expected to have significant environmental effects. Investments in ports, quay and repair of slipways and facilities involve infrastructure upgrades which could have an effect on the environment, with possible risks to human health or the environment depending on the specifications of these projects, which are not available at this strategic stage. In order to take a precautionary approach, an SEA will be carried out to reasonably predict any environmental impacts from the implementation of the PP measures. The human health and environmental risks will be discussed for each measure, as outlined in Section 4.
The magnitude and spatial extent of the effects (geographical area and size of population likely to be affected)	Yes	The PP allocates European funds to certain measures relating to the Common Fisheries Policy and the Integrated Maritime Policy. While the measures may integrate environmental considerations, the majority of the measures are non-physical, which are not expected to have significant environmental effects. Investments in ports, quay and repair of slipways and facilities involve infrastructure upgrades which could have an effect on the

		environment, with variable magnitude and spatial extent of the effects depending on the specifications of these projects, which are not available at this strategic stage. In order to take a precautionary approach, an SEA will be carried out to reasonably predict any environmental impacts from the implementation of the PP measures. The magnitude and spatial extent of the effects will be extracted for each measure, as outlined in Section 4.
The value and vulnerability of the area likely to be affected due to: I) Special natural characteristics or cultural heritage II) Exceeded environmental quality standards or limit values III) Intensive land use	No	The PP allocates European funds to certain measures relating to the Common Fisheries Policy and the Integrated Maritime Policy. While the measures may integrate environmental considerations, the majority of the measures are non-physical, which are not expected to have significant environmental effects. Investments in ports, quay and repair of slipways and facilities involve infrastructure upgrades which could have an effect on the environment. The draft Programme identifies high level initiatives including port infrastructure related primarily to refurbishment and upgrades and representing a minor component of the Programme. Details on the location of these developments and the value and vulnerability of the areas are not available at this strategic stage, as the specifics will be devised at project application stage.
The effects on areas or landscapes which	No	The PP allocates European funds to certain measures relating to the Common Fisheries

have recognized national, community or international protection status		Policy and the Integrated Maritime Policy. While the measures may integrate environmental considerations, the majority of the measures are non-physical, which are not expected to have significant environmental effects. Investments in ports, quay and repair of slipways and facilities involve infrastructure upgrades which could have an effect on the environment. The draft Programme identifies high level initiatives including port infrastructure related primarily to refurbishment and upgrades and representing a minor component of the Programme. Details on the location of these developments and the effects on areas or landscapes which have recognized national, community or international protection status are not available at this strategic stage, as the specifics will be devised at project application stage. In order to take a precautionary approach, an SEA will be carried out to reasonably predict any environmental impacts from the implementation of the PP measures. The effects on areas or landscapes which have recognized national, community or international protection status will be extracted for each measure, as outlined in Section 4.

Part E – Summary of Environmental Effects
Provide a comprehensive statement on the significant environmental effects of the PP.

The PP represents a programme which allocates European funds to certain measures relating to the Common Fisheries Policy and the Integrated Maritime Policy. The measures are split into two priority areas: fostering sustainable fisheries and the conservation of aquatic biological resources; and fostering sustainable aquaculture activities and processing and marketing of fisheries and aquaculture products. The assessment is based on the level of detail of the draft programme. The specific measures are yet to be determined at project level during the implementation of the programme. A more detailed evaluation of impact will be undertaken at project level where the nature and/or scale of the projects will be assessed.

The majority of the measures are non-physical (such as data collection plans, software and equipment investments, training, seminars, reimbursement systems, research investigations, etc.), which are not expected to have significant environmental effects. Investments in ports, quay and repair of slipways and facilities involve infrastructure upgrades which could have an effect on the environment. The draft Programme identifies high level initiatives including port infrastructure related primarily to refurbishment and upgrades and representing a minor component of the Programme. Details for these projects are not available at this strategic stage, as the specifics will be devised at project application stage.

In order to take a precautionary approach, an SEA will be carried out to reasonably predict any environmental impacts from the implementation of the PP measures.

Part F – Screening Outcome

Following the screening, as required under the Strategic Environmental Assessment regulations, including all required consultations, the RA is of the view that:

- ☐ A SEA is required because the PP falls under the scope of regulation 4(2)
- ☑ A SEA is required because the PP falls under the scope of regulation 4(3) and is likely to have significant environmental effects
- ☐ A SEA is required because the PP falls under the scope of regulation 4(4) and is likely to have significant environmental effects
- ☐ A SEA is not required because the PP is unlikely to have significant environmental effects

Maria Pia Pace

Name of Officer responsible for this report

Signature of Officer responsible for this report

Name and Stamp of Responsible Authority

26/01/2022

Date

Notes to Responsible Authority

A signed copy of this document should be provided to the SEA Focal Point after conducting all consultations. The RA should also attach:

- the draft plan/programme
- a copy of the public notification obligatory under Regulation 4(7)
- If appropriate, a copy of the notification for public participation (see Schedule III Article 5 (3) to S.L.549.61)
- Copy of consultation correspondence by the Responsible Authorities to designated authorities

FIGURE 1: AREA COVERED BY THE PP (MALTA)

3.2 EXPERTS' RECOMMENDATION

The aim of the screening exercise is to determine whether a particular plan or programme requires an SEA, based on legislative guidance and requirements. The screening stage is decisive for the initiation of the entire SEA process, and the recommendation of the authors is outlined below.

The PP represents a programme related to the use of European funds dedicated to the Common Fisheries Policy and the Integrated Maritime Policy, and the purpose of the programme is to assign funds to measures which fall under the aforementioned European policies. The measures are split into two priority areas: fostering sustainable fisheries and the conservation of aquatic biological resources; and fostering sustainable aquaculture activities and processing and marketing of fisheries and aquaculture products.

The PP will have no effect on the framework for future development consent of projects listed in Annexes I and II to Directive 85/337/EEC (Regulations 4(2)(a) and 4(4) of the SEA Regulations, S.L. 549.61). Furthermore, while the projects which are covered by the PP will be subjected to AA screening in line with the Habitats Directive, the PP itself is not (Regulation 4(2)(b) of the SEA Regulations).

The majority of the measures are non-physical (such as data collection plans, software and equipment investments, training, seminars, reimbursement systems, research investigations, etc.), which are not expected to have significant environmental effects. Investments in ports, quay and repair of slipways and facilities involve infrastructure upgrades which could have an effect on the environment. The draft Programme identifies high level initiatives including port infrastructure related primarily to refurbishment and upgrades and representing a minor component of the Programme. Once investment details are identified at project implementation stage, the project will be subjected to a development permit application which will require EIA and AA screening. The screening and/or EIA will identify potential impacts to the surroundings and provide appropriate mitigation measures, which should be included in the permit conditions.

Whilst the PP is not expected to induce any significant environmental effects (Regulation 4(3) of the SEA Regulations) on a strategic level, a precautionary approach is being adopted whereby an SEA will be carried out to reasonably predict any environmental impacts from the implementation of the PP measures.

3.3 DESCRIPTION OF KEY STAKEHOLDERS AND THEIR CONCERNS

In accordance with Article 5(2) of the SEA Regulations (S.L. 549.61), the screening exercise is subject to consultation by designated authorities (i.e. key stakeholders). Such key stakeholders include the environmental and health authorities referred to in Article 7(3) of the SEA Regulations, as reproduced hereunder:

> *(a) "The Environment and Resources Authority or any successor entity responsible for the environment; and where applicable-*

(b) the Regulator for Energy and Water Services or any successor entity or entities;
(c) the competent authority responsible for agriculture;
(d) the competent authority responsible for fisheries;
(e) the competent authority responsible for health;
(f) any other authority which is deemed by the responsible authority to have an input into the strategic environmental assessment process."

Consequently, the list of key stakeholders relevant to this SEA exercise have been identified as those included in Table 1.

TABLE 1: LIST OF STAKEHOLDERS TO BE TARGETED DURING THE PROJECT

GROUP	STAKEHOLDER
Governmental bodies	The Environment & Resources Authority
	Transport Malta
	Planning Authority
	Ministry for the Environment, Climate Change and Planning
	Ministry of Finance
	Department of Fisheries and Aquaculture
	Ministry for Transport, Infrastructure and Capital Projects
	Ministry for Gozo
	Ministry for Agriculture, Fisheries, Food and Animal Rights
	University of Malta
	Malta Aquaculture Directorate
	Energy and Water Agency
	Ambjent Malta Agency
	Ministry for Health
	Regulator for Energy and Water Services
	Environmental Health Directorate
	Civil Protection Department
	Occupational Health & Safety Authority
	Local Councils' Association
	Malta Resources Authority
NGOs	Ghaqda Koperattiva tas-Sajd (GhKS)
	Koperattiva tas-Sajd Malta (KSM)
	Flimkien Ghal Ambjent Ahjar
	Friends of the Earth Malta

GROUP	STAKEHOLDER
	Biological Conservation Research Foundation
	Fondazzjoni Wirt Artna
	Nature Trust
	Moviment Graffitti
	Birdlife Malta
	Din l-Art Helwa

The Screening and Scoping Report has been subjected to the first session of stakeholder consultation, as required by Article 5 (2) and Article 6(2) of S.L. 549.61. The consultation period, in line with guidance provided by the SEA Focal Point, allowed interested stakeholders to provide feedback on the results of the Screening & Scoping Exercise. The aim of this first consultation period was to ensure that all environmental considerations were appropriately taken into account and that all viewpoints were considered in the early stages of the SEA.

During the consultation period, two stakeholders came forward with comments on the Screening & Scoping Report, as enclosed in Appendix I and summarised in .

TABLE 2: STAKEHOLDER CONSULTATION FEEDBACK AND CONSULTANTS' REPLY

STAKEHOLDER	STAKEHOLDER FEEDBACK	SEA CONSULTANTS' REPLY
BirdLife Malta	BirdLife Malta stated that "*under Article 4 of the Strategic Environmental Assessment Regulations, the EMFAF National Programme should be subject to a SEA.*" BirdLife Malta recommended that an SEA is carried out to identify any possible negative impacts which may arise from the implementation of the measures which include physical interventions, such as the promotion of fisheries and aquaculture sectors and the expansion of port/landing infrastructure. BirdLife Malta acknowledged that the "*environmental impact of all the above mentioned is difficult to predict at this stage*" and that "*a significant share of the measures and initiatives under the Programme is of a non-physical nature.*"	Reference is made to the screening form included in Section 3.1 where a rigorous screening exercise of the PP in terms of Article 4 was carried out. The exercise concluded that the majority of the measures would not give rise to environmental effects due to their non-physical nature. From the few measures which involved physical interventions, few details are available at this strategic stage. In order to take a precautionary approach, an SEA will be carried out to reasonably predict any environmental impacts from the implementation of the PP measures.
Environment & Resources Authority	ERA corroborated the SEA consultants' statement that most of the measures are non-physical in nature and are consequently "*unlikely to have a significant adverse impact on the environment.*" They nevertheless stated that "*some of the proposed actions could still involve development interventions, such as:* *a. improving and expanding key port/landing infrastructure, such as landing sites adequately equipped to facilitate small-scale fishing activities, including fully serviced docking areas, moorings, refrigerated warehousing, etc.;*	In order to take a precautionary approach, an SEA will be carried out to reasonably predict any environmental impacts from the implementation of the PP measures. Further information on the possible impacts (including cumulative ones) which could arise from the implementation of the PP has been included in Section 3.1 of the Screening & Scoping Report. Such impacts will be assessed in further detail in the Environmental Report.

STAKEHOLDER	STAKEHOLDER FEEDBACK	SEA CONSULTANTS' REPLY
	b. storage facilities for lost fishing gear and marine litter collected; and *c. investments in port infrastructure aimed at adapting to climate change.*" ERA recommended that "*considering that most of the above infrastructural development projects will be concentrated around particular coastal areas, it is recommended that the SEA screening conclusion provides a more comprehensive and robust review of the likely impacts (including cumulative impacts) resulting from such interventions, and whether these, based on professional judgement and previous experience, could result in significant environmental impacts.*"	

4 SCOPING EXERCISE

Although the PP is not expected to induce any significant environmental effects (Regulation 4(3) of the SEA Regulations) on a strategic level, a precautionary approach is being adopted whereby an SEA will be carried out to reasonably predict any environmental impacts from the implementation of the PP measures.

The scoping exercise for this PP is presented in the following subsections.

4.1 STAGES INVOLVED IN THE COMPILATION OF THE ENVIRONMENTAL REPORT

Table 3 outlines the stages involved in the compilation of the Environmental Report.

TABLE 3: STAGES INVOLVED IN COMPILING THE ENVIRONMENTAL REPORT

STAGE		DESCRIPTION
1	Environmental themes	Identification of the key environmental aspects to be addressed in the environmental report
2	Environmental baselines	Description of the environmental baseline scope
3	Policies	Links to other relevant environmental policies, plans and programmes, particularly in relation to the SEA Regulations
4	Potential environmental issues & impact assessment	Environmental issues potentially arising from the PaMs
		Impact assessment exercise during all its phases (i.e. construction/installation, operation and decommissioning), including cumulative impacts, to evaluate whether the proposed policy-level measures are expected to be effective in pre-empting significant impacts
		Designation of mitigation measures for the adverse impacts and determining the residual impacts
5	Assessment of alternatives	The zero-option will be identified and assessed as an alternative to the proposed PP to determine the preferred alternative (including reasons for rejection of others)
6	Recommendations	A description of the recommendations made throughout the SEA process to improve criteria and measures

STAGE		DESCRIPTION
7	Monitoring proposals	A description of the monitoring requirements to assess the impacts and implications of the policy during the implementation stage

Step 1 falls within the requirements of the scoping report, and has been completed for the PP, as presented in the following subsections. Steps 2-7 are carried out as part of the Environmental Report (Task 4 of CT3000/2020), and their methodology has been outlined in the following sections.

4.2 KEY ENVIRONMENTAL ASPECTS TO BE ADDRESSED

Stage 1 involved reviewing the list of proposed measures which have been included in the PP. Following the review, a list of key environmental themes was drawn up, as follows:

- Air quality
- Biodiversity (terrestrial and marine)
- Land uses & landscape
- Cultural heritage
- Waste management

The list of key environmental themes has been drawn up using the guidelines provided in Schedule I of the SEA Regulations S.L. 549.61. Flora and fauna will be included in the assessment of biodiversity. Soil and material assets will not be assessed as part of the SEA since they are not expected to be affected by the PP measures and are therefore not considered relevant to the Environmental Report. Nevertheless, any environmental issues that may arise during the assessment will also be assessed if and wherever relevant.

The SEA Directive does not specifically require the use of objectives or indicators in SEA, yet they are recognised as the way in which environmental effects can be described, analysed and compared. SEA objectives state what is intended and the plan's performance against objectives is normally measured by indicators. The SEA objectives are different and separate from the policy objectives, although the two influence each other and may overlap. SEA indicators are measurements of temporal trends. They will be used to ascertain the success of the implementation of the policy against various SEA objectives.

The environmental issues, criteria and indicators associated with each theme have been identified as outlined in Table 4. The inter-relationships between the themes, as well as secondary, cumulative, synergistic, short, medium and long-term, permanent and temporary, positive and negative impacts of the policy will also be addressed.

This list of environmental themes, criteria and indicators is subject to update following consultation with the SEA Focal Point and relevant stakeholders identified

in Section 3.3. As outlined in Table 3, relevant policies will also be assessed as part of the SEA and presented in the Environmental Report. Such policies should include EU policies, regulations, communications, directives and international obligations and agreements that will be used throughout the process as well as the relevant national legislation that they transpose or that Malta is party to.

TABLE 4: ENVIRONMENTAL THEMES, CRITERIA AND INDICATORS RELATED TO THE ERDF, CF AND JTF

THEME	SEA OBJECTIVE		CRITERION	INDICATOR	DATA SOURCE
Air quality	1	Improve air quality	Ensure that the national air quality issues and emission limit values are not breached	National emissions (tonnage) of pollutants into the air, with regards to Malta's obligations under the NEC Directive 2016/2284	National Statistics Office
					ERA
Biodiversity	2	Maintain and safeguard protected habitats and species	Maintain and safeguard the conservation of designated habitats and species of flora and fauna	Status of protected habitats and species of flora and fauna	ERA
			Maintain and safeguard other important habitats which are not officially protected yet	Status of other habitats, including valleys and watercourses	ERA
			Maintain and safeguard environmental factors essential to ecosystems	Status of environmental factors, including coastal water, groundwater, geology and soil	ERA

THEME	SEA OBJECTIVE		CRITERION	INDICATOR	DATA SOURCE
Land uses & landscape	3	Protect the quality, integrity and distinctiveness of the landscape and townscapes	Protection of the landscape	Status of landform and topography, landscape, the natural beauty and scenic amenity of the landscape	ERA
Cultural heritage	4	Conserve and protect sites of architectural, archaeological and/or ecological importance from adverse impacts of infrastructural works	Conserve and protect sites of cultural heritage	Number of scheduled sites	PA
Waste management	5	Increase sustainable management of waste, waste preventions and minimisation practices	Promote prevention, re-use, recycling, recovery (energy)	Waste generation by type	MECP/ Wasteserv
		Increase re-use, recycling and recovery wastes	Reduce landfilling	Waste separation and recycling	

4.3 DESCRIPTION OF THE ENVIRONMENTAL BASELINE SCOPE

Stages 2 and 3 of the Environmental Report will involve a thorough literature review of any existing and available information relevant to the SEA. Literature to be assessed includes but is not limited to the following data sources:

- The Strategic Plan for the Environment and Development (SPED, 2015)
- State of the Environment Report (2018)
- The National Environmental Policy (2012)
- The National Strategy for the Environment (2020-2050)
- The National Biodiversity Strategy and Action Plan (2012-2020)
- Update of Articles 8, 9 and 10 of the Marine Strategy Framework Directive (2008/56/EC) in Malta's Marine Waters: Second Assessment Report (2020)
- Flora, Fauna and Natural Habitats Protection Regulations (S.L. 549.44)
- Long-Term Waste Management Plan (2021-2030)
- 2nd Water Catchment Management Plan for the Malta Water Catchment District (2016)
- Bathing Water Quality Regulations (S.L. 465.09)
- Air Quality Plan for the Maltese Islands (2010)
- Noise Action Plan (2013)
- The Limitation of Emissions of Certain Atmospheric Pollutants Regulations (S.L. 549.124), in view of the specific emission ceilings for Malta
- Any other relevant literature sources, such as those from the NSO, ERA, Eurostat, MetOffice, Malta Airport, MESDC and Wasteserv

A thorough assessment of the proposed PP measures shall be carried out, comparing each of the measures to the zero option (do-nothing scenario), which is a theoretical alternative where the PP is not implemented.

4.4 IMPACT IDENTIFICATION AND EVALUATION

The significance of the environmental impacts will be assessed in Stage 4, in line with the guidelines provided in Section 2 of Schedule II Criteria for determining the likely significance of effects referred to in Regulation 4(5) of S.L.549.61 on the Strategic Environmental Assessment:

(a) the probability, duration, frequency and reversibility of the effects,
(b) the cumulative nature of the effects,
(c) the transboundary nature of the effects,
(d) the risks to human health or the environment (e.g. due to accidents),
(e) the magnitude and spatial extent of the effects (geographical area and size of the population likely to be affected),
(f) the value and vulnerability of the area likely to be affected due to:
  i. special natural characteristics or cultural heritage,
  ii. exceeded environmental quality standards or limit values,
  iii. intensive land-use,
(g) the effects on areas or landscapes which have a recognised national, Community or international protection status.

Impacts on the environmental themes highlighted in Table 4 will be assessed as part of the SEA process and presented in Environmental Report. For each environmental theme, the impact assessment will be presented in tabular format, as indicated in Appendix II. Since the PP has already been developed, the zero-option (do nothing scenario) will serve as an alternative during the SEA, which will be assessed as a theoretical option (Stage 5). The matrix (Table 5) will summarise the impacts of the alternatives being considered, the significance of the impacts and the timeframe of the impacts. On the basis of the results from Stages 4 and 5, recommendations for alteration to the proposed measures of the PP will be made (Stage 6), as well as proposals for a monitoring programme of the PP (Stage 7).

APPENDIX I: STAKEHOLDER CONSULTATION FEEDBACK

BirdLife Malta's comments on the Screening and Scoping Report for the Provision of the SEA of the EMFAF National Programme 2021-2027

7 December 2021

BirdLife Malta has reviewed the Scoping and Screening Report for the Provision of the SEA of the EMFAF Programme 2021-2027 published in November 2021. Below please find our feedback with this regard.

Firstly, we would like to mention that under Article 4 of the Strategic Environmental Assessment Regulations, the EMFAF National Programme should be subject to a SEA. The aim of the SEA is to include environmental considerations into the process of drafting and development of respective national policies and programmes, to envisage the possible impact that these plans and policies can have on the environment, and to offer strong and sound mitigation measures.

The draft EMFAF National Programme states that the "main initiatives will include the promotion of the Fisheries and Aquaculture sectors, modernisation through support for new technology and equipment". Although the Programme is designed in a way that it contains a list of measures without providing specific details, the above mentioned initiatives, depending on scale, nature and other specifications may have various environmental impacts. The draft Programme also identifies "actions aimed at improving and expanding key port/landing infrastructure", specifically actions aimed at reaching of a "good and fair access to landing sites ensuring they are adequately equipped to facilitate small-scale fishing activities including, amongst others, fully serviced docking areas, moorings, refrigerated warehousing, drinking water service, ice machines, etc. to improve the infrastructure of fishing ports, auctions halls, landing sites and shelters to increase the quality, control and traceability of the products landed, energy efficiency, as well as contribute to environmental protection and improve safety and working conditions". Given the coastal locations of the proposed initiatives and the yet not fully known scale of the developments, we can assume that they can be associated with certain negative effects on the natural environment, at a scale which might see simultaneous applications ongoing at the same time.

The environmental impact of all the above mentioned is difficult to predict at this stage, yet we are of the opinion that the precautionary principle should be applied in all the cases listed to make sure that everything necessary is done to avoid the potential adverse impact on the natural environment, especially marine and coastal ecosystems. We do realize that a significant share of the measures and initiatives under the Programme is of a non-physical nature, yet certain number of actions include physical interventions and developments,

therefore, we would like to suggest adding further considerations to the SEA screening with the idea to include all possible environmental impacts arising from the actions indicated in the draft EMFAF National Programme and propose feasible mitigation measures to prevent or minimise negative impacts.

Director General
Strategy & Implementation Division
Parliamentary Secretariat for European Funds

16th December 2021

Dear Ms Maria Pia Pace,

SEA Screening for the European Maritime, Fisheries and Aquaculture Fund Operational Programme 2021-2027
Consultation in terms of Regulation 4(6) of S.L. 549.61 (Strategic Environmental Assessment Regulations)

Reference is made to the OPM's SEA screening consultation on the European Maritime, Fisheries and Aquaculture Fund (EMFAF) Operational Programme 2021-2027, which ERA received by email on 10th December 2021.

The EMFAF Programme is a strategic level document that brings together various objectives and actions aiming at fostering: (i) sustainable fisheries and the restoration and conservation of aquatic biological resources; and (ii) sustainable aquaculture activities, and processing and marketing of fisheries and aquaculture products.

ERA has reviewed the information provided with this SEA screening consultation and provides comments below, with the intention of ensuring that implementation of the Programme avoids major environmental impacts.

Yours sincerely,

Perit Michelle Piccinino
Chief Executive Officer
Environment and Resources Authority

ERA's comments on the Strategic Environmental Assessment (SEA) Screening Report for the European Maritime, Fisheries and Aquaculture Fund Operational Programme 2021-2027

16th December 2021

1. Introduction

1.1 ERA welcomes the opportunity to comment on the SEA Screening Template of the EMFAF Operational Programme 2021-2027.

1.2 These comments are provided without prejudice to ERA's review and comments on any development projects that may emerge from this programme, when more detailed environmental assessment may be required.

2. General Comments

2.1 Most of the initiatives identified in the EMFAF programme are non-physical in nature, related to investment in training, improvements to fishing vessels, data collection, etc. ERA considers that, strategically, these initiatives are unlikely to have a significant adverse impact on the environment.

2.2 The EMFAF Programme also specifies that its measures will complement other initiatives in the ERDF, CF and JTF Programme in relation to the decarbonisation of ports, investments in TEN-T seaports, as well as cross-border and transnational programmes in areas related to the green transition and risk management, including in coastal areas.

2.3 Whilst most of the proposed measures are generally not infrastructure-oriented, some of the proposed actions could still involve development interventions, such as:

a. improving and expanding key port/landing infrastructure, such as landing sites adequately equipped to facilitate small-scale fishing activities, including fully serviced docking areas, moorings, refrigerated warehousing, etc.;
b. storage facilities for lost fishing gear and marine litter collected; and
c. investments in port infrastructure aimed at adapting to climate change.

2.4 Moreover, the programme identifies the fostering of sustainable aquaculture activities as a priority. This may include interventions such as the identification and mapping of the most suitable areas for developing aquaculture, amongst other measures. Once more details are available, the potential environmental impacts of the envisaged aquaculture proposals/operations may still need to be considered at a strategic level in order to avoid significant environmental impacts at project stage, including any relevant cumulative impacts.

2.5 Generally, the SEA Screening Template highlights that the details or various specific measures are yet to be determined at project level, and that more detailed evaluation of environmental impacts will be undertaken at project stage. However, considering that most of the above infrastructural development projects will be concentrated around particular coastal areas, it is recommended that the SEA screening conclusion provides a more comprehensive and robust review of the likely impacts (including cumulative impacts) resulting from such interventions, and whether these, based on professional judgement and previous experience, could result in significant environmental impacts. In this regard it is recommended, that any physical/development interventions and commitments are directed toward existing harbours such that impacts/pressures on the coastal environment are avoided at source.

APPENDIX II: TEMPLATE FOR THE FINAL ASSESSMENT MATRIX

TABLE 5: TEMPLATE FOR THE FINAL ASSESSMENT MATRIX

ENVIRONMENTAL THEME:

	EFFECT	PROBABILITY	DURATION	FREQUENCY	REVERSIBILITY	CUMULATIVE EFFECTS	TRANSBOUNDARY EFFECTS	RISKS	MAGNITUDE	SPATIAL EXTENT	VALUE AND VULNERABILITY	EFFECT ON PROTECTED AREAS	SIGNIFICANCE	JUSTIFICATION
Policy alternative 1:	As proposed in the policy													
Criterion/measure 1														
Criterion/measure 2														
Criterion/measure 3														
Policy alternative 2:	Zero-option													
Criterion/measure 1														
Criterion/measure 2														
Criterion/measure 3														

ANNEX 2: CONSULTATION COMMENTS ON ENVIRONMENTAL REPORT

ERA
Environment & Resources Authority

Sacha Dunlop
Senior Manager
AIS Environment

22nd July 2022

Subject: Consultation on the SEA Environmental Report for the EMFAF Programme 2021-2027

ERA welcomes the opportunity to comment on the SEA Environmental Report of the EMFAF Programme, which the Authority received by email on 20th July 2022.

The conclusions in the Environmental Report are noted. ERA considers that its comments (enclosed) should be taken into consideration in the Environment Report so as to ensure that potential environmental impacts associated with projects supported by this programme are mitigated at an early stage.

Yours sincerely,

Mr. Kevin Mercieca
Acting Chief Executive Officer
Environment and Resources Authority

Environment & Resources Authority
Hexagon House, Spencer Hill, Marsa MRS 1441 T. (+356) 2292 3500 E. info@era.org.mt W. era.org.mt

ERA's comments on the Strategic Environmental Assessment (SEA) Environmental Report for the EMFAF Programme for 2021-2027

22nd July 2022

1. Introduction

1.1 ERA welcomes the opportunity to comment on the Strategic Environmental Assessment (SEA) Environmental Report (ER) for the EMFAF Programme 2021-2027

1.2 The following comments are provided without prejudice to ERA's review and additional comments on any eventual projects that may be supported by this programme, when more detailed environmental assessment and/or permitting will be required. Depending on their nature, scale and context, such projects may require different types of environmental assessments or other related screenings including Environmental Impact Assessment (EIA) and/or project-level Appropriate Assessment, as relevant. These project-level mechanisms are important to ensure that any site-specific adverse impacts on the environment, including on water resources, biodiversity, landscape, etc., resulting from proposed physical interventions, such as port/landing infrastructure, storage facilities, etc., are mitigated at an early stage.

2. Comments

2.1 Some of the proposed actions in the Programme are infrastructure-oriented, such as the upgrading of port infrastructure and the installation of storage facilities for fishing gear and marine litter. The Environmental Report acknowledges that development interventions supported by the programme could have adverse impacts on biodiversity, the landscape, land take-up and generation of waste. However, given that the details of such proposals are not available, it is difficult to determine whether such impacts could be major or minimal. **ERA considers that the choice of location for such interventions is crucial to avoid significant impacts on natural sites, the landscape and seascape, undeveloped rural land, biodiversity, cultural heritage and their context. Therefore, the Environmental Report should clearly recommend that preference should be given to proposed developments, infrastructure and similar interventions which are least harmful to the environment, which are primarily directed towards areas already designated for development and similarly committed sites, away from important environmental areas such as valleys, ridge-edges, cliffs, escarpments, natural habitats and sites, natural coast, important seabed, etc. Moreover, preference should be given to projects which minimise the generation of waste as much as possible according to the waste hierarchy. It is also recommended that suitable abatement measures are considered as part of the design of the development and its implementation, in order to minimise noise and air emissions.**

2.2 With regards to aquaculture zones and related operations, it must be ensured that these activities do not result in negative impacts on natural sites, seabed, the conservation status of important natural habitats and species, protected areas and important landscapes/seascapes. In particular, sensitive seabeds (e.g. Maerl beds), shallow waters, marine habitats (e.g. Posidonia meadows), natural coasts and coastal landscapes/seascapes should be avoided upfront, and suitable buffer zones should be established from such sensitive areas where no fish farming operations and facilities should be considered. Aquaculture facilities should be kept away from the viewshed of coastal areas, particularly important natural landscapes and seascapes, including sensitive landscapes and Areas of High Landscape Value. **These considerations need to be highlighted in the ER as environmental safeguards for giving**

preference to aquaculture-related projects and interventions which are least harmful to the environment.

Appropriate Assessment

2.3 ERA notes the comment in the Environment Report, which highlights that:

"Any developments which are funded under the Programme that could have a significant adverse impact on Special Areas of Conservation (SACs) and/or Special Protection Areas (SPAs) will also require an Appropriate Assessment in line with the Flora, Fauna and Natural Habitats Protection Regulations, Trees and Woodlands Protection Regulations and Conservation of Wild Birds Regulations (Section 4.3.5)".