Strategy and Implementation Division within the Ministry for the Economy, European Funds and Lands

STRATEGIC ENVIRONMENTAL ASSESSMENT ON THE CAP STRATEGIC PLAN FOR MALTA FOR THE PROGRAMMING PERIOD 2023-2027

ENVIRONMENTAL REPORT

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Quality Assurance

Strategic Environmental Assessment on Malta'sCAP Strategic Plan 2023-2027 Environmental Report
Oct 2022

Report for: **The Strategy and Implementation Division within the Ministry for the Economy, European Funds and Lands**

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ACRONYMS

AA	Appropriate Assessment
AAI	Area of Archaeological Importance
AHLV	Areas of High Landscape Value
AKIS	Agricultural Knowledge and Information Systems
CAP	Common Agricultural Policy
CAP SP	Common Agricultural Policy Strategic Plan
CDDA	Common Database on Designated Areas
CO	Carbon monoxide
CO_2	Carbon dioxide
EAFRD	European Agricultural Fund for Rural Development
EAGF	European Agricultural Guarantee Fund
EC	European Commission
EEA	European Environment Agency
EFSA	European Food Safety Authority
EIA	Environmental Impact Assessment
ERA	Environment and Resources Authority
EU	European Union
GAEC	Good Agricultural and Environmental Conditions
GHG	Greenhouse Gas
GI	Green Infrastructure
GRDP	Greening Regional Development Programme
HFC	Hydrofluorocarbons
IACS	Integrated Administration and Control System
IBA	Important Bird Area
IE	Included elsewhere
IPM	Integrated Pest Management
IWMAFR	An Integrated Water Management Approach to Flood Relief
LN	Legal Notice

LPIS	Land Parcel Identification System
LULUCF	Land–use, Land-use Change and Forestry
MCCAA	Malta Competition and Consumer Affairs Authority
MDG	Millennium Development Goal
MEFL	Ministry for the Economy, European Funds and Lands
MFEA	Ministry for Foreign & European Affairs
MRA	Malta Resources Authority
MTP	Mechanical Treatment Plant
NA	Not applicable
NCCAS	National Climate Change Adaptation Strategy
NECP	National Energy and Climate Plan
NF_3	Nitrogen trifluoride
NFRP	National Flood Relief Project
NGO	Non-Governmental Organisation
NH_3	Ammonia
NMVOC	Non-Methane Volatile Organic Compounds
NO	Not occurring
NO_x	Nitrogen oxides
NO_2	Nitrogen dioxide
N_2O	Nitrous oxide
NREAP	National Renewable Energy Action Plan
NSO	National Statistics Office
O_3	Ozone
ODPM	Office of the Deputy Prime Minister (UK)
PANNA	Pesticide Action Network North America
PFC	Perfluorocarbons
PM	Particulate matter
R&I	Research and Innovation
RDP	Rural Development Programme
RES	Renewable Energy Sources

RTO	Regenerative Thermal Oxidiser
SAC	Special Area of Conservation
SDS	Sustainable Development Strategy
SEA	Strategic Environmental Assessment
SF_6	Sulphur hexafluoride
SID	Strategy and Implementation Division
SMP	Soil Management Plan
SMR	Statutory Management Requirements
TSE	Treated Sewage Effluent
UK	United Kingdom
UN	United Nations
UCA	Urban Conservation Area
UNESCO	United Nations, Educational, Scientific and Cultural Organisation
UNFCCC	United Nations Framework Convention on Climate Change
UAA	Utilised Agricultural Land
VOCs	Volatile organic compounds
WCMP	Water Catchment Management Plan
WFD	Water Framework Directive
WSC	Water Services Corporation

1. CHAPTER 1 – INTRODUCTION

1.1. The objective of the Strategic Environmental Assessment (SEA) Directive is to provide a high level of protection of the environment and to contribute to the integration of environmental considerations into the preparation and adoption of plans and programmes with a view to promoting sustainable development. SEA is the process of evaluating the environmental impacts of any proposed plan / programme likely to have significant effects on the environment. The SEA process helps to inform the decision-making process and the final plan / programme with the aim of improving it and promoting sustainable development. In addition, the SEA process aims to increase public involvement in decision making at a strategic level.

THE SEA PROCESS

1.2. The SEA on Malta's Common Agricultural Policy Strategic Plan (CAP SP) 2023-2027 started in December 2021, after Adi Associates Environmental Consultants Ltd was awarded the tender in June 2021 to carry out the SEA through a competitive tender procedure administered by the Strategy and Implementation Division within the Ministry for the Economy, European Funds and Lands (MEFL).

1.3. The SEA involves several key stages, as described in **Table 1.1**. Importantly, the *scoping stage* aims to agree the scope and level of detail of information which must be included in the Environmental Report. It is one of the most important stages in the process as it identifies the issues for consideration in the Environmental Report. Although no longer a legal requirement, it is considered good practice to clearly document the scoping process. Preparation of the *Environmental Report* commences once all relevant information is collected.

Table 1.1: Key stages in the SEA process

Stage in SEA Process	Details of Process Required
Screening	Screening is required to determine whether the proposed plan/programme is likely to have significant environmental effects and whether an SEA is required.
Scoping	Scoping enables the coverage and level of detail of the Environmental Report to be determined in conjunction with the statutory consultee/s.
Environmental Report	The Environmental Report details the anticipated environmental impacts of the programme and any proposed amendments to the plan to mitigate its effects. It must be consulted upon.
Adoption	The Adoption Report details the results of consultation; how comments have been incorporated into the programme; the final programme; and the proposals for monitoring the environmental impacts of the programme.
Monitoring	The Monitoring stage is undertaken during implementation of the programme and serves to identify the level of monitoring required and, should adverse impacts be identified, any remediation proposals.

1.4. A Scoping Report was prepared and is included in **Appendix 1.** Consultation on the

draft Scoping Report was undertaken with a number of identified stakeholders, including the Environment & Resources Authority (ERA), the Planning Authority (PA), the Malta Resources Authority (MRA), the Ministry for the Environment, Climate Change & Planning, the Ministry for Health, Ministry for Energy and Water / Energy & Water Agency / Regulator for Energy and Water, the Agriculture Directorate, Managing Authority for Rural Development, Ministry for Gozo, Ministry for Agriculture, Fisheries and Animal Rights, the Superintendence of Cultural Heritage and the Environmental Health Directorate.

1.5. This Environmental Report is based on the Scoping Report including comments submitted during consultation. It outlines the assessment of the impacts of the CAP SP on various environmental parameters, as described in **Chapter 7**. Public consultation on the CAP SP together with the Environmental Report was carried out between July and August 2022. The outcome of the public consultation exercise is summarized in **Appendix 2** to this Environmental Report that contains the feedback received on the Environmental Report and the response to that feedback. **Appendix 3** describes how the recommendations made in this Environmental Report were taken on Board in the CAP SP whereas **Appendix 4** contains an Adoption Statement.

Guidance

1.6. Guidance on SEA for Malta has not yet been published. The Environmental Report therefore draws on other European Guidance, namely, the Greening Regional Development Programme (GRDP) (2006) "*Handbook on SEA for Cohesion Policy 2007-2013*", the Commission's "*Implementation of Directive 2001/42 on the Assessment of the Effects of Certain Plans and Programmes on the Environment*"[1] and the UK's (2005) "*A Practical Guide to the Implementation of the SEA Directive*".

STRUCTURE OF ENVIRONMENTAL REPORT

1.7. The structure of the Environmental Report has been developed following consideration of European Guidance and as described in the Scoping Report. The Environmental Report structure is detailed below:

- Non-technical summary;
- Glossary of abbreviations;
- **Chapter 1** – Introduction (overview of the CAP Strategic Plan and its purpose; layout of report);
- **Chapter 2** – Summary of the CAP Strategic Plan and its context (brief

[1] DG Environment ,Implementation of Directive 2001/42/EC on the assessment of the efffects of certain plans and programmes on the Environment

description of the CAP SP and related documents);

- **Chapter 3** – Methodology (identification of main options: approach taken, who has been consulted, and when);
- **Chapter 4** – Baseline environmental information and trends (and limitations of data), including evolution of baseline without the implementation of the CAP SP;
- **Chapter 5** – SEA objectives and context (key environmental aspects, relevant environmental objectives and criteria, and likely environmental implications without the SEA);
- **Chapter 6** – Assessment of alternatives, including reasons for selecting alternatives dealt with;
- **Chapter 7** – Assessment of environmental effects and proposed mitigation;
- **Chapter 8** – Recommendations; and
- **Chapter 9** – Monitoring requirements.

2. CHAPTER 2 – MALTA'S CAP STRATEGIC PLAN

INTRODUCTION

2.1. This chapter describes the CAP SP. It also gives an overview of the Strategic Objectives and related investment priorities.

2.2. The CAP Strategic Plans to be developed by each Member State will identify targeted interventions to address the specific needs of EU countries and deliver tangible results in relation to the new CAP EU-level objectives and Green Deal goals. At the same time, the CAP Strategic Plans will address national objectives and targets.

MALTA'S CAP STRATEGIC PLAN 2023-2027

2.3. Malta's CAP SP, with a budget of approximately €167 million (including Technical Assistance), seeks to continue to build on the types and patterns of support that were offered under previous CAP measures, direct payments and schemes. It covers the entire territory of the Maltese Islands. Resources will be primarily mobilised through the European Agricultural Guarantee Fund (EAGF) and by the European Agricultural Fund for Rural Development (EAFRD) targeting the needs of the agricultural sector, ensuring the provision of adequate resources to meet future demands as well as environmental and climate objectives, new technologies and digitisation, fair income for farmers and workers, improving rural conditions, and improving farm resilience. Other targets include organic farming systems, animal welfare, the apiculture sector, eco-schemes and more sustainable agricultural practices as well as support for young farmers.

2.4. The CAP SP aims to support measures in line with three general objectives, as outlined in the regulatory framework, that are addressed through nine specific objectives (SO). These are described hereunder as presented in the CAP SP.

Economic objectives

General Objective 1: To foster a smart, competitive, resilient and diversified agricultural sector ensuring long-term food security

SO1: To support viable farm income and resilience of the agricultural sector across the Union in order to enhance long-term food security and agricultural diversity as well as to ensure the economic sustainability of agricultural production in the Union

Income support to the landless livestock sectors and to land-based farms (at a higher level of support than provided through the RDP 2014-2020 due to evidence that there has been further decline in this sector). EAGF interventions will focus on direct payments to small farms, coupled with income support to the beef, sheep, dairy and tomato sectors, and complementary income support for young farmers. EAFRD interventions will include support for natural or other area specific constraints which will further support farm viability and resilience of the agricultural sector to prevent land abandonment.

SO2: To enhance market orientation and increase farm competitiveness both in the short and long term, including greater focus on research, technology and digitalisation

Interventions under EAFRD include: off-farm investments relating to infrastructure, off-farm productive investments, quality schemes and other cooperation activities, knowledge exchange including training and dissemination of information and on-farm productive investments. These interventions are designed to enhance farm competitiveness and better market orientation whilst including a greater focus on research, technology and digitalisation.

Further investment in agricultural holdings is also identified to support farm modernisation and restructuring, develop innovative technological processes, improve hygiene and soil management, and improved waste management, amongst others.

SO3: To improve the farmers' position in the value chain

Provides a toolkit of measures mainly from the EAFRD, providing a mix of soft and hard incentives to effectively support product, market and producer knowledge and development. Interventions include:

- Modernising and/or restructuring farm businesses and their holdings, including a simplified investment grant scheme for low budget grants, as well as the farm business development funding that was previously offered and is conditional on preparing a farm business plan;
- Improving processing and marketing facilities and initiatives, the upgrading of processing facilities for meat and other livestock products and pursuing stronger marketing of all Maltese fresh produce to Maltese retail and catering outlets, amongst others.
- Fostering cooperation within the sector, specific additional support will be offered to cooperatives and other groups of farmers and rural actors who act together to achieve coherent aims in line with these goals. Support will also target climate change adaptation, mitigation, sustainable use of energy and resources as well as the protection of biodiversity; and
- Grants and associated training will be offered to encourage and support more diversified farm-based businesses. This will especially encourage new business ideas initiated and run by women and young people, and businesses focused on celebrating and adding value to Maltese heritage, Maltese food and craft products and activities celebrating Maltese culture.

Interventions under Quality Schemes can also provide support to encourage uptake of National Quality Standards.

Environmental objectives

General Objective 2: To support and strengthen environmental protection, including biodiversity, and climate action and to contribute to achieving the environmental and climate-related objectives of the Union, including its commitments under the Paris Agreement.

SO4: To contribute to climate change mitigation and adaptation, including by reducing greenhouse gas emissions and enhancing carbon sequestration, as well as to promote sustainable energy

This SO will provide investment aids for farm and business development and diversification, as well as support for training and education of farmers in climate-friendly technologies and modern farming systems development. Interventions covering agri-environment-climate measures and eco-schemes will also contribute to climate adaptation or mitigation. Four eco-schemes, described below, will provide financial support to farmers who carry out specific actions. Eco-schemes complement and go beyond the existing requirements of Good Agricultural and Environmental Conditions (GAEC), Statutory Management Requirements (SMR) and national standards. The eco-schemes include:

- Land parcels dedicated for biodiversity purposes – beneficiaries will commit an area of at least one land parcel to biodiversity for 2 years by refraining from cultivating the land for crop production and without the use of Plant Protection Products, including fertilisers;
- Biodegradabe mulch - in order to reduce plastic waste from farms, an eco-scheme related to the use of biodegradable mulch will compensate farmers for costs incurred and income forgone when purchasing more expensive biodegradable mulch, instead of plastic mulch; and
- IPM and SMP for temporary crops – beneficiaries must commit to follow an Integrated Pest Management Plan on the area of the land parcel, as identified at application stage, for three consecutive years.

SO5: To foster sustainable development and efficient management of natural resources such as water, soil and air, including by reducing chemical dependency

At national scale, investments in water infrastructure for treated urban wastewater are to continue distribution to the main agricultural areas of the Maltase Islands. Smaller scale investment will include enhanced water capture facilities on farms, restoration and renovation of water management features in the landscape, and the maintenance of traditional field boundaries for soil protection.

Interventions through agri-environment-climate measures and eco-schemes can contribute to enhanced soil, water and air protection. Incentives for growing green manures or cover crops or in inter-cropping arrangements, to enable C-

sequestration in soils and planting more trees and shrubs along field boundaries, will encourage better management of natural resources.

Farm-level and higher technical training for all commercial (trading) Maltese farmers in soil and water protection and enhancement techniques and support in the form of aids for cooperation and collaboration, including support for Operational Groups will also be addressed through this Strategic Objective.

SO6: To contribute to halting and reversing biodiversity loss, enhance ecosystem services and preserve habitats and landscapes

EAFRD interventions will include non-productive and productive investments, conservation and sustainable use of genetic resources and land-based management commitments. Interventions under EAGF will include Eco-schemes and support to the apiculture sector including support for labs, varroasis, restocking and transhumance.

Social objectives

General Objective 3: To strengthen the socio-economic fabric of rural areas

SO7: To attract and sustain young farmers and new farmers and facilitate sustainable business development in rural areas

Assistance in business start-ups for young farmers in Malta including the setting up of a business plan, management marketing and financial skills development and other training and technical advisory support as required.

SO8: To promote employment, growth, gender equality, including the participation of women in farming, social inclusion and local development in rural areas, including the circular bio-economy and sustainable forestry

This SO will fund local investment in community infrastructure and activities relating to LEADER including the development and update of Local Development Strategies, the implementation of the LEADER programme that will be carried out by the Local Action Groups, and training measures for potential LAG staff and other local stakeholders. Focused support will be especially targeted to young people and women providing capacity-building in business management, leadership, and entrepreneurship, combining training with start-up/seed funding. Further initiatives include the restoration of heritage structures, including vernacular architecture, in rural areas and overall regeneration of rural area, which aim towards strengthening the socio-economic and cultural fabric of rural areas.

SO9: To improve the response of Union agriculture to societal demands on food and health, including high-quality, safe and nutritious food produced in a a sustainable way, to reduce food waste, as as to improve animal welfare and to combat antimicrobial resistance.

Actions are aimed towards investing in agricultural holdings by improving animal

welfare as well as combatting antimicrobial resistance, supporting better dietary and health requirements such as school schemes and public awareness campaigns, amongst others. Support for organic farming practices and methods will also be considered. Training and advice in animal welfare will also be supported.

Investments targeting the enhancement and mainstreaming of higher standards of production in environmental, nutritional and welfare terms, across Maltese farm sectors, coupled with aids to promote greater public awareness of local products meeting these standards, and interventions to enable farmers to better understand consumers' choices and preferences for food and drink products and their attitudes towards Maltese products. Under EAFRD this SO will be most relevant for interventions under productive and non-productive investments, as well as quality schemes and knowledge exchange, training and dissemination of information.

Training and advice to raise production standards and producer awareness of consumer demand, will also be provided. Direct consumer education can be promoted via funding for farmers organisations to pursue awareness campaigns or it can involve direct action by the public administration, or new partnerships that can be CAP-supported and created especially for these purposes under the co-operation measure.

Cross-cutting objective: modernisation

Cross-cutting objective of modernising the sector by fostering and sharing of knowledge, innovation and digitalisation in agriculture and rural areas, and encouraging their uptake

The EAGF will provide support for laboratories for the analysis of apiculture products, training and information networks as well as research programmes under the apiculture sector. Support through EAFRD will include knowledge exchange, training and dissemination of information as well as on productive investments. Agricultural Knowledge and Information Systems (AKIS) will be developed further.

RELATION OF THE CAP STRATEGIC PLAN TO OTHER NATIONAL DOCUMENTS & LEGISLATION

2.5. Schedule 2 of the SEA Regulations requires a discussion of "*the degree to which the plan or programme sets a framework for projects and other activities, either with regard to the location, nature, size and operating conditions or by allocating resources" and "the relevance of the plan or programme for the implementation of Community legislation on the environment, such as plans and programmes linked to waste-management or water protection*".

2.6. A detailed analysis was carried out at the scoping stage and is presented in its entirety in the Scoping Report (see **Appendix 1**). The analysis was subdivided into the following main categories:

(i) **International Commitments**: this category covered the international

environment and sustainability policy framework within which Malta must work. It included a selection of global commitments, such as those arising from the Millennium Development Goals (MDGs), UN Framework Convention on Climate Change (UNFCCC) and Kyoto Protocol.

(ii) **EU requirements**: relevant EU communications were included. In the case of European Union Directives already transposed into national legislation, the Directives *per se* were not discussed; the section on national legislation is described below;

(iii) **National Environmental & Planning Documents**, including the *Structure Plan for the Maltese Islands*, the *National Sustainable Development Strategy*, the *National Environment Policy* and the *National Reform Programme*. The review provided herein summarised the key issues raised in these documents; further information can be obtained from the original documents;

(iv) **National Sectoral Policies and Strategies**: this category covered highest-level policy and strategy documents published by the Government, such as the *National Strategic Plan*. Rather than summarise entire documents, this review sought to emphasise the key sustainability objectives and priorities;

(iv) **National legislation**: no attempt was made to assess the individual regulations, as is done at the project level EIA (Environmental Impact Assessment). However, the main areas of concern for the CAP SP were highlighted. Given the scale (and evolutionary nature of this field), this review was not exhaustive and represented a current (March 2022) snapshot.

3. CHAPTER 3 – METHODOLOGY

INTRODUCTION

3.1. This chapter describes the approach adopted in this SEA, the SEA process itself, its limitations, and the consultation process.

3.2. As discussed in **Chapter 1**, the SEA process in Malta is regulated by the SEA Regulations S.L.549.61; this Legal Notice transposes Council Directive 2001/42/EC[2]. Since guidance on SEA for Malta has not yet been published, this assessment draws on other European Guidance, namely, the Greening Regional Development Programme's (GRDP) (2006) "*Handbook on SEA for Cohesion Policy 2007- 2013*", the Commission's "*Implementation of Directive 2001/42 on the Assessment of the Effects of Certain Plans and Programmes on the Environment*", and the UK's (2005) "*A Practical Guide to the Implementation of the SEA Directive*".

3.3. As mentioned, this SEA began in June 2021, following a Call for Tenders by the Strategy and Implementation Division (SID) within the Ministry for the Economy, European Funds and Lands, MEFL. The Consultants (Adi Associates Environmental Consultants Ltd) have carried out the SEA in consultation with the proponents of the Plan.

DETERMINING THE SCOPE OF THE SEA

3.4. The scope of the SEA is identified in the Scoping Report for the CAP Strategic Plan. The Scoping Report identifies a range of relevant polices and plans that could be influenced by, or which could influence, the CAP SP.

3.5. The Scoping Report also contains an initial list of key environmental issues that were identified, and reasons for their inclusion in the Scoping Report are also provided. SEA objectives and indicators were also described. Monitoring, based on the chosen SEA indicators, will provide information on the effectiveness of the CAP SP in achieving the SEA objectives.

CONSULTATION

3.6. In addition to the general public, the following entities will be specifically consulted on the Environmental Report, which includes the respective designated authorities as required by S.L. 548.61 article 7(3):

- SEA Focal Point;
- Environment & Resources Authority;

[2] Directive 2001/42/EC of the European Parliament and of the Council 27th June 2001on the assessment of the efffects of certain plans and programmes on the Environment

- Planning Authority;
- Malta Resources Authority;
- Ministry for the Environment, Energy and Enterprise;
- Energy & Water Agency / Regulator for Energy and Water;
- Regulator for Energy and Water;
- Ministry for Health;
- Environmental Health Directorate;
- Agriculture Directorate;
- Managing Authority for Rural Development;
- Ministry for Gozo;
- Ministry for Agriculture, Fisheries and Animal Rights; and
- Superintendence of Cultural Heritage.

3.7. Comments were received on the Scoping Report from the Malta Resources Authority, Environment and Resources Authority, Environmental Health Department, Department of Health Regulation, and Superintendence of Cultural Heritage. The SEA Focal Point also provided feedback directly to SID. All comments were addressed and the Scoping Report was amended, where relevant.

ASSESSMENT PROCESS

3.8. The SEA process provides the start of the 'green thread', having identified:

a) potential environmental impacts that could result from the implementation of the specific objectives of the CAP SP;

b) various mitigation strategies and measures that could be used to minimise or negate the impacts of these actions; and

c) a number of future areas or activities for which further environmental assessments may be required before and during the implementation of the CAP SP.

Link to other assessments

3.9. The SEA takes into account environmental issues in accordance with Schedule I(f) of the SEA Regulations, SL 549.61

ALTERNATIVES

3.10. The SEA Directive requires the assessment to identify the likely significant effects on the environment of implementing the plan or programme, as well as considering reasonable alternatives, taking into account the objectives and the geographical scope of the plan or programme. **Chapter 6** provides an assessment of alternatives considered when developing the CAP SP.

4. CHAPTER 4 – ENVIRONMENTAL BASELINE

INTRODUCTION

4.1. A good understanding of the environment of the areas covered by the SEA is essential for the performance of a sound assessment. It is therefore necessary to establish the environmental baseline relevant to the plan or programme being proposed. This provides a snapshot of the existing state of the environment and a description of the likely future trends (based on past trends) without the programme being in place.

4.2. Schedule I of the SEA Regulations requires that the Environmental Report includes a description of "*the relevant aspects of the current state of the environment*". This Chapter provides summary information on the current state of Malta's environment, environmental trends (where available), and indicates those issues that are considered to be of particular relevance to the development of the CAP SP.

4.3. The data replicated here were collated from a number of sources; the SEA relies on existing data. The description provided below is essentially a broad-brush[3] "State of the Environment" review of the Maltese Islands, focusing on the main environmental issues.

4.4. Malta's Sustainable Development Vision for 2050 identifies the country's environmental challenges; it arises from Sustainable Development Act (Chapter 521). This legislative framework mandates Government to "mainstream Sustainable Development across the workings of Government, to raise awareness of sustainable development issues and practices across society. Malta's *National Environmental Policy 2012* further strengthens the environmental pillar of the Sustainable Development Strategy and seeks to integrate environment and development policies within the context of Europe 2020. The following environmental parameters were identified:

- Air quality;
- Climatic factors and climate change;
- Energy-efficiency and renewable energy resources;
- Biodiversity, including the marine environment;
- Freshwater;

[3] This broad-brush review does not purport to be a complete treatise of environmental data available for the Maltese Islands but aims solely to give an overview of the main environmental issues and trends applicable to the sector under review in this SEA. Hence, there may be documents, papers, or reports that are not referenced or referred to in this Environmental Report; this does not in any way devalue the content of this environmental baseline.

- Waste;
- Land use;
- Soils;
- Landscape;
- Cultural heritage;
- Population and human health; and
- Material assets.

4.5. On the basis of the above, and the scope of the SEA, **Table 4.1** shows how the Environmental Report draws together the relevant issues and baseline data.

Table 4.1: Environmental baseline

Issue	Relevant baseline data	Illustrative material
Biodiversity / fauna and flora	• Areas protected and managed under international and local legislation • Areas known to support priority Annex I habitats and/or Annex II species under the Habitats Directive • Overall conservation status and trends of habitats and species of importance • Protected species • Areas for which surveys have been carried out • Natura 2000 network • Farmland Bird Index	Designated, managed and surveyed areas; where relevant, any data related to areas, habitats and/or species that are not formally protected although they are considered to be of conservation value, will be included
Population & Human health	• Groundwater safeguard zones • Nitrate and Chloride levels in groundwater • Air quality • Population density • Work force in the agricultural and rural sectors	Graphs and tables Published data
Water	• Freshwater and marine ecosystems • Water production and consumption by sector • Nitrate and chloride levels in groundwater • Groundwater bodies • Surface water bodies (including linear) • Users and use of ground/surface water sources • Classification of groundwater sources • Boreholes • Estimated volume of groundwater that may be abstracted from source (m3 /	Maps / graphs / tables

Issue	Relevant baseline data	Illustrative material
	annum) • Treated Sewage Effluent • Water Framework Directive targets, objectives, protected areas	
Climatic conditions, climate change and emissions to air	• GHG inventory (if relevant) • Air emissions inventory • Emissions from various sectors • Coastal erosion, sea level rise, changing weather patterns resulting from climate change • Energy from renewables • Energy consumption	Graphs and figures
Soil	• Contamination of soil (including salinity) • Quantities of imported pesticides and fertilisers • Soil erosion • Soil sealing • Soil Organic Matter • Land productivity	Published data and figures
Landscape	• Areas protected for landscape value	Landscape sensitivity areas and protective designations
Cultural heritage	• Sites protected for cultural heritage & cultural landscape • Traditional structures related to agricultural and rural activities as important elements of the rural landscape • Intangible cultural heritage linked to the rural environment /landscape and traditional agricultural practices	Maps Data
Material assets	• Infrastructure related to the agricultural and rural sectors • Rural tourism • Waste generation and disposal trends especially with regards to animal wastes • Livestock farms • Urban land take up	Maps and figures

4.6. Where possible, quantitative data are presented in the form of maps, tables and figures. A brief description of the baseline and any trends are given, where available.

LIMITATIONS OF DATA

4.7. The data used to formulate the environment baseline were collated by a range of organisations, for a number of purposes. No information was collated specifically for the assessment of the environmental impacts of the CAP SP; however, given the specificity of the sector, much of the information collected to date has a direct

bearing on what the CAP SP aims to achieve, thus facilitating the inference of relationships between changes in the environmental baseline recorded and the potential effects of the CAP SP.

BIODIVERSITY

4.8. Malta's natural environment can be characterized under three subcategories including terrestrial, freshwater and marine habitats. Forest and natural areas cover only 0.7% and18% of Malta's surface area respectively[4]. Nonetheless, the Islands have a rich biodiversity, which includes a large number of native plants and animals.

4.9. The local terrestrial vegetational assemblages are composed by three groups: (i) major communities that are part of the succession towards climax communities; (ii) minor communities that are either specialised to occupy particular habitats, or occupy habitats that are rare, or are relics from a previous ecological regime, and; (iii) vegetational assemblages of disturbed habitats, which owe their existence to anthropogenic activities. The main vegetational assemblages are maquis, garrigue and steppe, whilst minor ones include patches of woodland, coastal wetlands and saline marshlands, freshwater and rupestral communities and sand dunes. Marine habitats on the other hand include seagrass meadows, algal communities, reefs, caves and sediments.

4.10. Since joining the European Union in 2004, Malta carried out three assessments in line with the Habitats Directive Article 17. Relevant reports on implementation measures were published in 2007, 2013 and 2019 (https://cdr.eionet.europa.eu/mt/eu/art17).

4.11. The figure below presents the conservation status of habitats and species for 2007 – 2012 and 2013 – 2018. In the subsequent sections the last two assessments will be compared to identify any changes. It should be noted that the two assessments are not necessarily directly comparable due to potential changes in methods and data.

4.12. The 2013 assessment was based on 30 habitats and 52 species of community interest, whilst the 2019 assessment was based on 29 habitats and 45 species of community interest. The deterioration in the conservation status of the habitats between the two assessments is conspicuous. On the other hand, there appears to be an improvement in the conservation status of the species.

4.13. Looking at the habitats and the species that were deemed as unfavourable, were further analysed to determine which exhibit stability, improvement, deterioration, or it is unknown whether they are stable or changing. Most habitat and species assessments that were classified to have an unfavourable conservation status in both

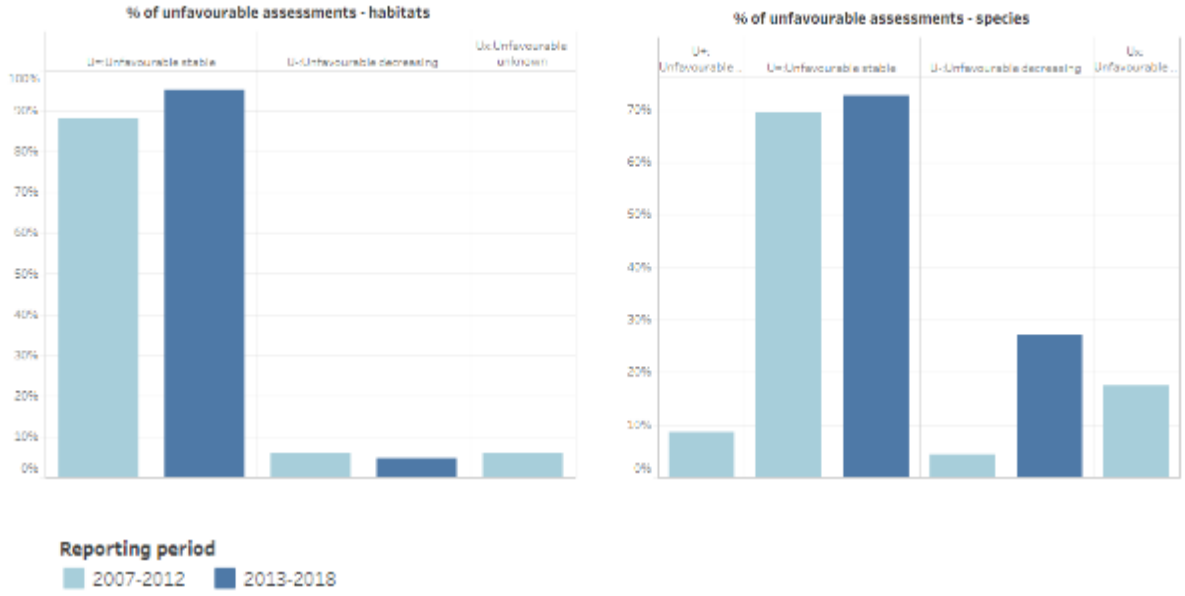
[4] ERA (2018) Land and Coast (Chapter 4) State of the Environment Report https://era.org.mt/en/Pages/State-of-the-Environment-Report-2018-Summary-and-Chapters.aspx

reporting periods did not show signs of improvement or deterioration and remained stable throughout the reporting period.

Figure 4.1: Overall assessment of conservation status

Source: European Environment Agency (2019) https://www.eea.europa.eu/themes/biodiversity/state-of-nature-in-the-eu/article-17-national-summary-dashboards/conservation-status-and-trends

Figure 4.2: Overall trend in unfavourable conservation status



Source: European Environment Agency (2019) https://www.eea.europa.eu/themes/biodiversity/state-of-nature-in-the-eu/article-17-national-summary-dashboards/conservation-status-and-trends

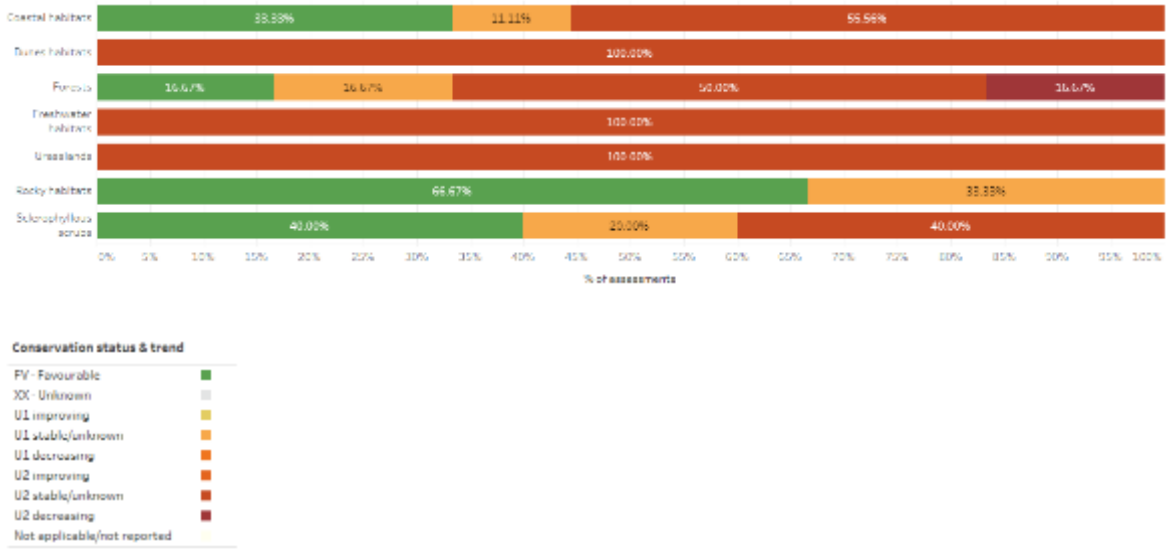
4.14. The table and figure below show the conservation status and trends for the different habitat assessments between 2013 and 2018 as per habitat group. The statistics on the assessments undertaken show that the rocky habitats are in the most favourable conditions.

Table 4.2: Number of habitat assessments in categories of conservation status and trend in CS

	Favourable	Unfavourable-inadequate - stable	Unfavourable - bad - stable	Unfavourable - bad - decreasing	Total
Coastal	3	1	5		9
Dunes habitats			3		3
Forests	1	1	3	1	6
Freshwater habitats			2		2
Grasslands			1		1
Rocky habitats	2	1			3
Sclerophyllous scrubs	2	1	2		5
Total	**8**	**4**	**16**	**1**	**29**

Source: European Environment Agency (2019) https://www.eea.europa.eu/themes/biodiversity/state-of-nature-in-the-eu/article-17-national-summary-dashboards/conservation-status-and-trends

Figure 4.3: Habitat conservation status and trend in conservation status



Source: European Environment Agency (2019) https://www.eea.europa.eu/themes/biodiversity/state-of-nature-in-the-eu/article-17-national-summary-dashboards/conservation-status-and-trends

4.15. Similarly, the table and figure below show the conservation status and trends for the different species assessments between 2013 and 2018 as per species group.

4.16. In terms of birds, 47 % of bird species assessed have a good population status in the EU. This is 5 % less than in the period 2008-2012. Conversely, the proportion of species with poor and bad status has increased by 7 % in the last 6 years and reached a total of 39 %. The population status of 14 % of the bird species in the EU is still unknown because of a lack of reliable data regarding their population sizes and trends.

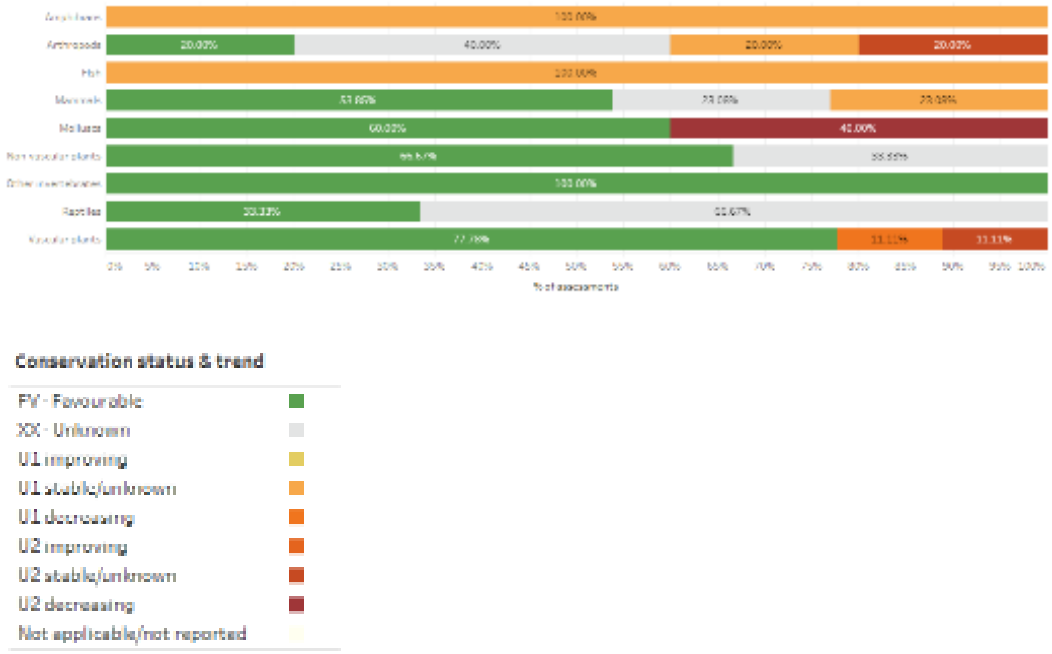
4.17. The State of Nature in the EU: Results from reporting under the nature directives 2013-2018 shows that 23 % of breeding birds have increasing short-term trends and 30 % have decreasing short-term trends; there are more decreasing than increasing long-term trends. Short-term trends for wintering birds are consistent with the results for the years 2008-2012, but the proportion of taxa with increasing long-term trends has dropped by 9 %. The proportion of taxa listed in Annex I with good status has decreased by 8 % since the last reporting period, while taxa with poor and bad status have increased by 6 %. The proportion of Annex II species with a good status is 9 % lower than in the 2008-2012 reporting period, while taxa with poor and bad status are 9 % higher. A good status for at least 50 % of the assessed species is reported for half of the taxonomic orders, but a high proportion of the remaining taxa within these orders are still assessed as ´bad´.

Table 4.3: Number of species assessments in categories of conservation status and trend in CS

	Favourable	Unknown	Unfavourable – inadequate - stable	Unfavourable – inadequate - decreasing	Unfavourable - bad - stable	Unfavourable - bad - decreasing	Total
Amphibians			1				1
Arthropods	1	2	1		1		5
Fish			1				1
Mammals	7	3	3				13
Molluscs	3					2	5
Non-vascular plants	2	1					3
Other invertebrates	2						2
Reptiles	2	4					6
Vascular plants	7			1	1		9
Total	**8**	**4**			**16**	**1**	**29**

Source: European Environment Agency (2019) https://www.eea.europa.eu/themes/biodiversity/state-of-nature-in-the-eu/article-17-national-summary-dashboards/conservation-status-and-trends

Figure 4.4: Species conservation status and trend in conservation status



Source: European Environment Agency (2019) https://www.eea.europa.eu/themes/biodiversity/state-of-nature-in-the-eu/article-17-national-summary-dashboards/conservation-status-and-trends

Protected areas

4.18. Biodiversity is safeguarded mainly through the protection and management of sites and areas. **Figure 4.5** illustrates the designated and managed areas on the Islands. The protected areas cover 28.9 per cent of the total land cover, 13.8 per cent of which are part of the EU Natura 2000 network.

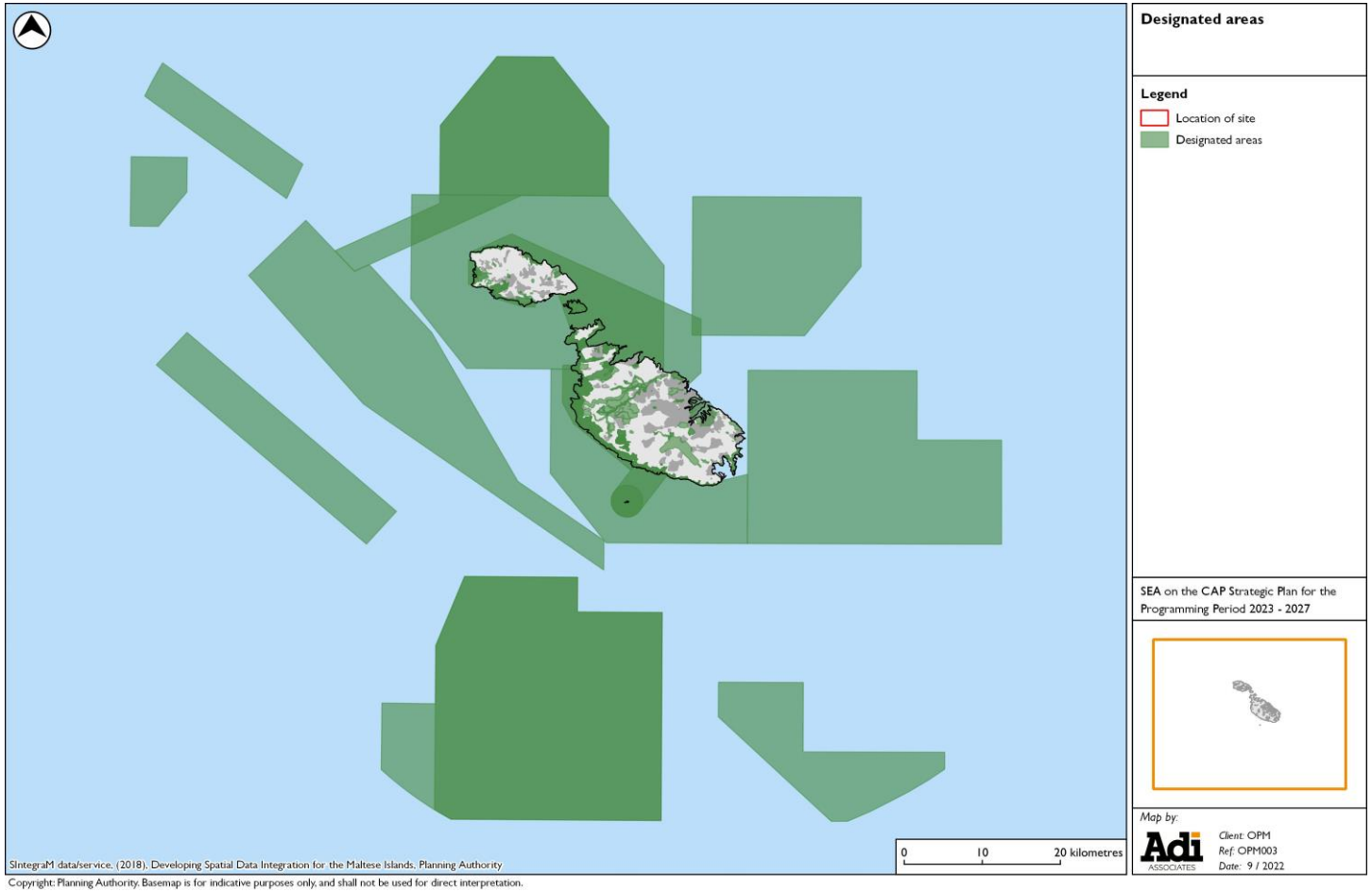
4.19. The management of the Natura 2000 network is the responsibility of Ambjent Malta, a government agency set up in 2018. In some sites / areas, the management of the protected area has been devolved to an NGO or a distinct entity through a management agreement between the government and the NGO.

4.20. As of 2021, Malta has 49 Special Areas of Conservation (SACs): 40 of international importance and 9 of national importance. The ten marine SACs cover an area of 2,280.4 km^2, see **Figure 4.6**. The terrestrial SACs cover an area of 44.95 km^2 (14.2%). Furthermore, again as of 2021, designated Special Protection Areas (SPAs) cover 17.2 km^2 of the land area (5.4%). The eight marine SPAs cover an area of 3,220.6 km^2. There are also 42 Areas of Ecological Importance (AEI) and Sites of Scientific Importance (SSIs), 24 AEIs, and 10 SSIs, 60 Tree Protection Areas and three Nature Reserves across the Islands. Beaches and swimming areas (including 11 specifically named beaches) are also protected from hunting activities[5].

4.21. Many of the Natura 2000 sites comprise farmland and forest land (including transitional woodland scrub). In the EU-27, in 2018 11% of agricultural area (including natural grassland) and 30% of forest area lay within the network; this compares to 8% of agricultural area and 31% of forest area in the Maltese Islands[6].

[5] ERA (2018) Biodiversity (Chapter 8) State of the Environment Report
[6] Analytical Factsheet Malta
https://agridata.ec.europa.eu/extensions/CountryFactsheets/CountryFactsheets.html?memberstate=Malta#

Figure 4.5: Designated areas



Source: European Environment Agency, Common Database of Designated Areas (CDDA) 2022 Retrieved 01 September 2022 from https://www.eea.europa.eu/data-and-maps/data/nationally-designated-areas-national-cdda-17

Figure 4.6: Natura 2000 sites

Source: European Environment Agency, Common Database of Designated Areas (CDDA) 2022 Retrieved 01 September 2022 from https://www.eea.europa.eu/data-and-maps/data/nationally-designated-areas-national-cdda-17

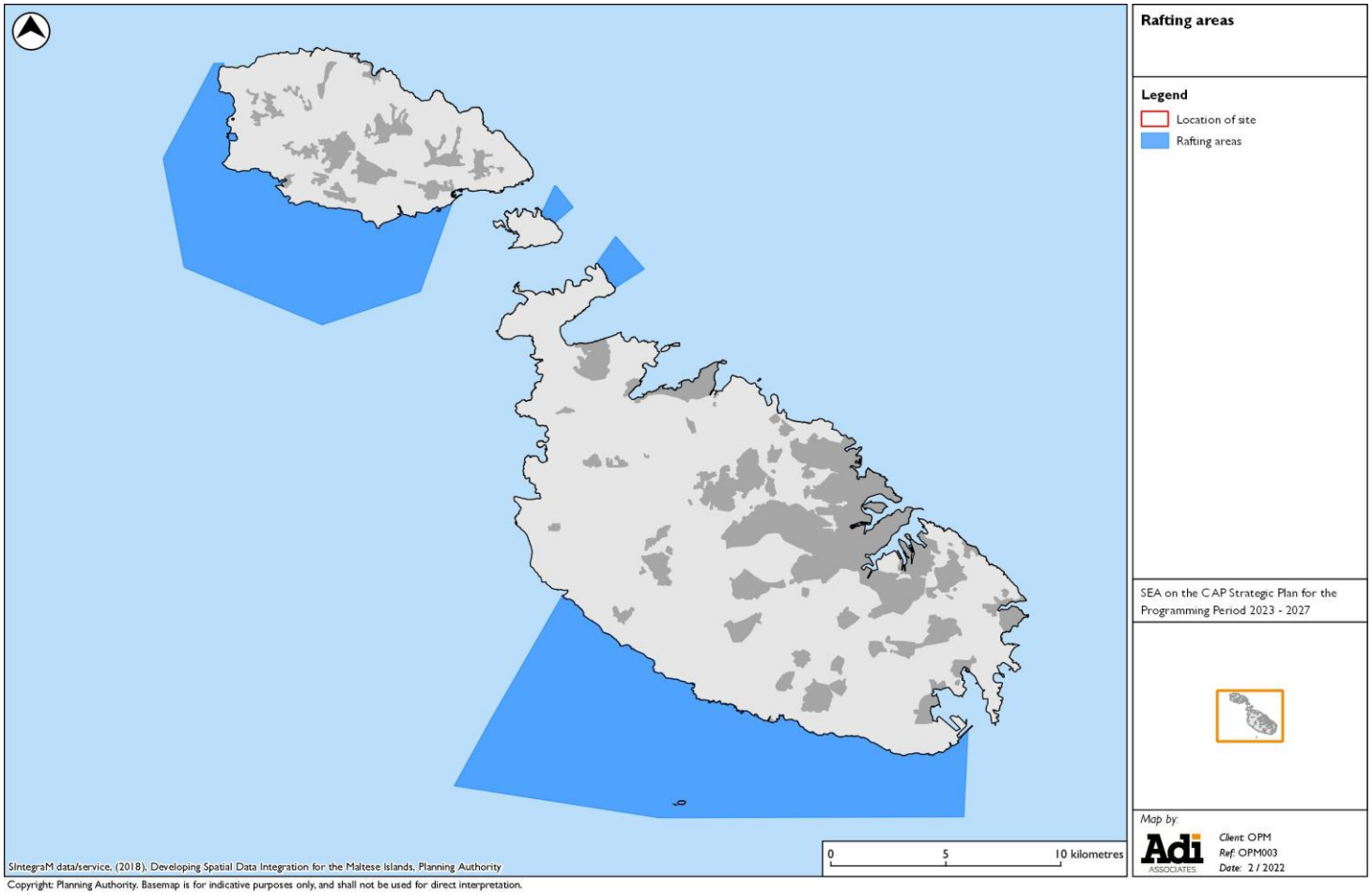
4.22. Malta has 21 Important Bird and Biodiversity Areas (IBAs). IBAs are not national designations but are designated under the BirdLife International IBA programme, which is aimed "*at identifying and protecting a network of critical sites for the conservation of birds*".

4.23. The cliffs are important areas for colonies of breeding birds, such as the Scolpoli's Shearwater. BirdLife Malta has identified areas opposite to these colonies which are used for rafting by these bird species[7], see **Figure 4.7**.

4.24. The Maltese Islands have a strategic location when it comes to bird migratory routes. In autumn, Europe's birds migrate southwards in search of warmer climates and more hospitable conditions. These wintering locations span from South Africa to southern Europe. The migratory birds use three main routes: via Spain and Gibraltar, via Turkey, and via Italy and Malta. In spring, the birds migrate northwards to Europe, for the breeding season[8].

[7] Sultana, J., Borg, J.J., Gauci, C. and Falzon, V. (2011) *The Breeding Birds of Malta* BirdLife Malta, Malta.
[8] BirdLife Malta (2012) Migration Routes [accessed online in April 2014 - http://www.birdlifemalta.org/Content/trapping/migration/1130/#.U2DYpIGSwuc]

Figure 4.7: Rafting areas



Source: Sultana, J., Borg, J.J., Gauci, C. and Falzon, V. (2011) *The Breeding Birds of Malta* BirdLife Malta, Malta – Rafting areas opposite the main Cory's Shearwater colonies in the Maltese Islands)

4.25. Another important aspect of the Maltese Islands in relation to biodiversity is the river valleys. Notwithstanding the size of the Islands, it has been calculated that there are a 100 km of river valleys[9].

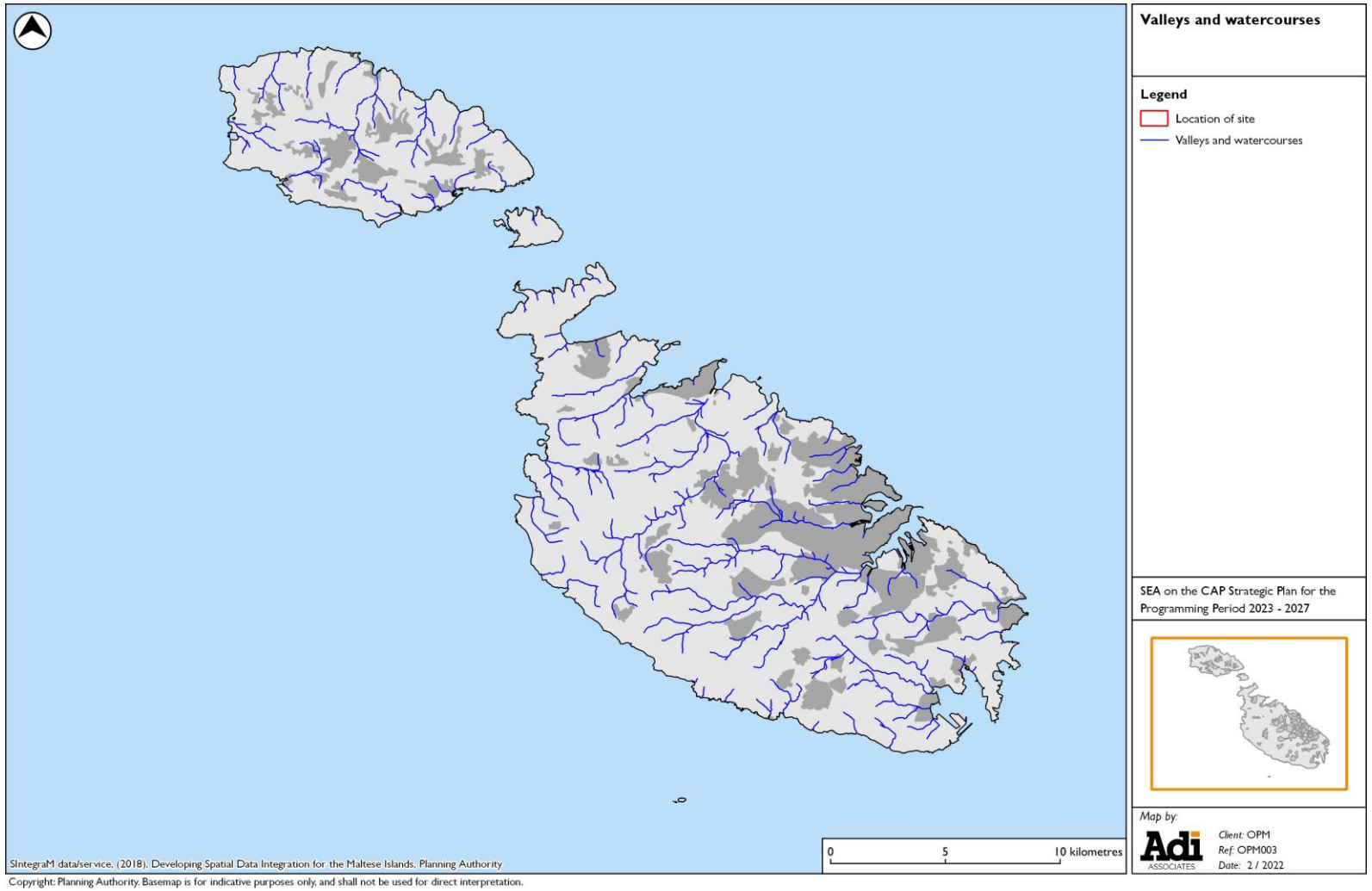
4.26. Malta has three main *widien* systems: River Għasel System, River Kbir System, and River Sewda System. There are other smaller *widien* across the Maltese Islands. **Figure 4.8** shows the valleys and watercourses present in the Maltese Islands.

4.27. River valleys support a number of habitats and species. The different floral habitats within the river valley systems include those along and in streams, in damp places, and in shaded valleys, etc.; rock pools; valley woody plants; valley plants of rocky places; valley plants of arid places (where there is some habitat overlap with valley plants of rocky places); valley plants of the fields etc.; valley plants of waste places; valley plants of grassy places; and valley plants of more general habitats[10].

4.28. Other important areas that are not protected are the green spaces within the urban areas. Some of these areas are designated as Strategic Open Gaps / Public Open Spaces under their relevant Local Plans or scheduled for their architecture (in the case of gardens); however, there is no proper protection of green spaces. Green spaces in urban areas are important for aesthetic, health, and for recreational reasons; they are also important from an ecological point of view.

[9] Haslam, S.M. and Borg, J. (1998) *The River Valleys of the Maltese Islands: Environment and Human Impact*. Published by the Islands and Small States Institute of the Foundation for International Studies, Malta in collaboration with CIHEAM, Bari, Italy.
[10] Ibid.

Figure 4.8: Valleys and watercourses in the Maltese Islands



Protected species

4.29. Malta has 183 species that are protected under EU law. Three of these species are unique to Malta. With respect to the Habitats Directive, Malta has 26 Annex II species (this excludes occasional, extinct and species on which there is a scientific reserve). Of these, 9 are endemic.

4.30. A total of around 4,500 floral and faunal species have been recorded in Malta. Approximately 85 species of these species are endemic. The most abundant endemic species is the Maltese wall lizard (*Podarcis filfolensis*) that is sub-divided into five distinct subspecies. There are also 12 beetles, 17 butterflies and moths, seven molluscs, five flies, two ants and one grasshopper which are all endemic. The only endemic mammal is the Sicilian shrew (*Crodidura sicula* spp. *Calypso*), which is found in Gozo (NTM-FEE, 2019[11]). There are more than 1,000 species of vascular plants. There are 700 indigenous species and around 25 endemic / sub-endemic species.

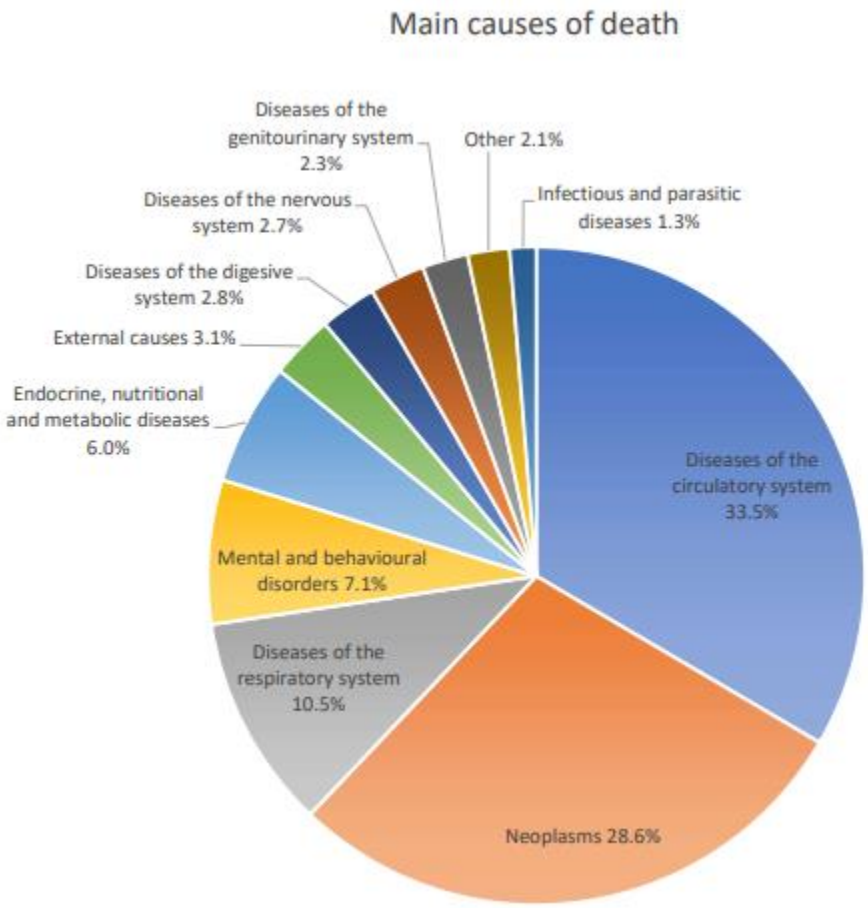
Farmland Bird Index

4.31. The Farmland Bird Index (FBI) measures changes in farmland bird populations over time. As birds are high up in the food chain, the indicator is often used as a proxy for the state of overall biodiversity linked to agricultural landscapes in Europe, generally in conjunction with other indicators. In the EU-27, the index has shown a strong downward trend since the reference year of 2000 (reference value in that year: 100; value in 2017: 82). The index is based – via several calculation steps - on population counts carried out by a network of volunteer ornithologists and co-ordinated within national schemes. Note that, although farmland bird populations can be strongly affected by agricultural activities, various other factors can also have a significant impact[12]. In 2008 the Farmland Bird Index for Malta was prepared by BirdLife Malta on behalf of the Ministry for Agriculture to establish a baseline for FBI for Malta. In 2013, BirdLife Malta updated the FBI. Furthermore, in recent years the Wild Birds Regulation Unit has commissioned the production of Breeding Bird Atlases in 2018 and in 2024, from which FBIs can be extracted as suitable indicators.

[11] https://naturetrustmalta.org/environmental-education/biodiversity/fauna/
[12] https://agridata.ec.europa.eu/extensions/CountryFactsheets/CountryFactsheets.html?memberstate=Malta#

4.32. In 2020, the life expectancy was 82.3 years. There was a slight lowering in life expectancy from the previous year when it stood at 83 years. This downward trend was the result of the COVID-19 pandemic[13]. The main cause of death in 2018 was of the circulatory system (33.5%) followed by neoplasms (28.6%)[14], see **Figure 4.9**.

Figure 4.9: Major causes of death: 2018



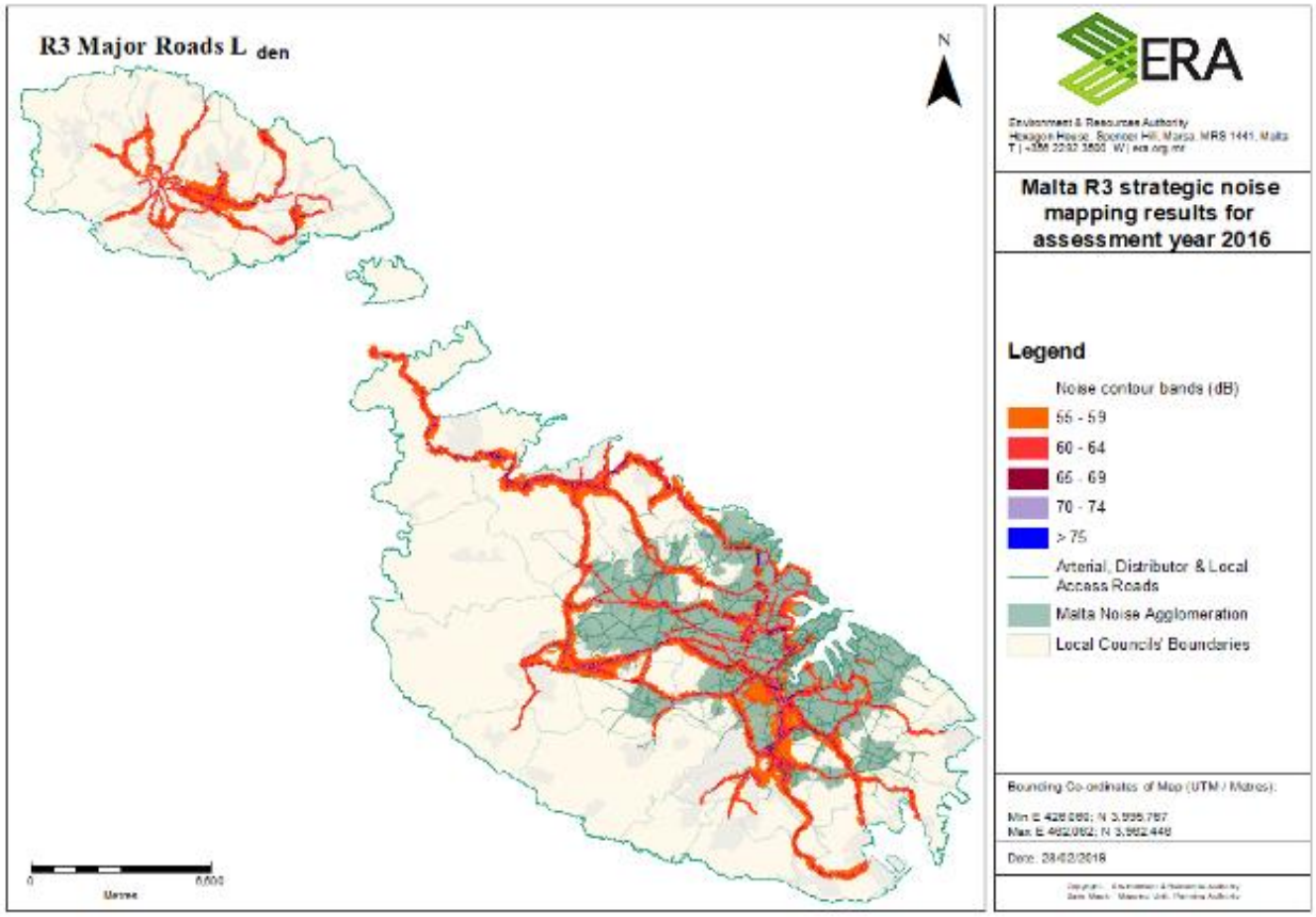
Source: Directorate for Health Information and Research, Annual Mortality Report 2018

[13] NSO News Release 122/2021 (2021) *World Population Day: 11 July 2021*
[14] Directorate for Health Information and Research, Annual Mortality Report 2018

Noise Pollution

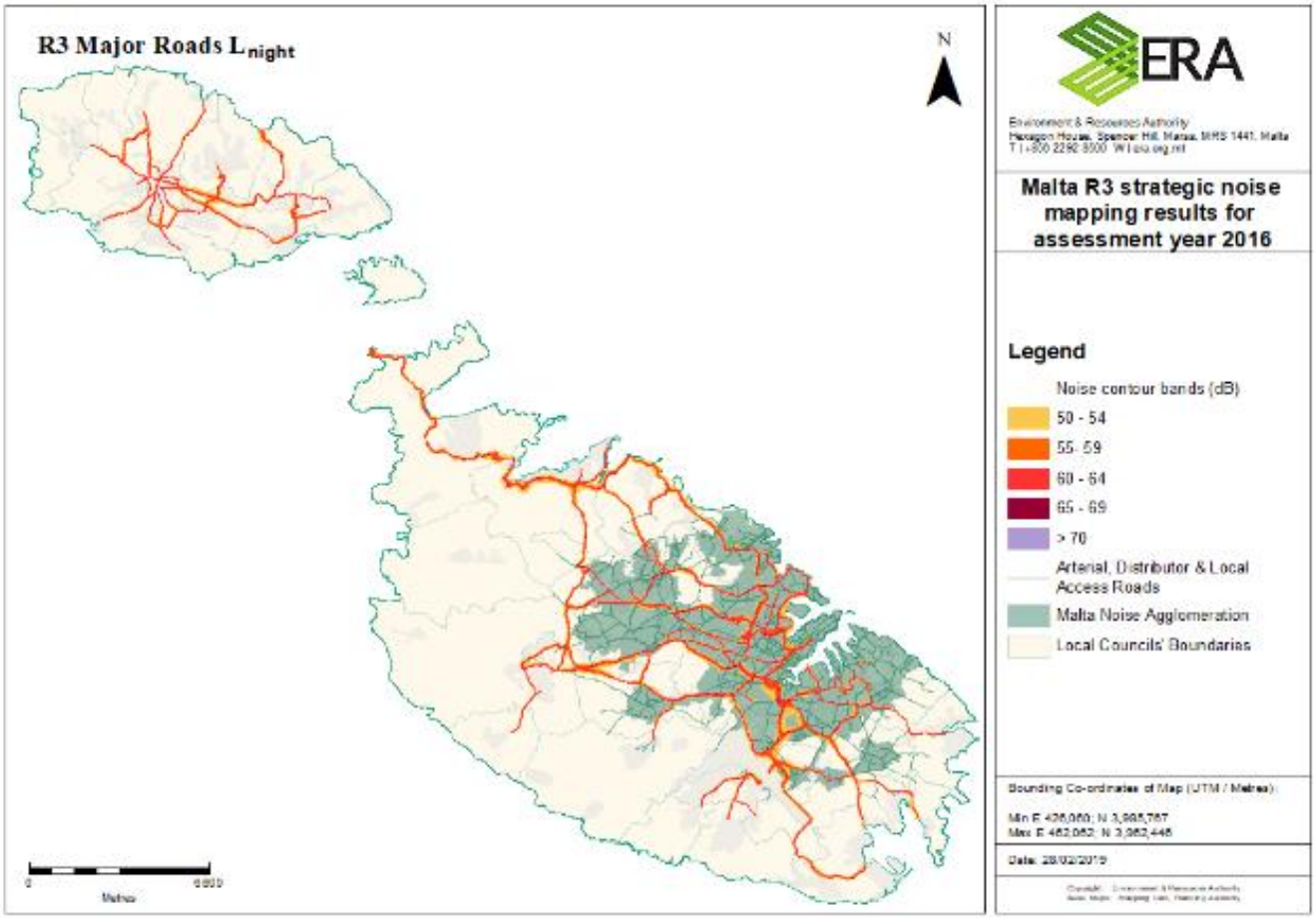
4.33. In line with the Noise Directive, Malta must adopt a policy that safeguards existing low background environmental noise, and to identify and reduce noise levels where they are excessive. To this end the Government has prepared 'strategic noise maps' for major roads, airports and agglomerations, see **Figure 4.10** to **Figure 4.14**. These strategic noise maps are useful to inform the public and the decision-makers alike, to develop action plans for the purpose of managing noise exposure and to assist the European commission in developing the European noise policy.

Figure 4.10: Major Roads 2016 Noise Map Lden



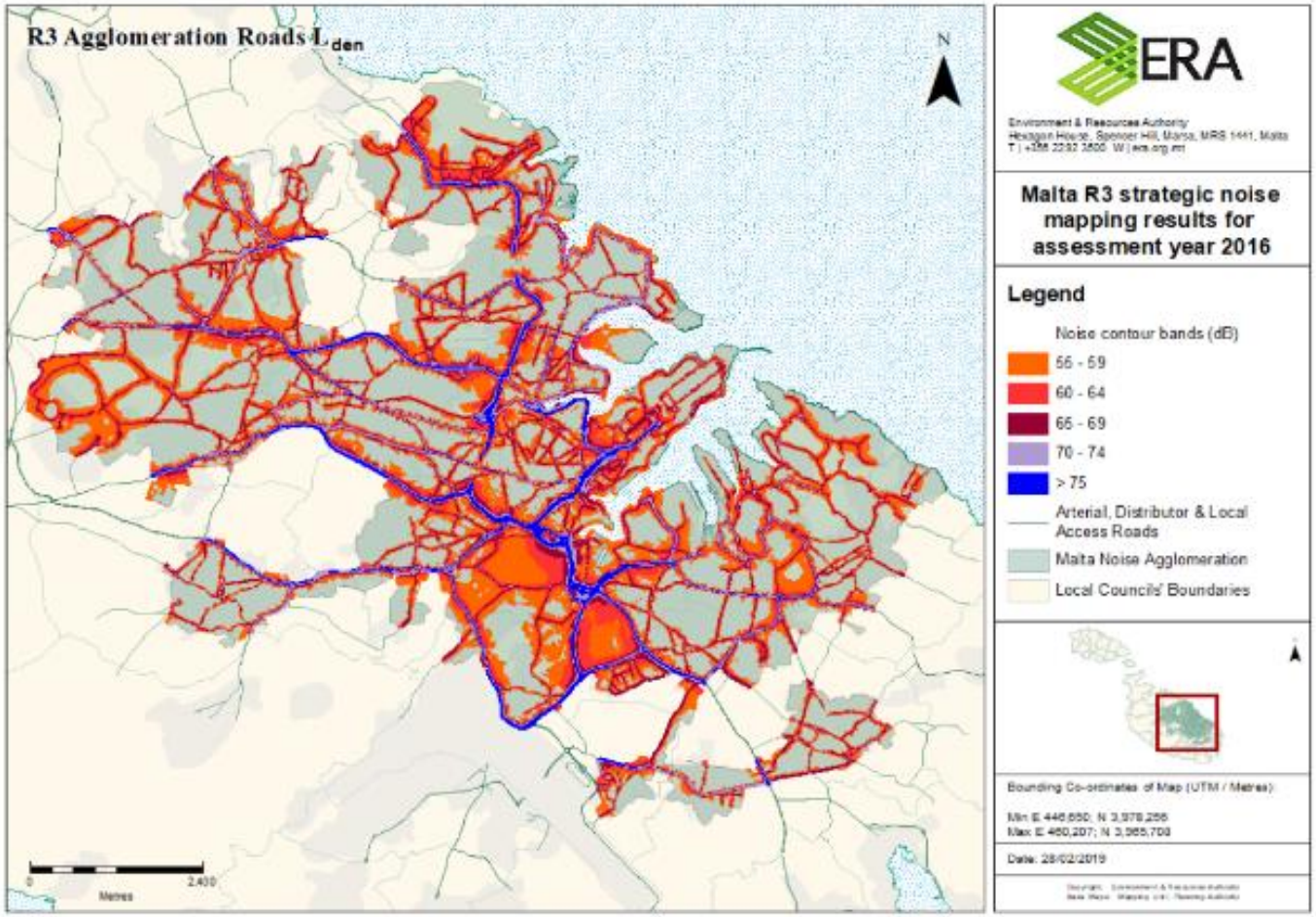
Source: ERA (2021) https://era.org.mt/wp-content/uploads/2021/08/Figure-9-and-23-MajorRoads_Lden18112020.pdf - accessed online on 4th March 2022

Figure 4.11: Major Roads 2016 Noise Map Light



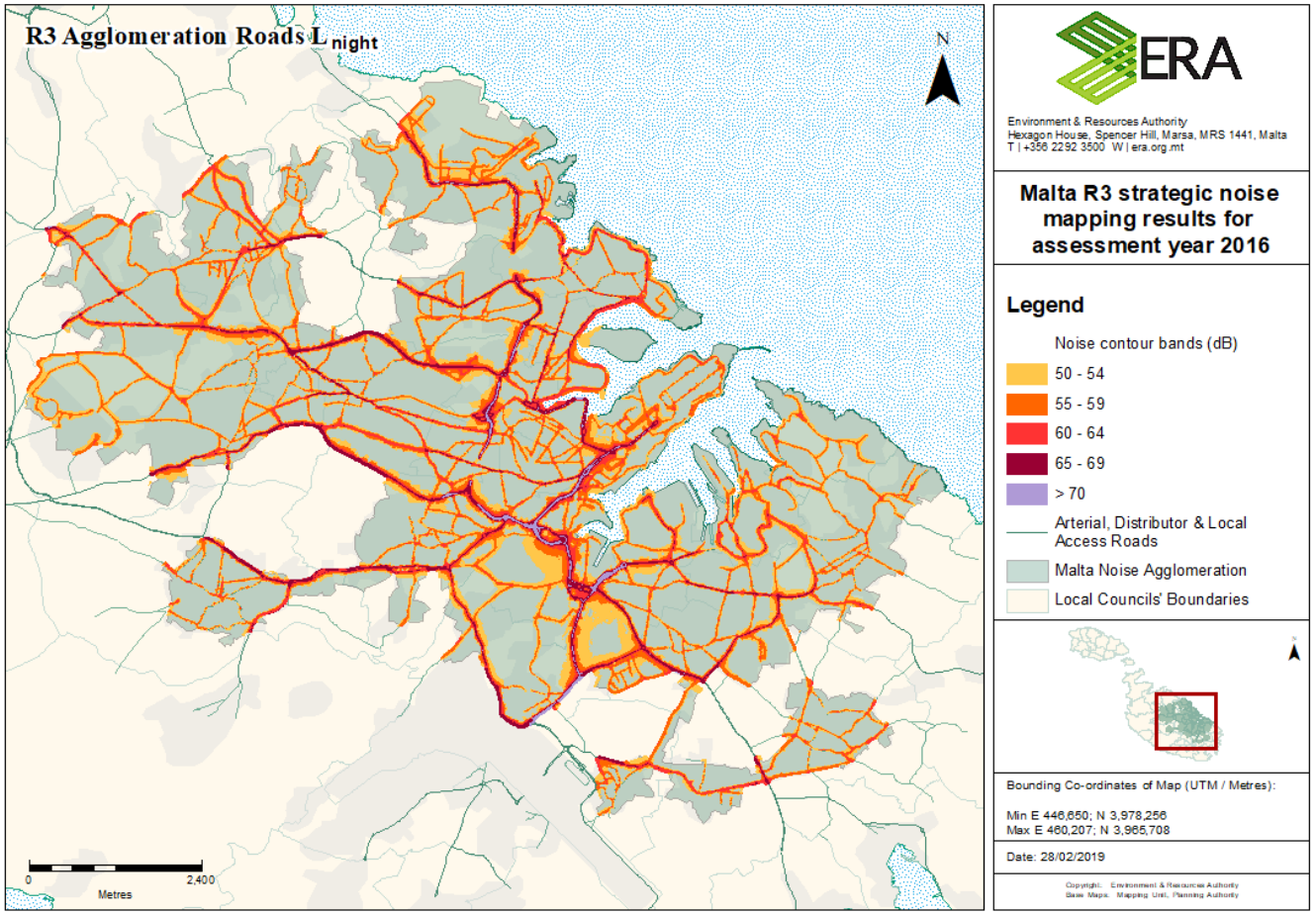
Source: ERA (2021) https://era.org.mt/wp-content/uploads/2021/08/Figure-10-and-24-MajorRoadsLnight18112020.pdf - accessed online on 4th March 2022

Figure 4.12: Major Agglomeration Roads 2016 Noise Map Lden



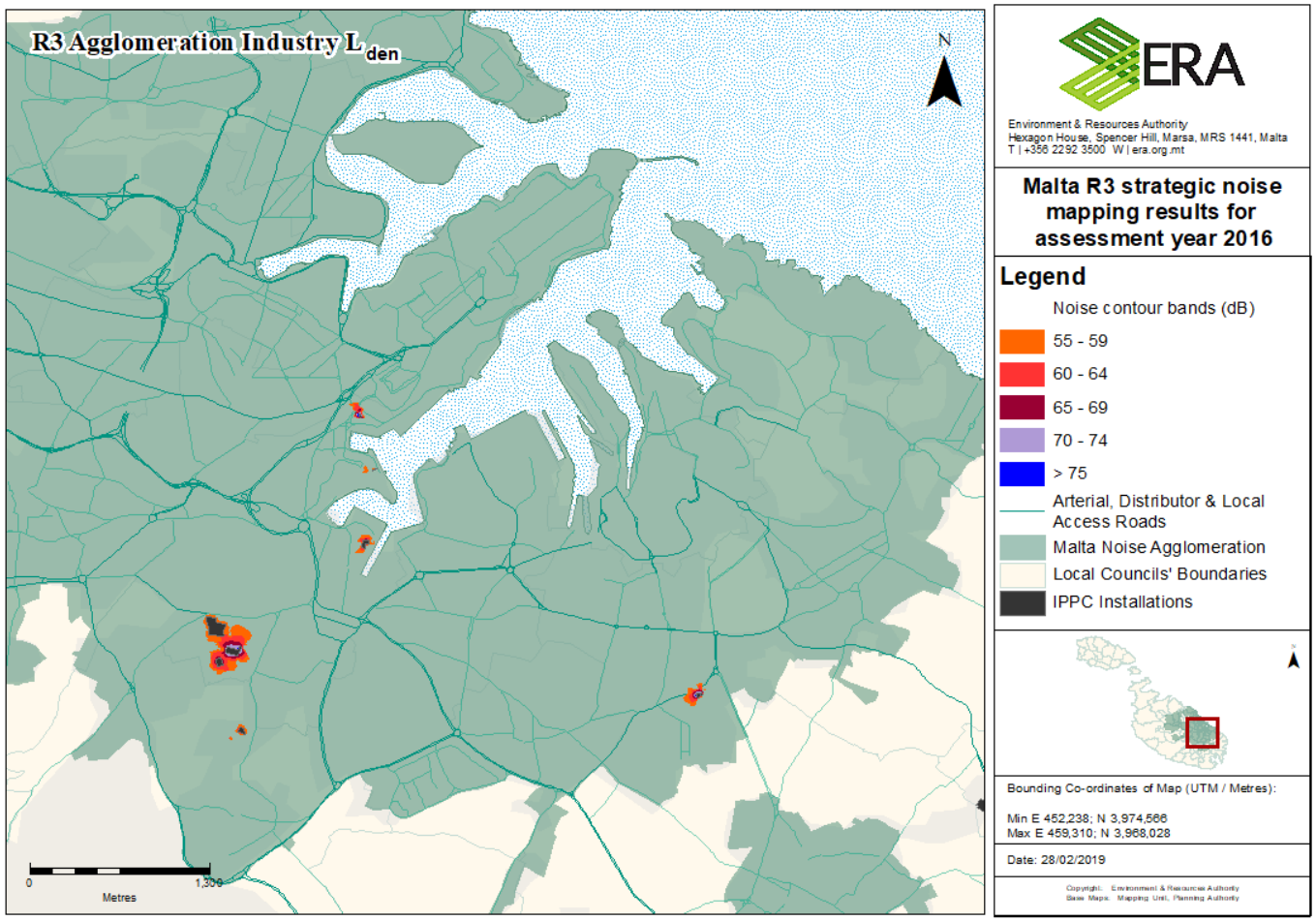
Source: ERA (2021) https://era.org.mt/wp-content/uploads/2021/08/Figure-21-Agglo_Roads_Lden18112020.pdf - accessed online on 4th March 2022

Figure 4.13: Major Agglomeration Roads 2016 Noise Map Light



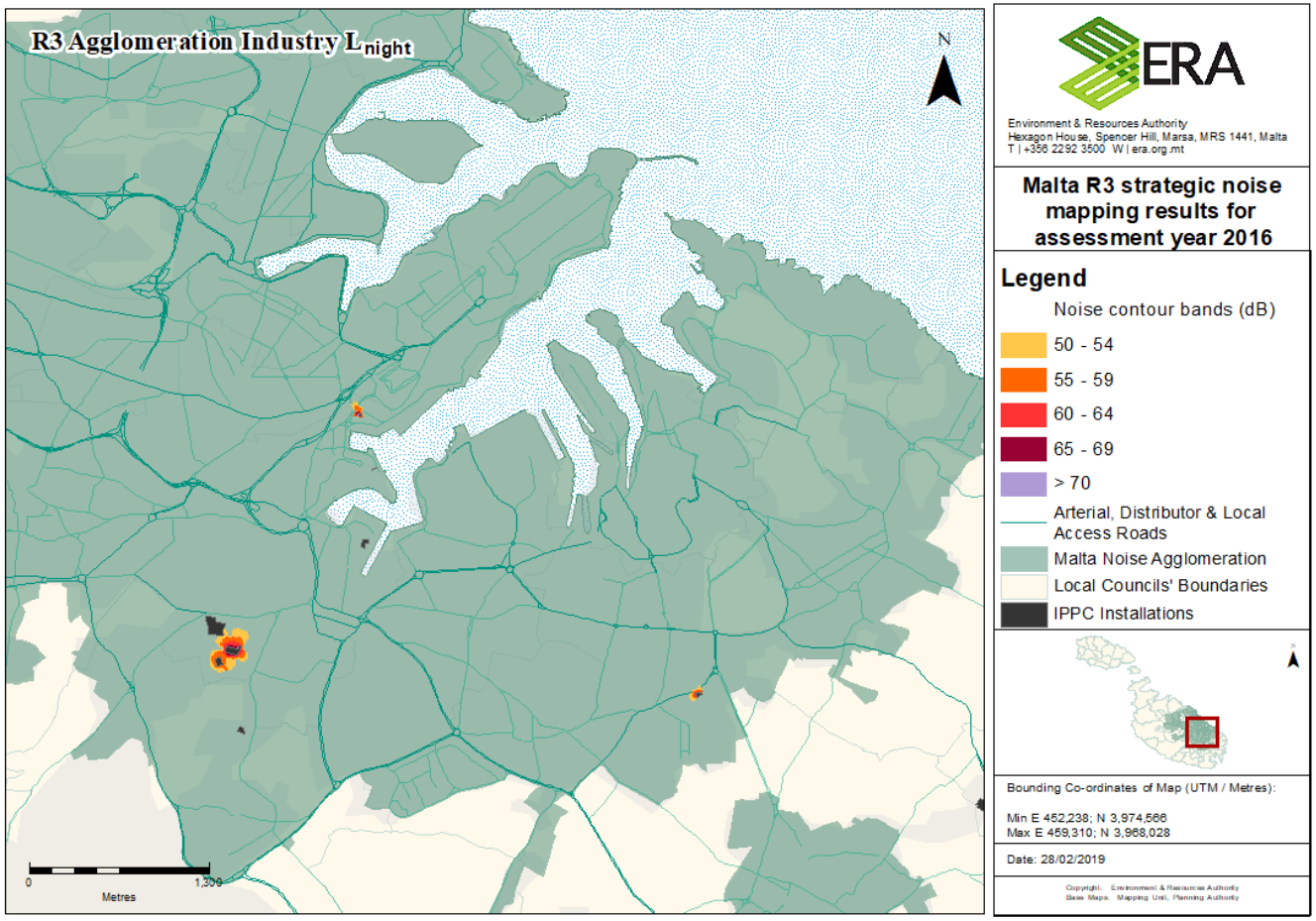
Source: ERA (2021) https://era.org.mt/wp-content/uploads/2021/08/Figure-22-Agglo_Roads_Lnight18112020.pdf - accessed online on 4th March 2022

Figure 4.14: Major Agglomeration Industry 2016 Noise Map Lden



Source: ERA (2021) https://era.org.mt/wp-content/uploads/2021/08/Figure-19-Agglo_Industry_Lden18112020.pdf - accessed online on 4th March 2022

Figure 4.15: Major Agglomeration Industry 2016 Noise Map Lnight



Source: ERA (2021) https://era.org.mt/wp-content/uploads/2021/08/Figure-20-Agglo_Industry_Lngt18112020.pdf - accessed online on 4th March 2022

Dust Pollution

4.34. Dust pollution is mostly linked with the construction industry, and mainly with quarrying and mechanically entrained dust. Dust pollution can be related to particulate matter concentrations in the atmosphere. Particulate matter was discussed in more detail in the section dealing with 'Emissions to Air'.

Light Pollution

4.35. Urban light pollution threatens street trees, flora in nature reserves, parks and gardens. Such light pollution also disturbs fauna (e.g. bats and birds), in particular lighting in the vicinity of breeding areas for seabirds. It has been estimated that 30 per cent of electricity generated for outdoor illumination is wasted.

Population

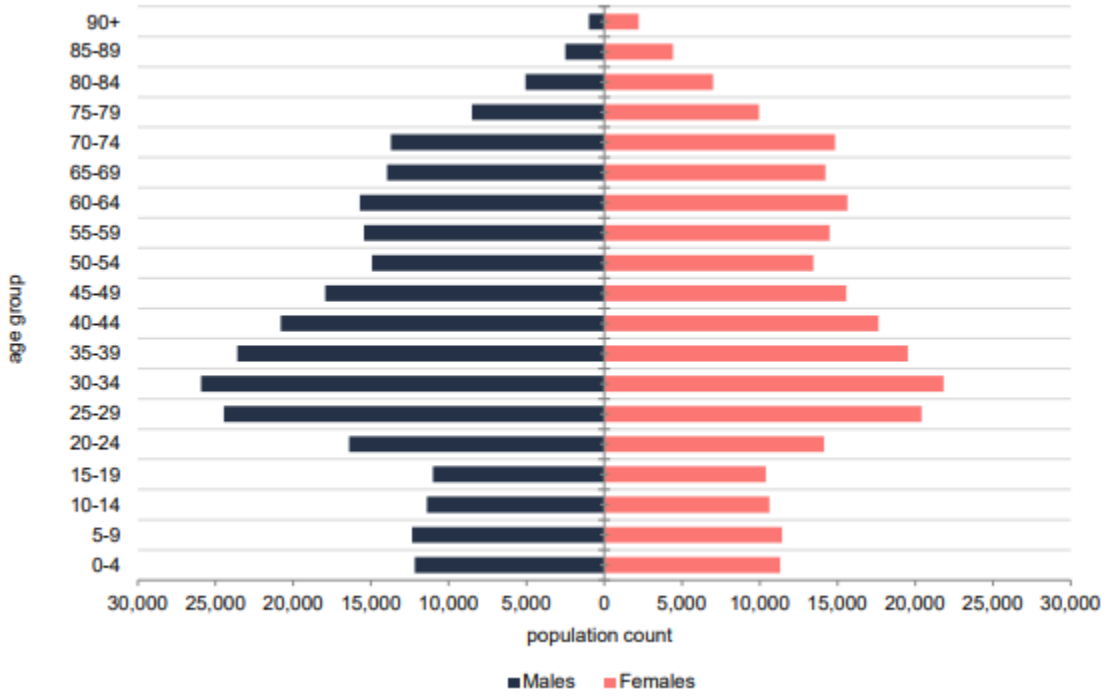
4.36. In 2020, the population stood at 516,100 persons[15]. This was a rise of 0.3 per cent over the 2019 figure. In 2020, there were 266,939 males and 249,161 females[16].

4.37. 2020 marked the first year since 2010 when the net migration for third-country nationals (including the United Kingdom) was negative. This reversal can be attributed to the COVID-19 pandemic situation[17].

4.38. The largest age cohort is those aged between 30 and 34. The population under the age of 18 makes up 15.9 per cent of the total population, whilst the population aged 65 and over represents 18.9 per cent[18], see **Figure 4.16**.

[15] NSO News Release 122/2021 (2021) *World Population Day: 11 July 2021*
[16] Ibid.
[17] Ibid.
[18] Ibid.

Figure 4.16: Total population by age group and sex as at 31 December 2020



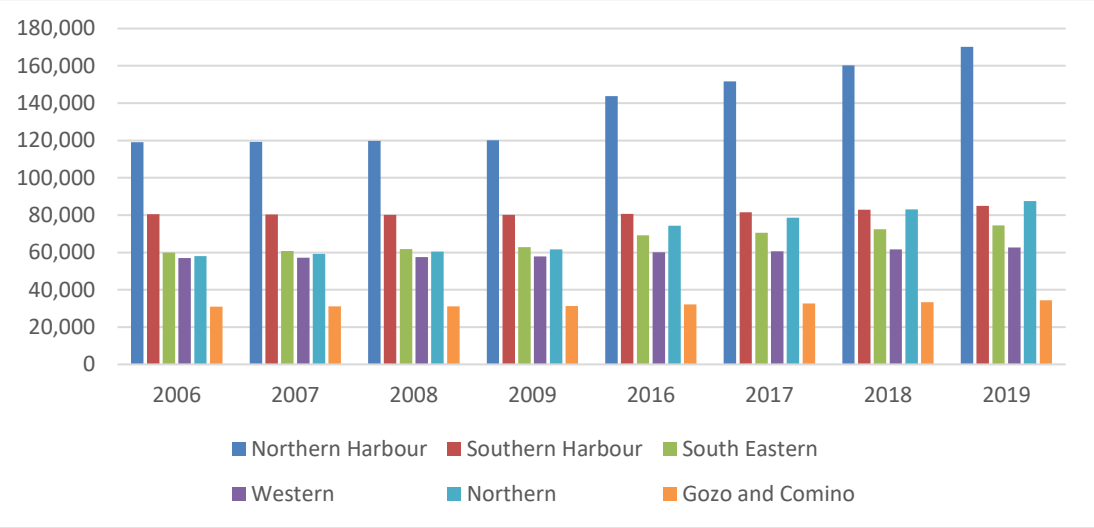
Source: NSO News Release 122/2021 (2021) World Population Day: 11 July 2021

Geographical Distribution

4.39. The largest concentration of the population is found in the Northern Harbour District with 170,220 residents accounting to a third of the whole population. The smallest district is Gozo with 34,430 residents accounting to 6 per cent of the whole population, see **Figure 4.17**. In 2021, the localities with the largest populations were San Pawl il-Baħar with 31,789 residents, Birkirkara with 25,790 residents and Tas-Sliema with 24,412 residents, see **Figure 4.18**. The smallest locality is Mdina with 244 residents, see **Figure 4.19**[19].

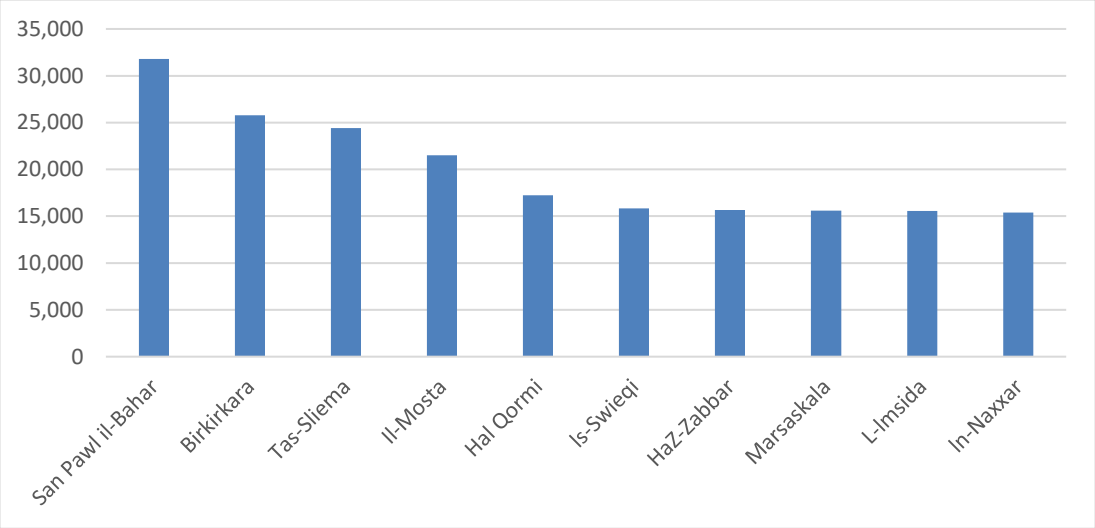
[19] Government Gazette 20,699 (14th September 2021) Estimated Population by Locality 1st January, 2021

Figure 4.17: Geographical distribution by census district



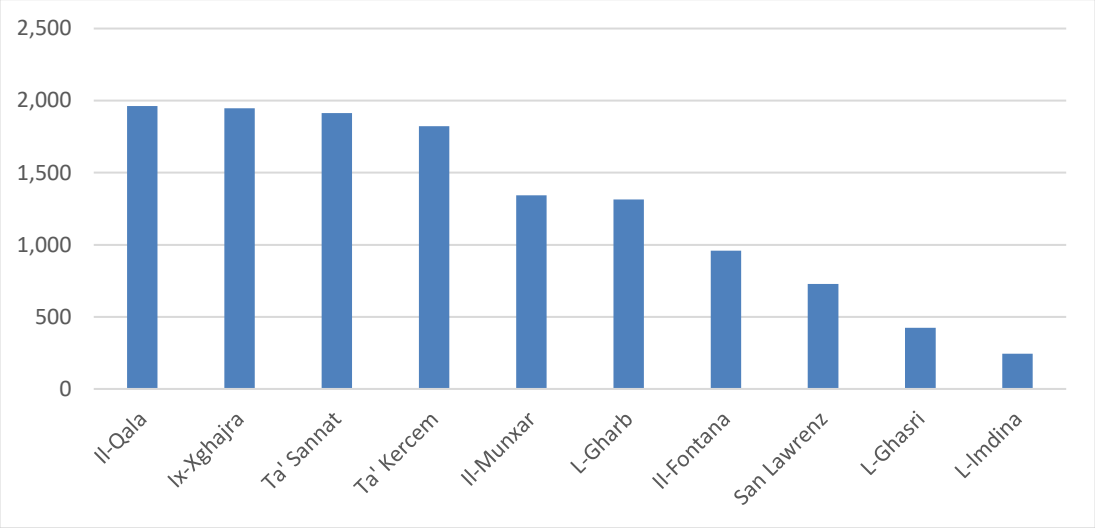
Source: NSO (2022) *Population* - https://nso.gov.mt/Home/SELECTED_INDICATORS/Pages/Sub-Selected-Indicators/Population.aspx (Accessed online on 07 March 2022)

Figure 4.18: Largest ten localites in 2021



Source: Government Gazette 20,699 (14th September 2021) Estimated Population by Locality 1st January, 2021

Figure 4.19: Smallest ten localites in 2021



Source: Government Gazette 20,699 (14th September 2021) Estimated Population by Locality 1st January, 2021

Population Density

4.40. In 2018, the Malta region had a population density of 1,867 persons per square kilometre. On the other hand, the Gozo region had 486 persons per square kilometre. The localities with the highest population densities are Tas-Sliema (17, 431 persons/km^2), followed by L-Isla (17,019 persons/km^2) and Il-Gżira (12,002 persons/km^2). The locality with the lowest population density is L-Għasri (85 persons/km^2).

Households and Dwellings

4.41. There is a continued trend towards smaller private households. The single-member households account to 53,644 or 27.3 % of private households.

4.42. In 2019, Malta had 183,333 households whilst Gozo had 13,260 households. The Northern Harbour district region was the region with the most households: 66,892 households, that is 34 % of the national share.

Farming community

4.43. The Census of Agriculture 2020[20] showed that the agricultural labour force shrank from 18,212 persons in 2010 to 13,511 persons in 2020. It is also evident that the agricultural community is ageing, and male dominated. In 2010, the labour force that was below 45 years comprised 24.8% of the total workforce. In 2020, the same cohort comprised

[20] NSO (2022) NSO News Release 015/2022 – *Census of Agriculture 2020*

23.7% of the total workforce. The persons 65 and older that were still working in the agricultural sector comprised 21.3% of the total workforce in 2010 and 32.1% in 2020.

4.44. The females working in the agricultural sector remains low at 13.5% of the total workforce.

4.45. A closer look at the agricultural labour force shows that around 87% of the agricultural labour force work limited hours (less than 1,800 hours that is the equivalent of one annual working unit).

WATER

4.46. Water resources in the Maltese Islands are limited both due to the size of the country and its dry climate. Water resources are mainly sea water and groundwater. Other water bodies include inland surface waters and transitional waters that are generally ephemeral[21] in nature. Streams and watercourses are part of a wider valley system known as *widien*. These valley systems are important for multiple uses including landscape character, flood protection, agricultural activities, recreational uses and groundwater recharge.

4.47. The Water Framework Directive (WFD) (2000/60/EC), transposed into Maltese legislation as S.L. 549.100 (Water Policy Framework Regulations, 2015), provides for the long-term sustainable management of water resources based on a high level of protection of the aquatic environment.

4.48. The WFD adopts an iterative approach characterised by the identification of the status of the different water bodies, the development and implementation of measures in determining the pressures and the proposed measures to maintain / improve the status of the water body and monitor to assess the effects of the proposed measures. Finally, this is recorded in the Water Catchment Management Plan, which is reviewed every six years.

4.49. The WFD results in the Second Water Catchment Management Plan represent the most significant milestones in the implementation of the Directive in Malta to date. The Third Water Catchment Management is currently being prepared and is expected to be published shortly. This Plan will cover the period 2022 to 2027.

4.50. The Plan describes the main issues for the management of water resources in the Maltese Islands and proposes actions or measures needed to deal with these issues. The Plan spells out the steps needed to protect, enhance and improve the water environment of Malta and Gozo. The plan is holistic in its approach since it considers

[21] Ephemeral refers to watercourses only, excluding permanent freshwater pools or the transitional waters (apart from il-Ballut ta M'Xlokk).

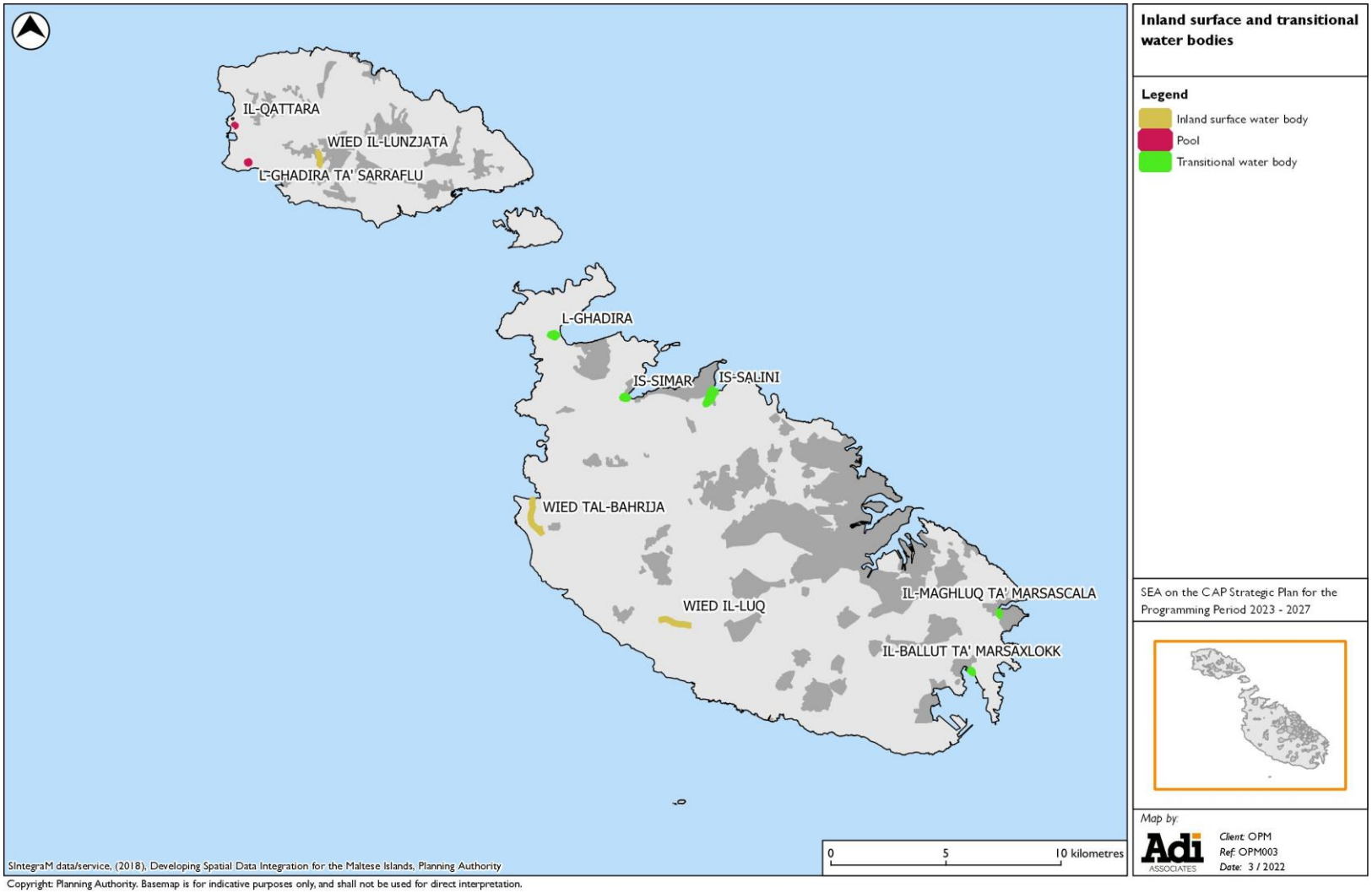
the integrated management of groundwaters and surface waters at the water catchment scale.

4.51. In line with the Water Framework Directive, the Maltese Islands have been designated as one whole Water Catchment district. Most inland surface waters in the Maltese Islands are related to river valleys ('*widien*') and their catchments whilst transitional waters are linked to coastal processes. Only a few watercourses and streams are permanent. These are linked to springs that are the result of the Blue Clay formation's impermeability. Due to their scarcity inland surface and transitional waters are often protected for their ecological value.

4.52. There have been two Water Catchment Management Plans covering the periods 2010 - 2015 and 2015 -2021. A third Plan is being drafted to cover the period 2022 – 2027.

4.53. There are five transitional waters, three watercourses and two pools that are protected under the WFD, see **Figure 4.20**.

Figure 4.20: Inland surface and transitional water bodies



Fresh water

4.54. Fresh water is a limited natural resource in the Maltese Islands. It derives from rainwater percolating through the porous limestone rock accumulating in aquifers, from where it either seeps out from fissures in the rock or is extracted for agricultural use or human consumption.

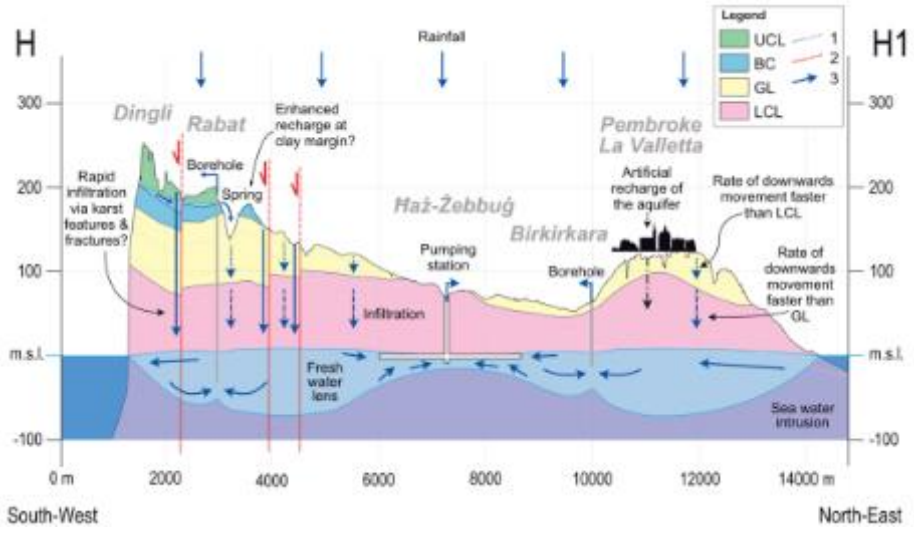
4.55. There are two main types of aquifers: the perched aquifers and the mean sea level aquifers, see **Figure 4.21**. Perched aquifers are found within the Upper Coralline Limestone formation, above the impervious Blue Clay formation, and above sea level. Such aquifers are not in contact with seawater and hence do not suffer from saltwater intrusion. A perched aquifer is characterised by its low permeability (0.2 – 0.5m per year) and high porosity (41 - 45%). This means that the rate of downwards movement in the aquifer matrix will be slow and the travel time in the unsaturated zone will be long in the thicker parts of the aquifer[22]. The depth of the perched aquifer varies between 20m and 50m.

4.56. The Lower Coralline Limestone formation hosts the mean sea level aquifer. This aquifer consists of freshwater that floats in a lens-shaped formation above saline sea water, due to differences in water density. The current highest piezometric level in this aquifer is around 3m. Due to abstraction pressures, the piezometric levels in some central regions of Malta can reach levels as low as 1m above mean sea level. The mean sea level aquifer is characterised by relatively low porosity levels (7 – 20%) and a downward movement rate of 0.5 – 2.8m per year. Yet, the thickness of the Maltese aquifers suggests that residence times in the saturated zone range from between 15 and 40 years. The longest residence times occur within the Gozo mean sea level aquifer and range from between 25 and 60 years[23].

[22] British Geological Society, A preliminary study on the identification of the sources of nitrate contamination in groundwater in Malta - Results and interpretation, 2008

[23] Ibid.

Figure 4.21: Conceptual model of perched and mean sea level aquifer



Source: Lotti et al., 2021. Numerically enhanced conceptual modelling (NECoM) applied to the Malta Mean Sea Level Aquifer. Hydrogeology Journal, 29: 1517-1537.

4.57. There are a total of 15 groundwater bodies across the Maltese Islands. Thirteen of these groundwater bodies are in good quantitative status. The location of the groundwater bodies is shown in **Figure 4.22**.

4.58. In 2014, agricultural activity accounted for 49 per cent of groundwater abstraction. WSC abstraction accounted for 37 per cent of the total groundwater abstracted[24]. Abstraction for agricultural activity accounted for 39 per cent of the total groundwater abstracted from the mean sea level aquifer system, whilst it accounted for 79 per cent of the perched aquifer systems. Analysis undertaken as part of the Second Water Management Plan showed that the mean sea level system is being over abstracted whilst the perched aquifer showed a positive balance, see **Table 4.4**.

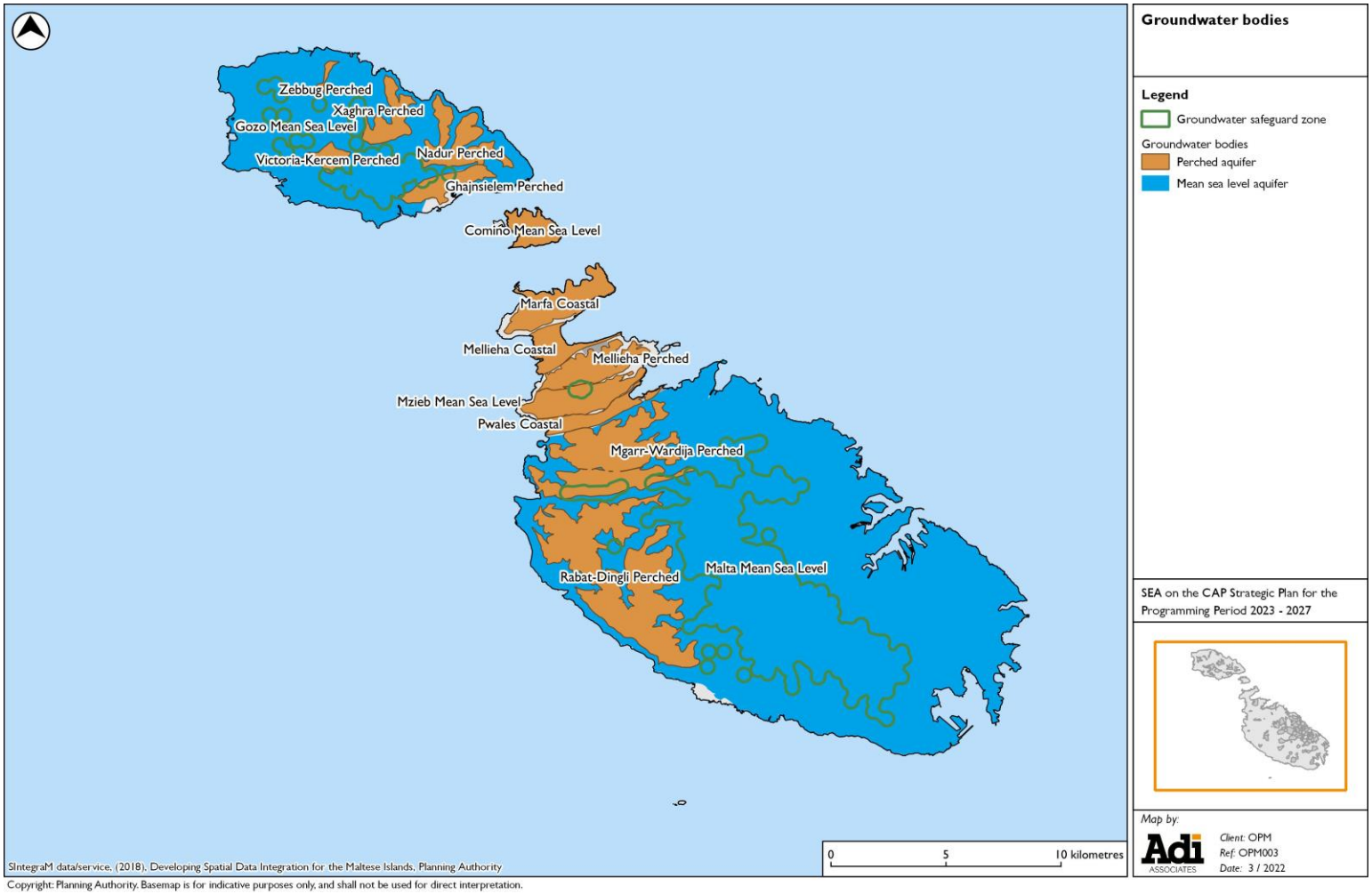
[24] Environment and Resources Authority (2015) The Second Water Catchment Management Plan for the Malta Water Catchment District 2015 - 2021

Table 4.4: Application of the Water Balance Model at Groundwater Body level

Groundwater Body	Size (km^2)	Inflow (Mm^3)	Outflow (Mm^3)	Balance (Mm^3)	Status
Malta Mean Sea Level	216.6	36.25	39.7	-3.45	Poor Status
Rabat Dingli Perched	22.6	5.41	3.48	1.94	Good Status
Mgarr-Wardija Perched	13.7	3.28	2.11	1.17	Good Status
Pwales Coastal	2.8	0.16	0.16	0.0	Good Status
Mizieb Mean Sea Level	5.2	1.25	0.8	0.45	Good Status
Mellieha Perched	4.5	1.08	0.69	0.39	Good Status
Mellieha Coastal	2.9	0.69	0.45	0.25	Good Status
Marfa Coastal	5.5	1.32	0.85	0.47	Good Status
Comino Mean Sea Level	2.7	0.64	0.35	0.29	Good Status
Gozo Mean Sea Level	65.8	12.85	12.9	-0.05	Poor Status
Għajnsielem Perched	2.7	0.71	0.64	0.06	Good Status
Nadur Perched	5.0	1.31	1.19	0.12	Good Status
Xagħra Perched	3.0	0.78	0.71	0.07	Good Status
Żebbuġ Perched	0.4	0.1	0.09	0.01	Good Status
Victoria-Kerċem Perched	1.5	0.39	0.376	0.04	Good Status

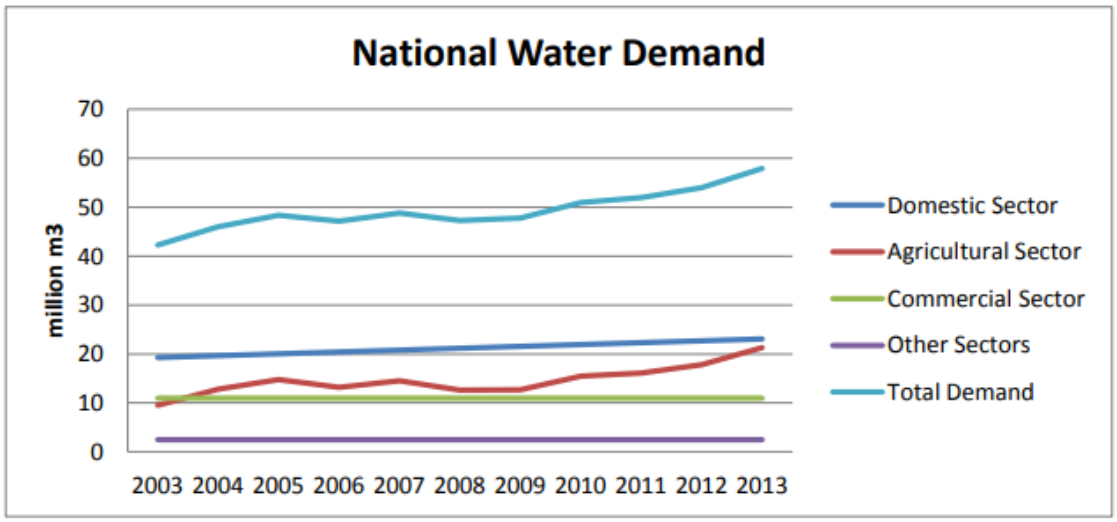
Source: Environment and Resources Authority (2015) The Second Water Catchment Management Plan for the Malta Water Catchment District 2015 - 2021

Figure 4.22: Groundwater bodies



4.59. A water demand assessment has shown that water demand from the agricultural sector has risen considerably, see **Figure 4.23**. The rise in the agricultural sector water demand can be possibly attributed to the increase in the registration of boreholes.

Figure 4.23: Trends in the National Water Demand between 2003 and 2013



Source: Environment and Resources Authority (2015) The Second Water Catchment Management Plan for the Malta Water Catchment District 2015 - 2021

4.60. The groundwater bodies are under both quantitative and qualitative pressures. The quantitative pressures include an increase in population. The estimated water demand grew from 48 million m^3 in 2009 to 62 million m^3 in 2014. These figures should be considered with caution since as explained above there was an increase in the registration of boreholes for irrigation and 2014 coinciding with a year with a precipitation that was lower than the average annual rainfall.

4.61. There are also indirect quantitative pressures related to climatic changes resulting in a drier climate hance less water. This change will exacerbate water demand from sectors like agriculture and reduce groundwater recharge. Additionally, continued urbanisation has resulted in more impermeable surfaces and reduced groundwater recharge.

4.62. The groundwater bodies are also facing qualitative pressures mainly through saline intrusions and nitrate contamination amongst others. Mean electrical conductivity content, which indicates seawater intrusion into the aquifers, was higher than the established thresholds in five of the fifteen aquifers, see **Table 4.5**.

Table 4.5: Mean Electrical Conductivity content in bodies of groundwater

Groundwater Body	Mean Electrical Conductivity Content (2009-2014) uS/cm
Malta Mean Sea Level	2,900.04
Rabat Dingli Perched	1,619.19
Mgarr-Wardija Perched	1,302.98
Pwales Coastal	9,206.72
Mizieb Mean Sea Level	2,572.93
Mellieha Perched	2,623.54
Mellieha Coastal	2,139.44
Marfa Coastal	3,720.27
Comino Mean Sea Level	2,485.75
Gozo Mean Sea Level	2,643.88
Għajnsielem Perched	1,822.0
Nadur Perched	992.2
Xagħra Perched	2,293.53
Żebbuġ Perched	1,780.62
Victoria-Kerċem Perched	2,307.08

NOTE: Sea water intrusions parameters: Sea Level Aquifer Systems: Electrical Conductivity 4,500uS/cm; Perched Aquifer Systems: Electrical Conductivity 2,000uS/cm and Coastal Aquifer Systems: Electrical Conductivity 3,000uS/cm.

Source: Environment and Resources Authority (2015) The Second Water Catchment Management Plan for the Malta Water Catchment District 2015 - 2021

4.63. Arable farming covers around 47 per cent of Malta. Agrochemicals such as fertilisers and pesticides contribute to diffuse pollution. Even though pesticide pollution has not been identified in the groundwater, the levels of nitrates found in water match the organic nitrogen in the cultivated soil. Another potential source of nitrate contamination is mismanagement of waste from the animal husbandry sector.

4.64. Twelve of the fifteen groundwater bodies have surpassed the 50 mg/L EU threshold for nitrate levels, see **Table 4.6**. Whilst a stable nitrate concentration has been observed in the mean sea level aquifers, an increasing concentration has been noted in the perched aquifers.

Table 4.6: Mean Nitrate content in bodies of groundwater

Groundwater Body	Mean Nitrate Content (2009-2014) mg/l
Malta Mean Sea Level	66.9
Rabat Dingli Perched	193.3
Mgarr-Wardija Perched	117.6
Pwales Coastal	407.6
Mizieb Mean Sea Level	43.3
Mellieha Perched	167.5
Mellieha Coastal	33.3
Marfa Coastal	217.4
Comino Mean Sea Level	15.8
Gozo Mean Sea Level	48.0
Għajnsielem Perched	119.0
Nadur Perched	79.7
Xagħra Perched	237.5
Żebbuġ Perched	215.9
Victoria-Kerċem Perched	226.7

Source: Environment and Resources Authority (2015) The Second Water Catchment Management Plan for the Malta Water Catchment District 2015 – 2021

4.65. Since 2017, another source of fresh water for the agricultural sector is "New Water", which is treated sewage effluent water that is good for irrigation purposes. The network of "New Water" is being extended in order to reach more farmers. The current Rural Development Programme 2014-2020 is funding the construction of the distribution network of "New Water" under Measure 4.3.

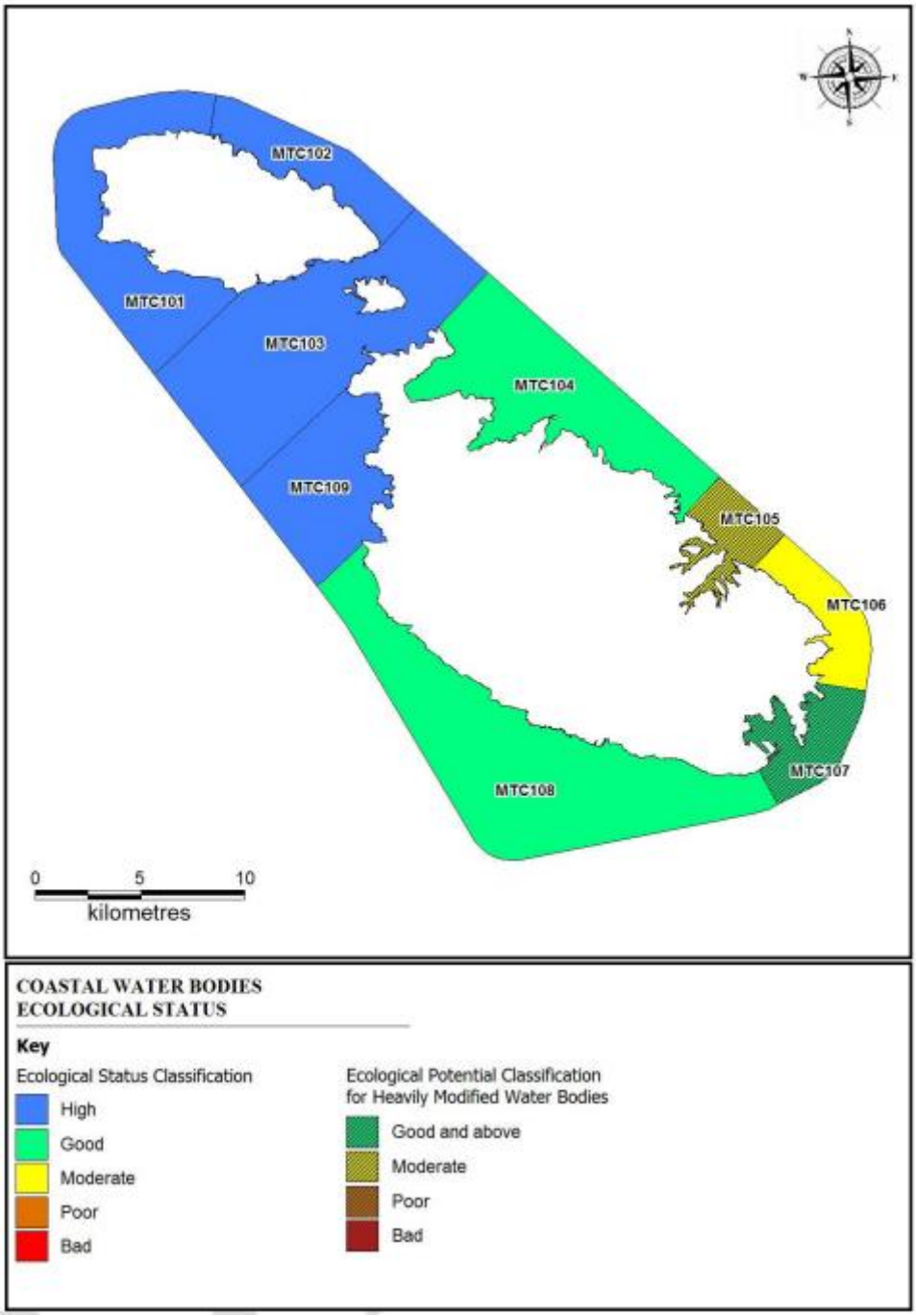
Coastal waters

4.66. The Water Catchment Management Plan identified 9 distinct coastal water bodies. These water bodies were categorised into 4 classes. These classes included:

- Type 1 – Very exposed, deep waters;
- Type 2 – Exposed, intermediate;
- Type 3 – Exposed, intermediate to deep waters; and
- Type 4 – Exposed, intermediate to deep waters with channel mixing.

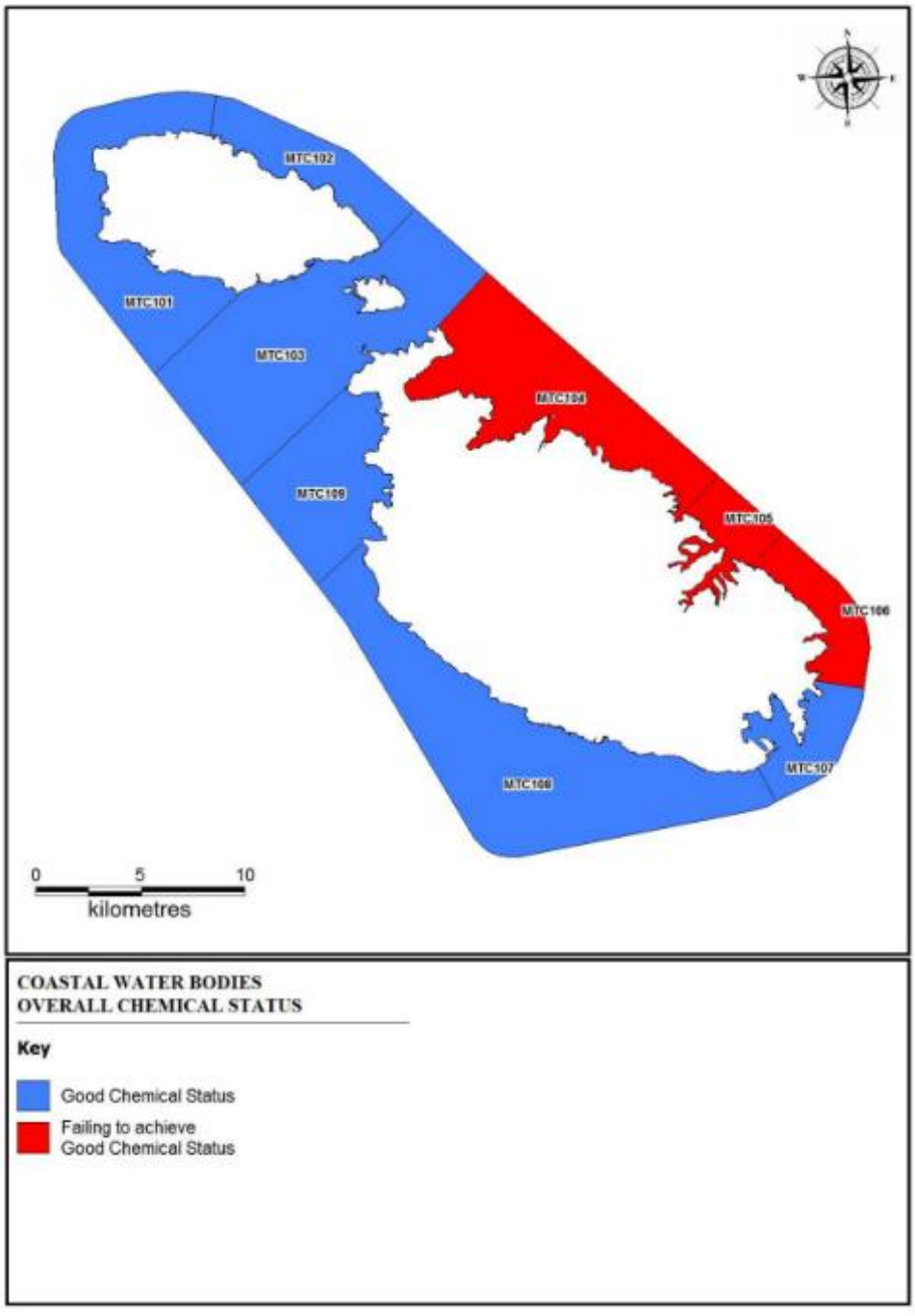
4.67. These water bodies have been assessed for their ecological and chemical status, see **Figure 4.24** and **Figure 4.25.**

Figure 4.24: Status of the Biological quality elements in all coastal water bodies (natural and heavily modified) coastal waters



Source: Environment and Resources Authority (2015) The Second Water Catchment Management Plan for the Malta Water Catchment District 2015 - 2021

Figure 4.25: Overall chemical status in designated coastal water bodies



NOTE: The map excluded Mercury since it resulted in failure in chemical status in all the coastal bodies.

Source: Environment and Resources Authority (2015) The Second Water Catchment Management Plan for the Malta Water Catchment District 2015 - 2021

4.68. Coastal water quality is monitored in line with various Directives including the Water Framework Directive, Marine Strategy Framework Directive, Nitrates Directive, Bathing Water Directive and the UN Barcelona Convention.

4.69. Over the years, water quality has improved significantly since all sewage is treated prior to disposal into the sea.

CLIMATIC CONDITIONS, CLIMATE CHANGE AND EMISSIONS TO AIR

Climatic conditions

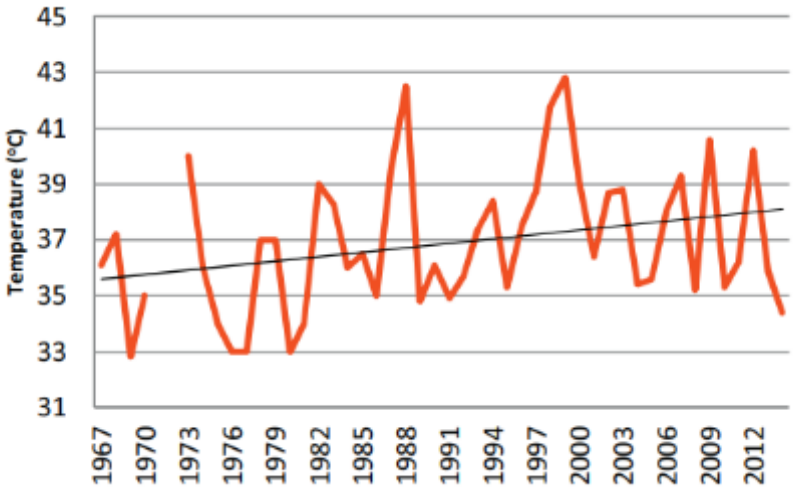
4.70. The climate of the Maltese Islands is a typical Mediterranean one, with mild wet winters and hot, dry summers. Malta has an average annual temperature is 18.62°C, with a standard deviation of 0.40. The annual mean temperature varies from a minimum of 17.9 to a maximum of 19.7. The monthly temperature means vary from 12.4°C in winter to 26.3°C in summer. This variation is the result of the regional weather trends and the moderating influence of the sea[25].

4.71. Analysis of mean air temperatures between 1967 and 2014 shows an increasing trend both in the annual maximum temperature and the annual minimum temperature[26], see **Figure 4.26** and **Figure 4.27**. The former raised by +0.09°C per annum and the latter raised by +0.02°C per annum. Both trends had a 99 per cent significance level. This upward trend in the mean temperature is confirmed when one contrasts the temperature anomalies between 1967 and 2014 and the climatic norm for Malta (1961-1990), see **Figure 4.28**.

[25] NSO (2011) *The Climate of Malta: statistics, trends and analysis 1951-2010*

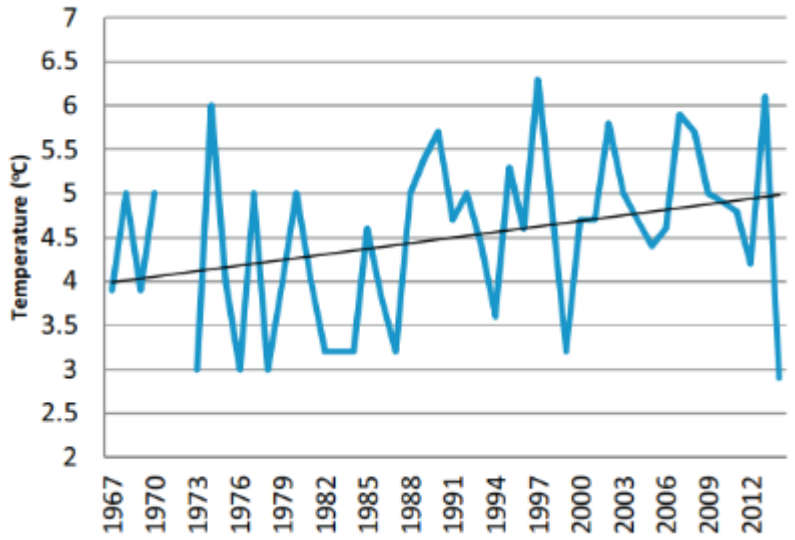
[26] Galdies, C.; Said, A.; Camilleri, L.; Caruana, M. (2016) Climate change trends in Malta and related beliefs, concerns and attitudes toward adaptation among Gozitan farmers.

Figure 4.26: Annual maximum temperature trend



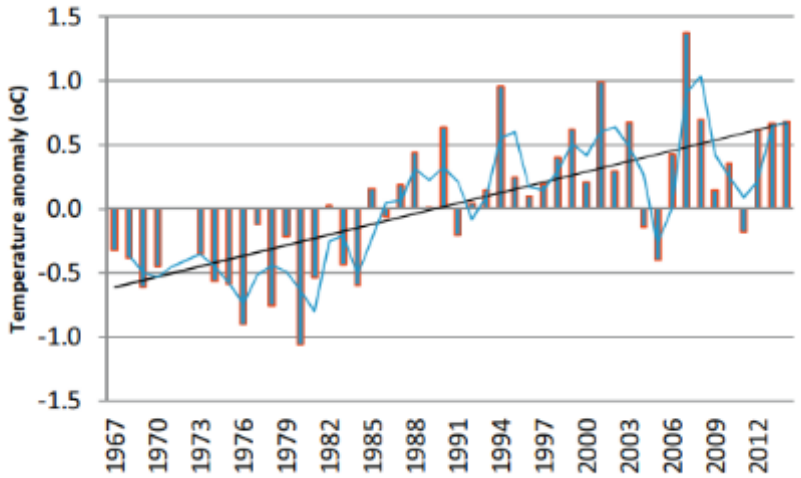
Source: Galdies et al., 2016

Figure 4.27: Annual minimum temperature trend



Source: Galdies et al., 2016

Figure 4.28: Annual mean temperature anomaly (1967-2013)



Source: Galdies et al., 2016

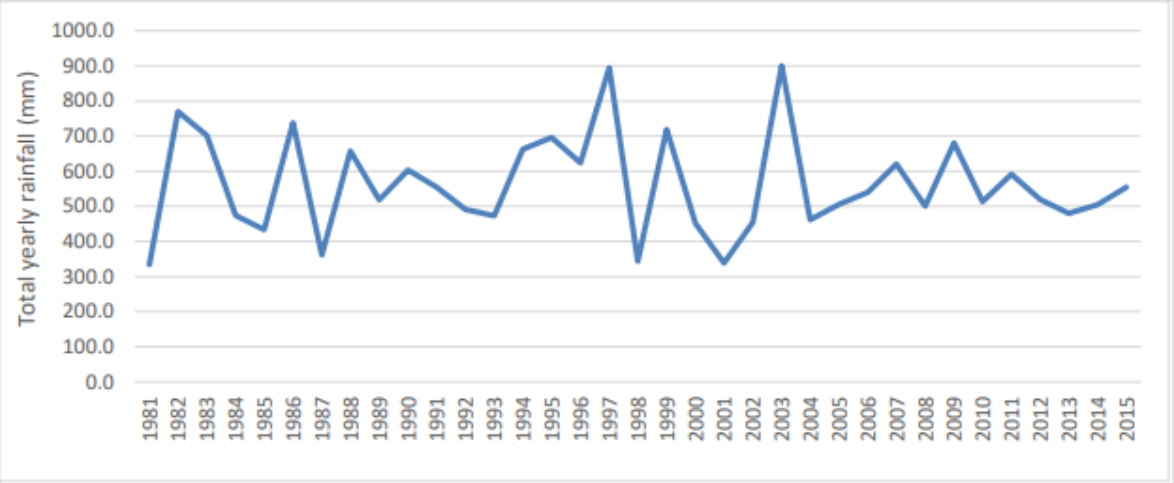
4.72. A positive trend in the heat stress index (Humidex) has also been registered. This is of greater concern due to its potential impact on biodiversity and agriculture. Concurrently, there is a declining trend in wind chill events. These trends suggest an increasingly warm and dry climate[27].

4.73. Precipitation in Malta takes the form of rain, hail, dew, and soft rime. The average precipitation rate calculated over 30 years (1961 - 2010) is that of 553.12mm with a standard deviation of 156.99mm (28.38 co-efficient of variation).

4.74. A Mann-Kendall test analysing the annual mean of Consecutive Dry Days (CDD) identified a positive, upward trend that is statistically significant[28]. The figure below presents the trend in the annual precipitation between 1981 and 2015.

[27] Galdies, C.; Said, A.; Camilleri, L.; Caruana, M. (2016) Climate change trends in Malta and related beliefs, concerns and attitudes toward adaptation among Gozitan farmers.
[28] Ibid.

Figure 4.29: Annual total precipitation between 1981 and 2015



Source: ERA (2018); Malta Airport Met Office

Emissions to air

4.75. Air quality is a particular indicator for both environmental quality and human health. At a national level, air quality is assessed by measuring the levels of the major pollutants: suspended particulate matter (PM) concentrations, ozone (O_3), benzene and other volatile organic compounds (VOCs), nitrogen dioxide (NO_2), and sulphur dioxide (SO_2). In Malta, these pollutants are mainly created by traffic and electricity generation plants.

4.76. **Table 4.6** lists various pollutants and their source.

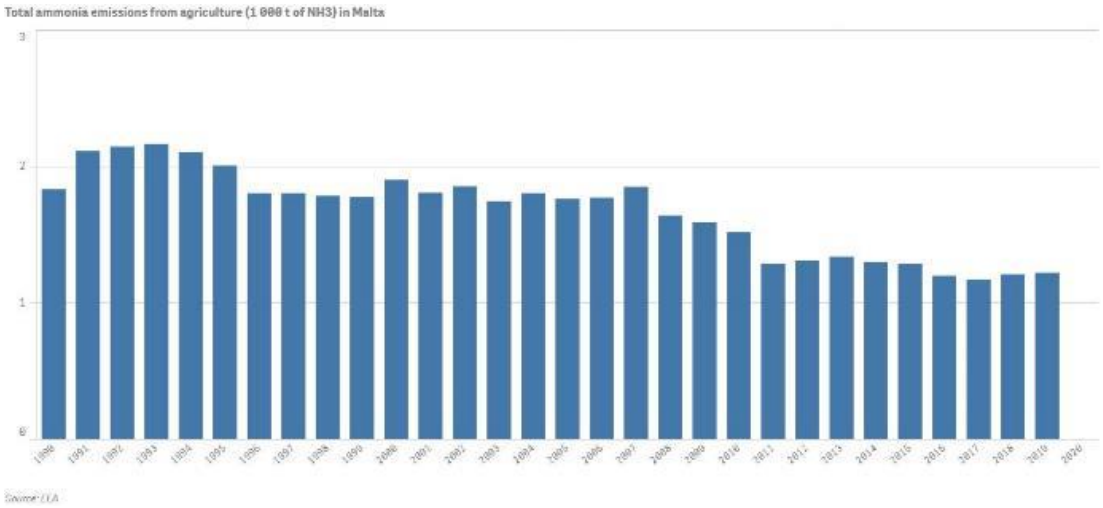
Table 4.6: Pollutants and their sources

Pollutant	Source(s)
Particulate Matter	• 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
Nitrogen Oxide (NO and NO_2)	• Combustion sources (results in NO mostly, with subsequent oxidation to NO2)
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

Source: ERA(2018) Ambient Air (Chapter 2) State of the Environment Report

4.77. Ammonia (NH_3) pollution increases acid depositions and the level of nutrients in soil and freshwater bodies, which can lead to eutrophication. It can also add to the burden of particulate matter in the air when it undergoes certain chemical reactions. Agriculture is the dominant emitter of ammonia in the EU (from livestock farming and the use of some inorganic nitrogen fertilisers). In the EU-27, ammonia emissions from agriculture fell more or less continuously between 1990 and 2012 but have been rising again since then. In Malta, between 1990 and 2020 the levels have fallen and have remained relatively constant since 2017 (see **Figure 4.30**).

Figure 4.30: Total emissions of ammonia



Air quality monitoring

4.78. There are two methods of air monitoring in Malta: passive diffusion tubes and the real time air quality stations. There are 100 NO_2 and 100 volatile organic compounds (VOC) passive diffusion tubes around the Maltese Islands. Readings are generally taken every 4 weeks and a total of 13 snapshots are taken annually. This network is used to gauge sulphur dioxide, benzene, toluene, ethylbenzene and xylenes (collectively known as BTEX) and nitrogen dioxide. There are four air quality monitoring stations in Malta (Ħ'Attard, L-Imsida, Iż-Żejtun and San Pawl il-Baħar). An additional station is found in L-Għarb, Gozo and is a background station. Another monitoring station is a mobile station and is currently located in Senglea.

Particulate matter (PM)

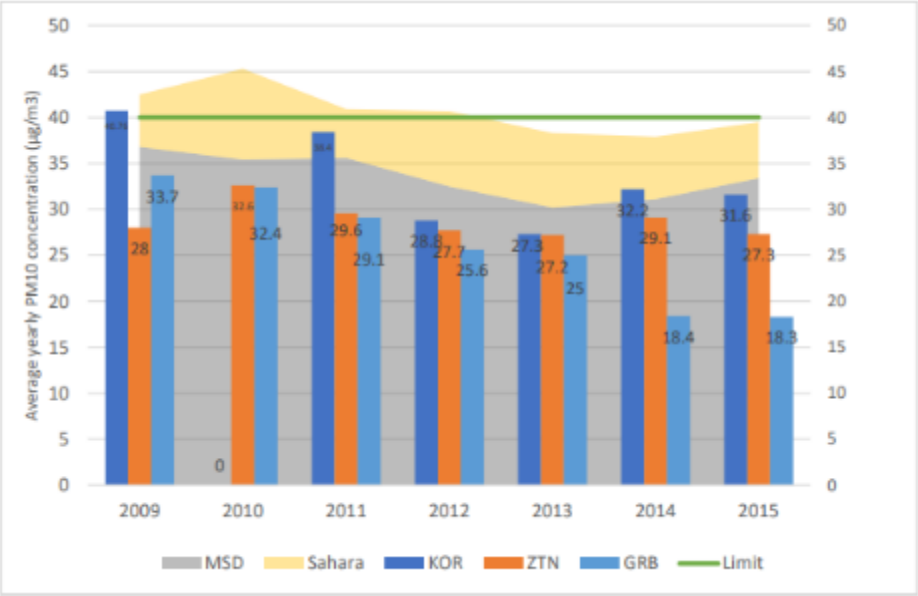
4.79. PM is solid or liquid particles. The standard limit for PM_{10}[29] is daily limit value of 50 µg/m³ and an annual limit value of 40 µg/m³. The daily limit should not be exceeded more than 35 times a year (approximately 10% of days measured). The annual limit value for PM2.5 is 25 µg/m³.

4.80. Airborne particulate matter originates from both natural and anthropogenic sources. The natural sources include pollen, sea spray and Saharan dust. The anthropogenic sources include traffic and power generation. Mineral extraction and construction activities also contribute to the generation of particulates. During the summer months, fireworks also produce airborne particulate matter.

[29] PM_{10} refers to particles with an aerodynamic diameter smaller than 10mm while $PM_{2.5}$ refers to particles of diameter smaller than 2.5mm, with the latter being the more dangerous for human health due to their deeper lung penetration.

4.81. Airborne PM remained stable between 2008 and 2015. In 2009, the average annual airborne PM concentration was surpassed at the Kordin station. This average was exceeded at L-Imsida station between 2009 and 2011. These high records could be attributed to Saharan dust episodes as shown in the figure below.

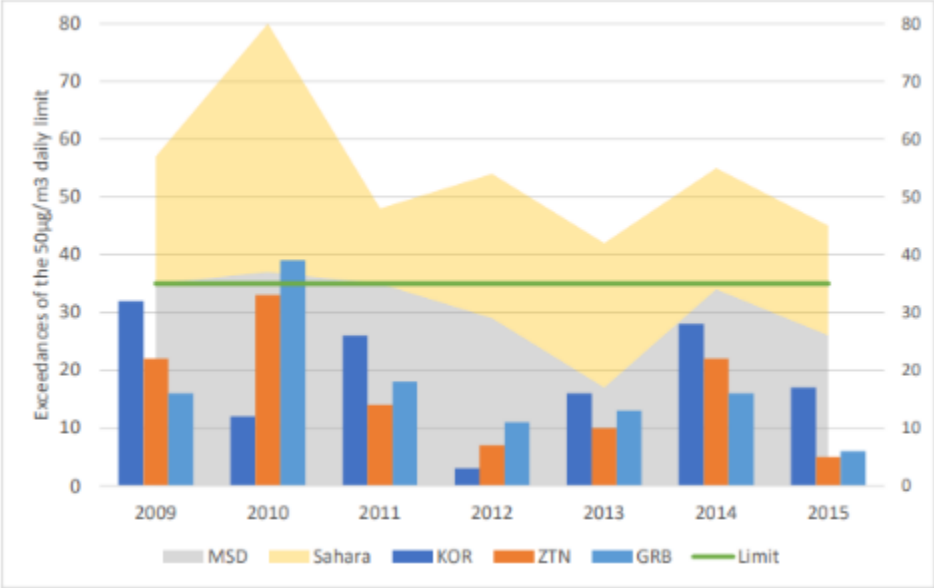
Figure 4.31: Annual mean PM_{10} concentrations at the air quality monitoring stations in Malta and Gozo



Source: ERA(2018) Ambient Air (Chapter 2) State of the Environment Report

4.82. In 2010, the number of exceedances of the PM_{10} 50 µg/m³ daily limit was surpassed over 35 times as per figure below. L-Imsida station measured 80 exceedances; these exceedances decreased after deducting the natural Saharan dust episodes. The Għarb station also measured more than 35 exceedances. Similarly, these exceedances went down after deducting natural sources.

Figure 4.32: Number of exceedances in the daily limit of the PM_{10} concentrations at the air quality monitoring stations in Malta and Gozo



Source: ERA(2018) Ambient Air (Chapter 2) State of the Environment Report

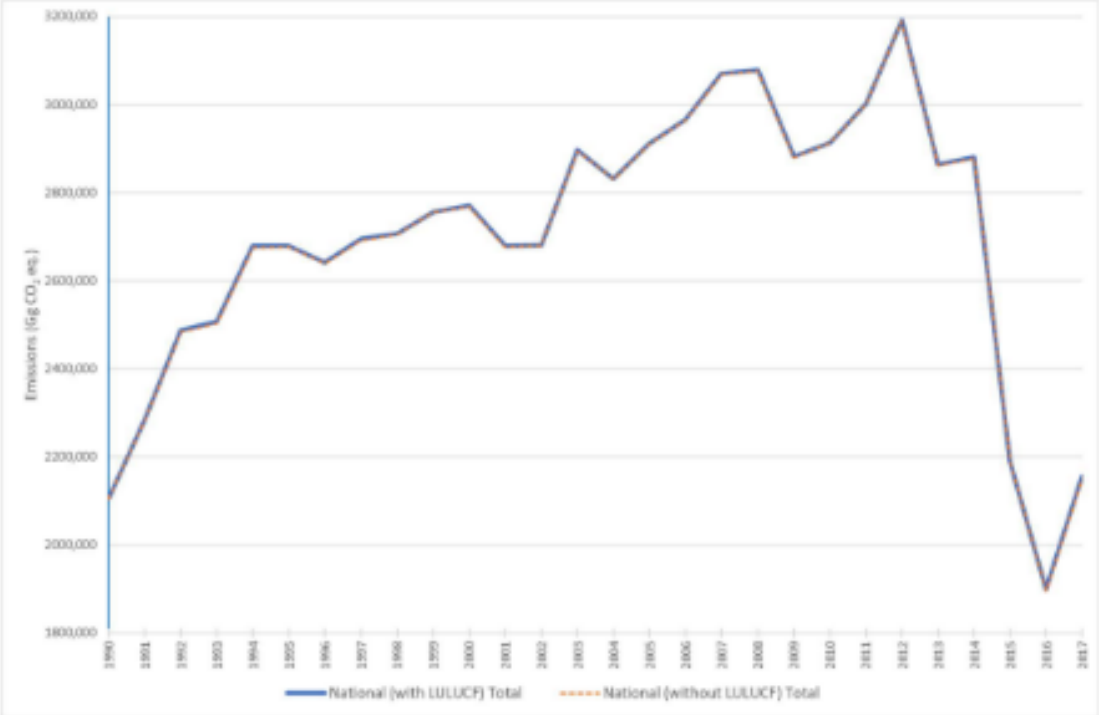
4.83. The 2009 – 2015 annual averages measured in all the monitoring stations were within the EU annual average $PM_{2.5}$ 25 µg/m³ limit value.

Greenhouse gases

4.84. Increases in anthropogenic greenhouse gases (GHGs) are the major contributor to climate change[30].

4.85. GHG emissions have been decoupled from population and GDP increases. From 1990 and 2012 there was a general upward trend in GHG emissions, see figure below. These were linked to power generation and transport. This upward trend was reversed from 2012 onwards, with a rapid decline up to 2016. There was an increase in emissions again after 2016. The decline was a result of the shift to the electricity interconnector and the surge after 2016 the result of the increased local production in energy.

Figure 4.33: National total GHG emissions



Source: Malta's inventory of greenhouse gas emissions and removals, 2019; Malta Resources Authority, 2019 *Fourth Biennial Report of Malta*.

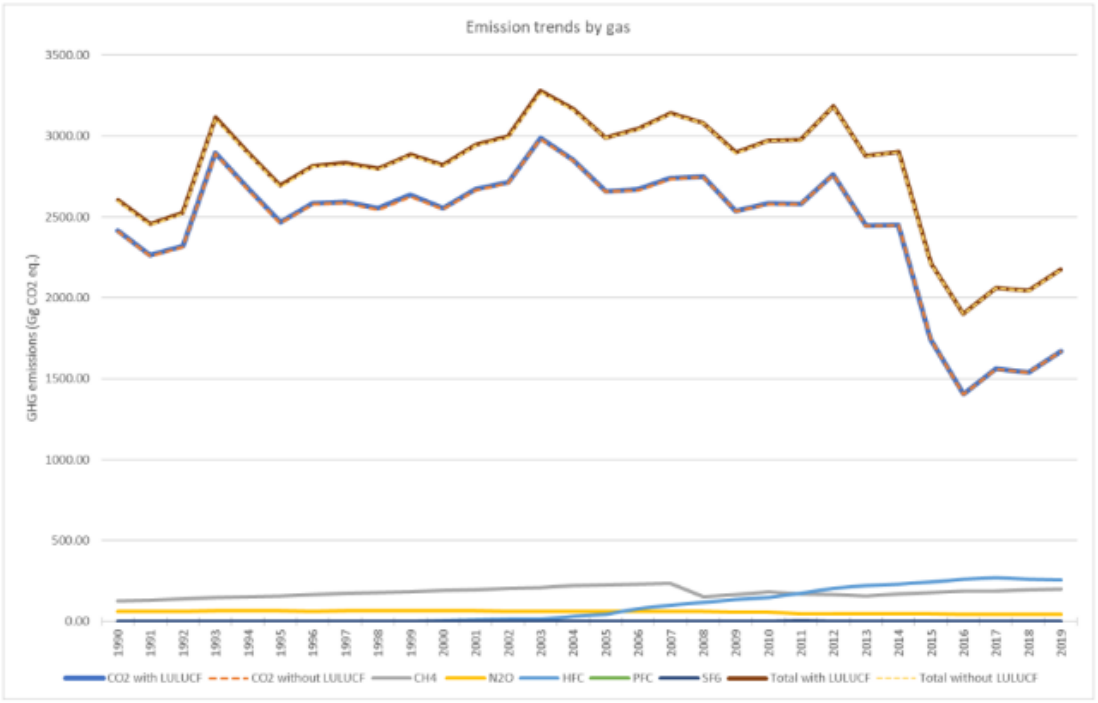
[30] IPCC, 2021: Summary for Policymakers. In: *Climate Change 2021: The Physical Science Basis*. Contribution of Working Group I to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change [Masson-Delmotte, V., P. Zhai, A. Pirani, S. L. Connors, C. Péan, S. Berger, N. Caud, Y. Chen, L. Goldfarb, M. I. Gomis, M. Huang, K. Leitzell, E. Lonnoy, J.B.R. Matthews, T. K. Maycock, T. Waterfield, O. Yelekçi, R. Yu and B. Zhou (eds.)]. Cambridge University Press. In Press.

4.86. The main GHG in Malta is carbon dioxide (CO_2). While remaining the dominant gas, the relative contribution of this gas has been decreasing over the past years. There has been an increase in HFCs both in the absolute and relative contribution to GHG emissions (see **Figure 4.34** and **Table 4.7**).

4.87. Methane (CH_4) is another GHG. Methane emission peaked by 2007. Following 2007, levels in CH_4 emissions fluctuated but never reached the previous levels. The relative contribution of CH_4 has increased from a 5.4 per cent share in GHG emissions in 1990 to 11.6 per cent in 2017. CH_4 emissions originate from waste management (74.73 per cent in 2019) and agricultural activities (2.86 per cent in 2019).

4.88. Nitrous oxide emissions represent a small share of the GHG emissions. Two thirds of the nitrous oxide emissions originate from the agricultural sector.

Figure 4.34: GHG emissions by gas



Source: Malta Resources Authority (2021) *Annual Report for Submission under the United Nations Framework Convention on Climate Change and the European Union's Monitoring Mechanism Regulation*

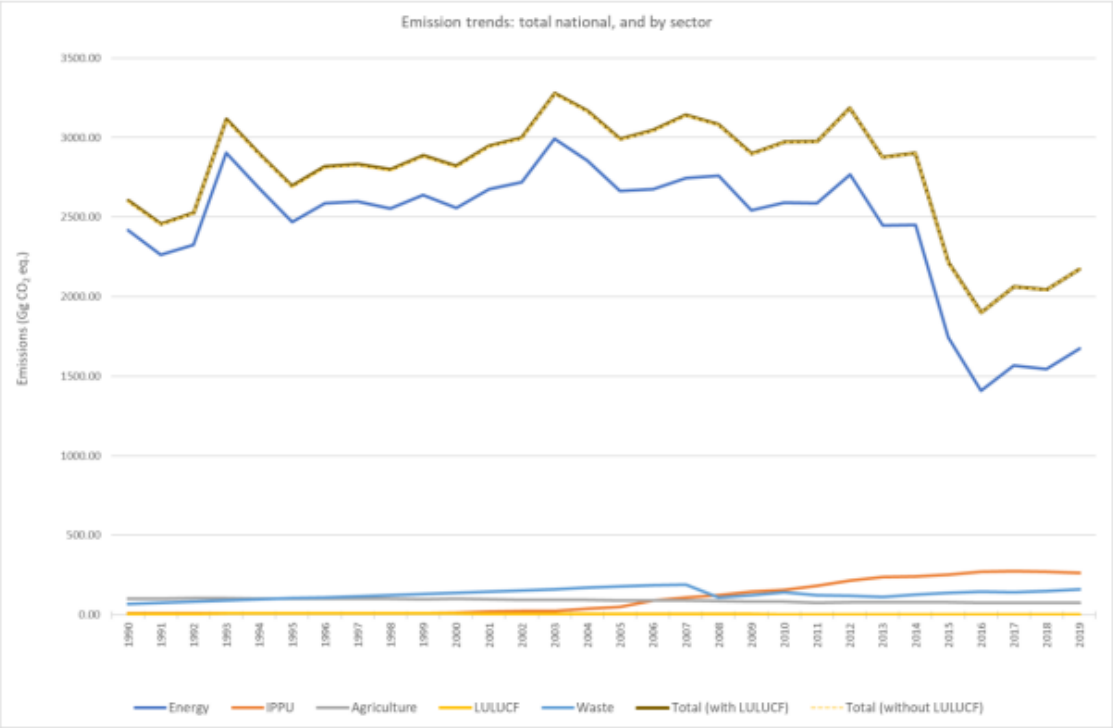
Table 4.7: GHG emissions by gas

	CO_2 with LULUCF	CO_2 without LULUCF	CH_4	N_2O	HFC	PFC	SF_6	NF_3	Total with LULUCF	Total without LULUCF
	Gg CO2 eq.									
1990	2414.88	2408.46	5.03	0.21	NO,NE,IE,NA	NA,NO	0.00	NA,NO	2602.98	2595.50
1991	2261.49	2255.39	5.32	0.21	NO,NE,IE,NA	NA,NO	0.00	NA,NO	2457.44	2450.25
1992	2321.30	2314.90	5.62	0.21	NO,NE,IE,NA	NA,NO	0.00	NA,NO	2527.22	2519.74
1993	2898.32	2891.13	5.91	0.22	NO,NE,IE,NA	NA,NO	0.00	NA,NO	3114.22	3106.01
1994	2677.10	2669.72	6.13	0.22	0.00	NA,NO	0.00	NA,NO	2897.83	2889.41
1995	2468.09	2460.27	6.32	0.22	0.00	NA,NO	0.00	NA,NO	2694.45	2685.61
1996	2586.33	2578.45	6.64	0.22	0.00	NA,NO	0.00	NA,NO	2818.29	2809.37
1997	2593.98	2586.19	6.91	0.22	0.00	NA,NO	0.00	NA,NO	2833.62	2824.80
1998	2552.75	2545.13	7.12	0.22	0.01	NA,NO	0.00	NA,NO	2799.03	2790.41
1999	2635.12	2627.59	7.40	0.22	0.01	NA,NO	0.00	NA,NO	2886.45	2877.95
2000	2552.37	2545.52	7.74	0.23	6.70	NA,NO	0.00	NA,NO	2821.02	2813.23
2001	2671.87	2665.17	7.86	0.22	11.26	NA,NO	0.00	NA,NO	2946.71	2939.15
2002	2713.98	2707.48	8.13	0.22	14.99	NA,NO	0.00	NA,NO	2997.98	2990.68
2003	2985.31	2979.28	8.42	0.21	16.60	NA,NO	0.00	NA,NO	3277.80	3271.00
2004	2851.99	2846.41	8.82	0.21	29.90	NA,NO	0.00	NA,NO	3167.44	3161.12
2005	2659.41	2654.26	9.00	0.21	42.21	NA,NO	0.00	NA,NO	2990.98	2985.10
2006	2670.67	2665.94	9.20	0.21	79.73	NA,NO	0.00	NA,NO	3045.76	3040.33
2007	2742.68	2738.40	9.38	0.22	98.68	NA,NO	0.00	NA,NO	3141.79	3136.83
2008	2750.99	2747.13	6.11	0.20	114.97	NA,NO	0.00	NA,NO	3081.31	3076.79
2009	2536.03	2532.57	6.64	0.19	135.93	NA,NO	0.00	NA,NO	2896.21	2892.11
2010	2582.22	2579.52	7.32	0.19	148.48	NA,NO	0.00	NA,NO	2971.72	2968.46
2011	2579.25	2576.84	6.79	0.16	172.35	NA,NO	0.00	NA,NO	2975.01	2972.04
2012	2762.64	2760.50	6.68	0.17	204.83	NA,NO	0.00	NA,NO	3184.16	3181.48
2013	2446.15	2444.30	6.24	0.16	220.45	NA,NO	0.00	NA,NO	2873.99	2871.60
2014	2449.97	2448.40	6.88	0.16	235.56	NA,NO	0.00	NA,NO	2907.29	2905.19
2015	1742.28	1740.99	7.17	0.16	251.27	NA,NO	0.00	NA,NO	2221.90	2220.08
2016	1406.41	1405.39	7.49	0.16	262.73	NO,NA	0.00	NO,NA	1904.01	1902.48
2017	1560.17	1559.43	7.37	0.15	271.64	NO,NA	0.00	NO,NA	2062.13	2060.88
2018	1538.78	1538.32	7.69	0.16	264.45	NO,NA	0.00	NO,NA	2042.13	2041.17
2019	1669.33	1669.15	8.07	0.16	257.29	NO,NA	0.00	NO,NA	2175.37	2174.72

Source: Malta Resources Authority (2021) *Annual Report for Submission under the United Nations Framework Convention on Climate Change and the European Union's Monitoring Mechanism Regulation*

4.89. The energy sector contributes to the bulk of national GHG emissions (see **Table 4.8** and **Figure 4.35**). Following 2012 there was a dip in GHG emissions from this sector. As explained above, this is linked to the introduction of the interconnector with mainland Europe. The second largest contributor in GHG emissions is transport. This is linked to high private car ownership and a general growth in road transport.

Figure 4.35: GHG emissions by sector



Source: Malta Resources Authority (2021) *Annual Report for Submission under the United Nations Framework Convention on Climate Change and the European Union's Monitoring Mechanism Regulation*

Table 4.8: GHG emissions by sector

	Energy	IPPU	Agriculture	LULUCF	Waste	Total with LULUCF	Total without LULUCF
	Gg CO2 eq.						
1990	2417.35	7.78	101.06	7.48	69.32	2602.98	2595.50
1991	2263.65	8.01	102.95	7.18	75.65	2457.44	2450.25
1992	2324.28	9.02	104.76	7.48	81.69	2527.22	2519.74
1993	2903.18	9.04	104.48	8.21	89.32	3114.22	3106.01
1994	2680.87	9.32	101.60	8.42	97.61	2897.83	2889.41
1995	2470.29	9.29	101.49	8.85	104.54	2694.45	2685.61
1996	2589.25	9.09	102.09	8.91	108.95	2818.29	2809.37
1997	2596.82	9.30	103.19	8.81	115.50	2833.62	2824.80
1998	2555.95	8.73	100.23	8.62	125.50	2799.03	2790.41
1999	2639.59	8.15	99.75	8.50	130.46	2886.45	2877.95
2000	2557.30	14.99	100.72	7.80	140.22	2821.02	2813.23
2001	2676.16	19.10	97.03	7.56	146.85	2946.71	2939.15
2002	2718.57	22.97	95.73	7.29	153.42	2997.98	2990.68
2003	2991.50	24.86	92.56	6.80	162.08	3277.80	3271.00
2004	2857.90	37.50	95.31	6.32	170.41	3167.44	3161.12
2005	2665.35	49.88	91.51	5.88	178.35	2990.98	2985.10
2006	2676.40	87.84	90.22	5.43	185.87	3045.76	3040.33
2007	2750.01	106.60	91.10	4.96	189.12	3141.79	3136.83
2008	2759.41	122.70	86.65	4.52	108.02	3081.31	3076.79
2009	2542.43	143.28	83.21	4.10	123.19	2896.21	2892.11
2010	2590.10	155.37	81.56	3.26	141.43	2971.72	2968.46
2011	2586.45	182.61	77.62	2.97	125.36	2975.01	2972.04
2012	2769.72	212.68	79.10	2.68	119.98	3184.16	3181.48
2013	2446.71	235.79	78.14	2.39	110.95	2873.99	2871.60
2014	2451.07	248.06	77.97	2.11	128.09	2907.29	2905.19
2015	1742.96	261.74	78.22	1.82	137.16	2221.90	2220.08
2016	1408.07	272.27	76.69	1.53	145.45	1904.01	1902.48
2017	1563.65	278.27	75.26	1.25	143.70	2062.13	2060.88
2018	1542.61	271.20	76.61	0.96	150.75	2042.13	2041.17
2019	1675.00	263.70	76.34	0.65	159.68	2175.37	2174.72

Source: Malta Resources Authority (2021) *Annual Report for Submission under the United Nations Framework Convention on Climate Change and the European Union's Monitoring Mechanism Regulation*

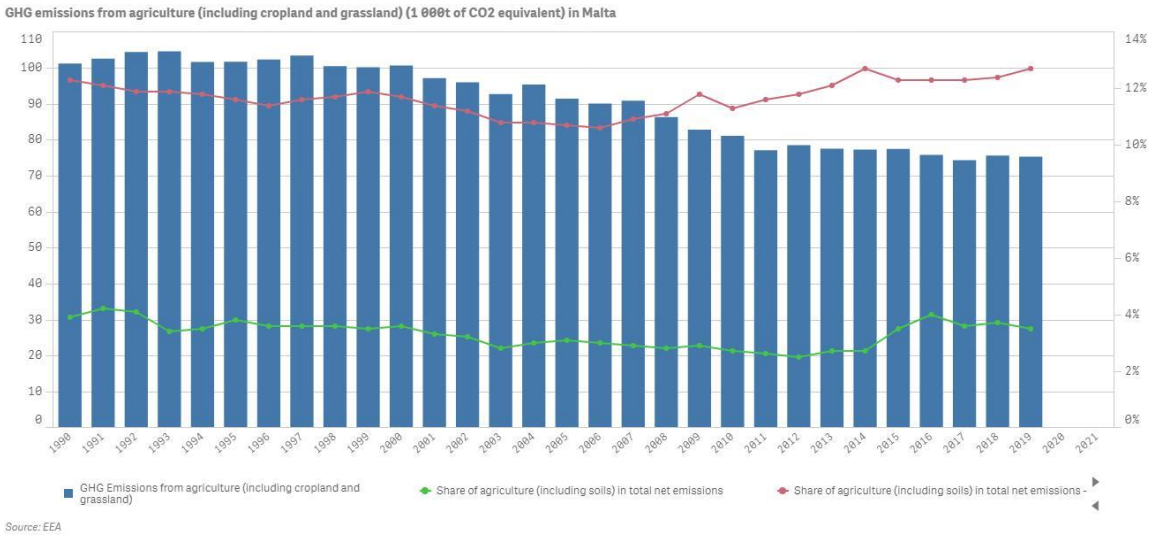
4.90. Agriculture contributes to climate change mainly by emitting three greenhouse gases (GHGs). First, there is methane (CH_4) from livestock digestion processes (enteric fermentation) and manure management. Secondly, nitrous oxide (N_2O) from agricultural soils with organic and mineral nitrogen fertilisation and manure management. And thirdly, carbon dioxide (CO_2) from soil as a result of agricultural land management such as ploughing or conversion of land use, e.g., from grassland to cropland. These practices can lead to mineralisation of the soil organic carbon to CO_2 emitted into the atmosphere. Agricultural land can also act as GHG sink, as growing vegetation takes up CO_2 from the atmosphere that is then stored temporarily or permanently in biomass or soils.

4.91. The indicator presented below (**Figure 4.36**) is a sum of mainly non-CO_2 emissions of enteric fermentation, manure management, and soil management and of the CO_2 emissions and removals from LULUCF (Land Use, Land Use change and Forestry) from grassland and cropland. These are reported by Member States under the 'Agriculture' and 'LULUCF' sectors as defined by the International Panel on Climate Change (IPCC), in the national greenhouse gas inventory submitted to the United Nations Framework Convention on Climate Change.

4.92. EU GHG emissions from agriculture (including cropland and grassland) have fallen by more than 20% since 1990, but they have stagnated since 2010. In 2018 they accounted for 13% of total EU GHG emissions.

4.93. This indicator does not include emissions of CO_2 from the energy use of agricultural machinery, buildings and farm operations or emissions from production of inputs, such as inorganic fertiliser.

Figure 4.36: GHG emissions from agriculture (1,000t of CO_2 equivalent) in Malta



Climate change

Sea-level rise

4.94. In Malta's Seventh Communication to the UNFCC, the MAGICC / SCENGEN model resulted in the modelling of the sea level rise in centimetres for the years 2025, 2050, 2075 and 2100. The modelled rises are 7cm for 2025; 14cm for 2050; 23cm for 2075; and 30cm for 2100[31].

4.95. Malta is densely populated, and a significant percentage of the population lives in the low-lying area around the harbours. Urban development covers 35 per cent of Malta's coast and 19 per cent of Gozo's coast[32].

Coastal erosion

4.96. One of the main effects of sea-level rise is an increase in coastal erosion. In 2021, a project C-COVER Coastal-Climate Overall Vulnerability and Exposure Risk – protection strategy for the Maltese Islands was launched and is funded by the European Commission's (EC) Technical Support Instrument through the Public Works Department (PWD), Ministry for Transport Infrastructure & Capital Projects (MTIP), and the Malta Tourism Authority (MTA)[33].

4.97. To date, coastal defence works have been carried out in a piecemeal way. The existing coastal defences have been built to protect harbours. In 2021, Infrastructure Malta built two defensive structures in Marsaxlokk Bay specifically to protect the Magħluq area, which includes a protected wetland and a pocket beach[34].

Renewable energy

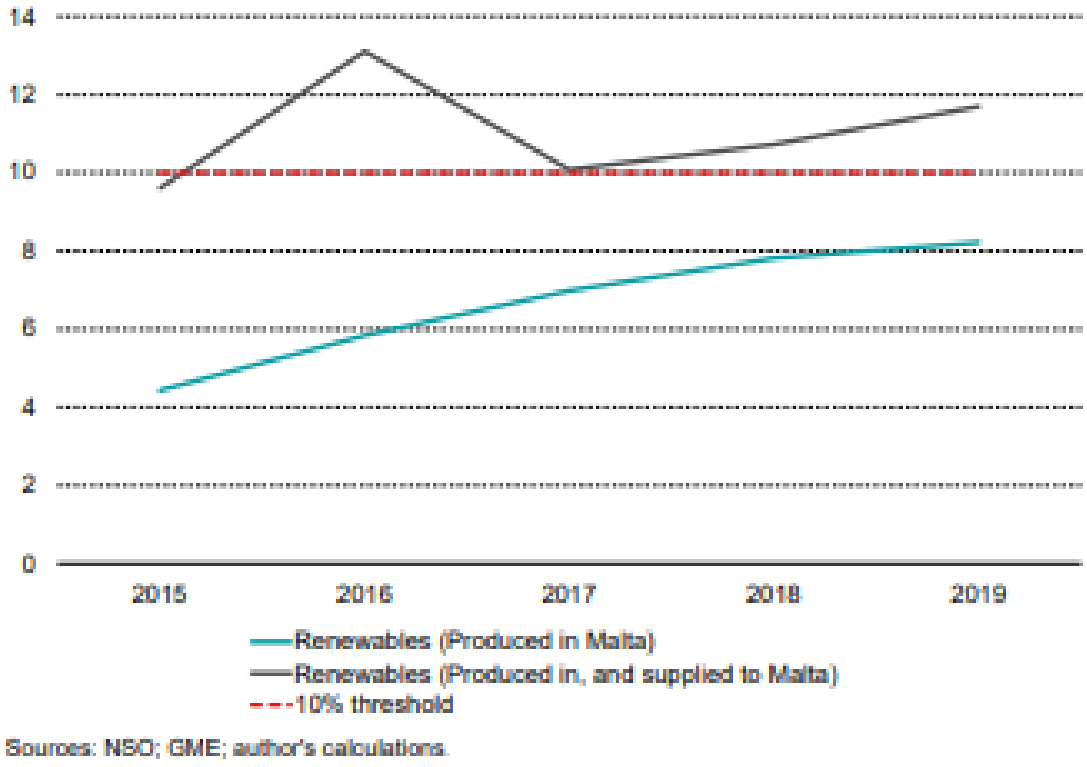
4.98. The *National Renewable Energy Action Plan* set a target of 10% renewable energy in energy consumption by 2020; a 10% renewable energy target applies for the transportation sector too. These targets are established in Maltese legislation through Legal Notice 538 of 2010 (Promotion of Energy from Renewable Sources Regulations)[35].

4.99. Renewable energy production in Malta has increased from 4.4 per cent in 2015 to 8.2 per cent in 2019. This doubling was the result of a policy drive to increase renewable energy production. Considering the gross local electricity production, the

[31] MRA obo MESDCC (2017) *The Seventh National Communication of Malta to the UNFCC*
[32] Ibid.
[33] Public Works (2021) https://publicworks.gov.mt/en/Documents/Coastal-COVER_PWD%20Website%20feed%20%282021-1202%29.pdf (Accessed online on the 23rd February 2022).
[34] Malta Today (2021) Shore protection structures in Marsaxlokk aim to prevent coastal erosion https://www.maltatoday.com.mt/news/national/111926/shore_protection_structures_in_marsaxlokk_aim_to_prevent_coastal_erosion_#.YhYlv-jMKM8 (Accessed on the 23rd February 2022).
[35] EWA (2012) *The National Energy Action Plan 2015 – 2020.*

10 per cent threshold was exceeded from 2016[36], see figure below. The gross local electricity supply includes the imported energy to Malta. It is noteworthy that the figures on the imported energy to Malta includes a number of assumptions.

Figure 4.37: Share of renewable energy in electricity supply



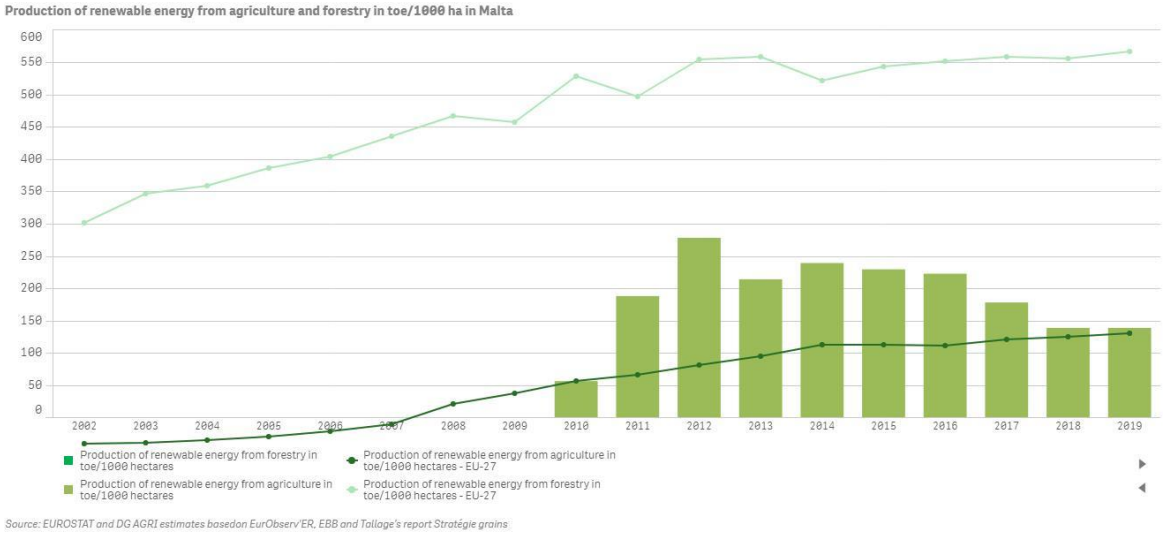
Source: Central Bank of Malta (2021) Renewable electricity in Malta: a question of sources.

4.100. **Figure 4.38** shows the production of renewable energy from agricultural and forestry biomass. The renewable energy from agricultural biomass sums the amount of energy obtained from: biodiesel from oilseeds crops; bioethanol from starch/sugar crops; second generation biofuels (from non-food cellulosic materials); agricultural biogas (livestock manure and energy crops, waste and residues); energy crops for electricity or heat (including short rotation coppice); and agricultural crop residues for electricity or heat as applicable to Malta. The renewable energy from forestry biomass sums the amount of energy obtained from: wood provided directly from forestry (fuel wood, wood chips, bark, shavings, forest residues) or transformed from any of the above (pellets, briquettes etc.); and forest-based industry by- and co-

[36] Central Bank of Malta (2021) Renewable electricity in Malta: a question of sources. *Quaterly Review* 3:38-40 https://www.centralbankmalta.org/site/Reports-Articles/2021/Renewable-electricity-in-Malta.pdf?revcount=3176 (Accessed online on the 23rd February 2022).

products in EU used for energy production (e.g. sawdust, black liquor). The indicator is expressed in tonnes of oil equivalent per 1000 hectares of land. Production of renewable energy from agriculture and forestry is increasing[37].

Figure 4.38: Production of renewable energy from agriculture and forestry in toe/1000 ha in Malta



Electricity supply

4.101. In 2020, around three quarters of the electricity supply was generated in Malta (73.6 per cent); 16.7 per cent was imported and 9.7 per cent was from renewable sources[38].

4.102. In 2015, the interconnector linking Malta to the European mainland grid was inaugurated. In 2017, Malta started to use the same interconnector to export electricity to Sicily.

4.103. The electricity supply is based on the net production and the imported electricity (reducing the exported electricity). The table and figure below show the electricity supply in Malta from the power plants and the renewable sources together with the imports and exports of electricity. Net imports are shown from 2015 onwards since it is related to the use of the Sicily-Malta interconnector.

[37] https://agridata.ec.europa.eu/extensions/CountryFactsheets/CountryFactsheets.html?memberstate=Malta#
[38] NSO (2021) *Electricity Supply: 2016 – 2020* (NSO181/2021)

Table 4.9: Electricity supply by year

megawatt-hours (MWh)

			2016	2017	2018	2019	2020[P]
a	+	*Power Plants*	720,834	1,479,721	1,763,485	1,857,984	1,900,262
b	+	*Renewable sources*	136,251	172,059	198,995	201,821	242,788
c=(a+b)		**Gross production**	**857,085**	**1,651,779**	**1,962,480**	**2,059,805**	**2,143,050**
d	-	*Own use (Power Plants)*	50,542	49,262	50,210	58,623	62,250
e=(c-d)		**Net production**	**806,543**	**1,602,517**	**1,912,270**	**2,001,182**	**2,080,800**
f	+	*Imports (balance)*	1,526,689	897,066	631,293	656,756	419,810
g	-	*Exports (balance)*	0	35,695	10,549	20,451	4,233
h=(e+f-g)		**Electricity supply**	**2,333,231**	**2,463,888**	**2,533,014**	**2,637,487**	**2,496,377**

[P] Provisional

Notes:

1. From 2017, the electricity supplied was generated from Enemalta plants at Delimara and Marsa, D3 Power Generation Ltd and Electrogas Malta Ltd plants at Delimara and partly imported via the Sicily-Malta interconnector.
2. Electricity exports through the Malta-Sicily Interconnector started in 2017.
3. Renewable energy is produced from photovoltaic panels, micro wind turbines and Combined Heat and Power (CHP) plants.
4. Own use by power plants is the difference between the Gross and Net production. Refer to definitions in the methodological notes.
5. Totals may not add up due to rounding.

Sources: Enemalta plc, Energy and Water Agency (EWA) and Regulator for Energy and Water Services (REWS).

Source: NSO (2021) *Electricity Supply: 2016 – 2020* (NSO181/2021)

SOIL

4.104. Soil is a basic resource necessary for agriculture and horticulture. It has several functions such as maintaining and supporting vegetation, managing water quality and distribution, preserving archaeological heritage, and managing potential pollutants[39].

4.105. There are seven major soil types with an intricate spatial distribution. This is mostly the result of the movement of excavated soil material, the replenishment of eroded or shallow soils, and the impacts of urbanisation. The combination of human factors with the underlying bedrock led to the formation of different types of soil landscapes as shown in **Figure 4.39**. These soil landscapes are classified into two: semi-natural landscapes and man-made landscapes.

4.106. Soil bulk density is an indicator of soil compaction. The higher the density, the more is the soil compact and hence the lower the yields produced and the vegetation cover, making the soil more vulnerable to erosion. Bulk density was calculated in 97 sites in 2003 and 2013. Bulk density stood at 1.12 g/cm^3 in 2003 and 1.17 g/cm^3 in 2013, see **Figure 4.40**.

4.107. Electrical conductivity indicates the salinity and nitrate levels in the soil. As explained above, five of the fifteen aquifers surpassed the electrical conductivity thresholds, whilst most aquifers surpassed the nitrate levels. In 2013, lower soil electrical conductivity was recorded in 67% of the total 141 sites under study. This decline

[39] MEPA, State of the Environment Report 2005, Sub-report 5: Soil, 2005.

might have been the result of better agricultural practices such as management of fertilisers, see **Figure 4.41**.

4.108. Soil organic matter is a key determinant of soil productivity. It influences many functions such as exchange of nutrients, water retention, and soil ecology. A major threshold of soil organic matter content is two percent. Below this level, a potentially serious decline in soil quality will occur. Soil was assessed for organic carbon content in 2003 and 2013 (a total of 70 sites). In 2003, the organic content stood at 2.11 % and in 2013, 2.30 %[40]. 59 % of the locations in 2013 had higher organic carbon content when compared to 2003. This represents a marginal improvement in soil quality and its functions, see **Figure 4.42**.

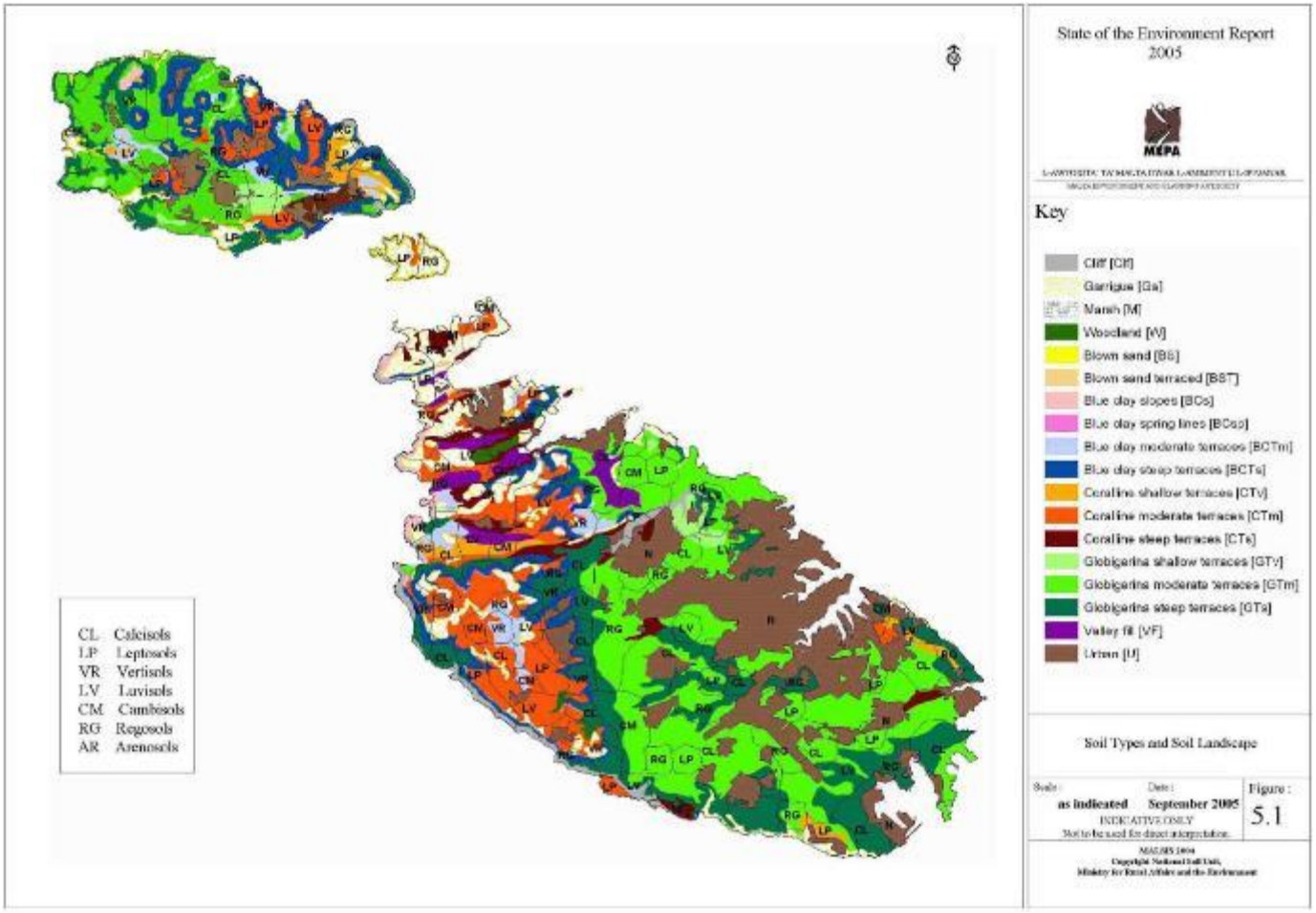
4.109. The soils were also tested for their pH value. The 2013 assessment showed that 65 % of the 40 sites registered a decrease in pH values. In 2003, the average pH value was 8.01, whilst the average pH value in 2013 was 7.92, see **Figure 4.43**.

4.110. Soil moisture has increased between 2003 and 2013. An increase in soil moisture was recorded in 61% of the sites (from a total of 148 sites), see **Figure 4.44**.

4.111. Soil depth was measured in 2013. The average soil depth, excluding sites exceeding the 200 cm depth, was 47.76 cm. Soil depths less than 10 cm were typical of plateaux and steep valley sides. Soils between 10 cm and 100 cm have been associated with agricultural areas, see **Figure 4.45**.

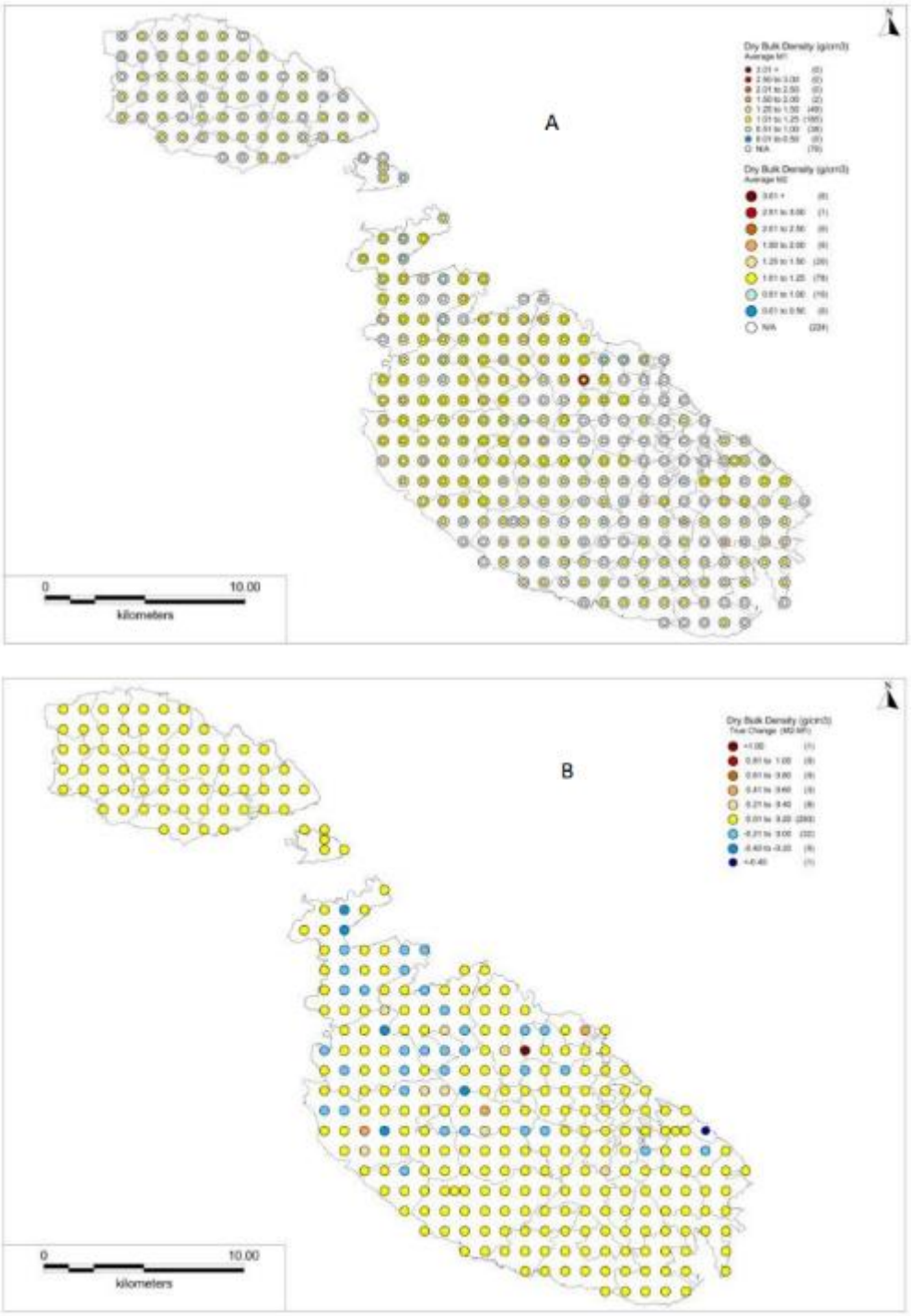
[40] ERA (2018) Land & Coast (Chapter 4) State of the Environment Report

Figure 4.39: Soil types and soil landscape



Source: MEPA, State of the Environment Report 2005, Sub-report 5: Soil, 2005

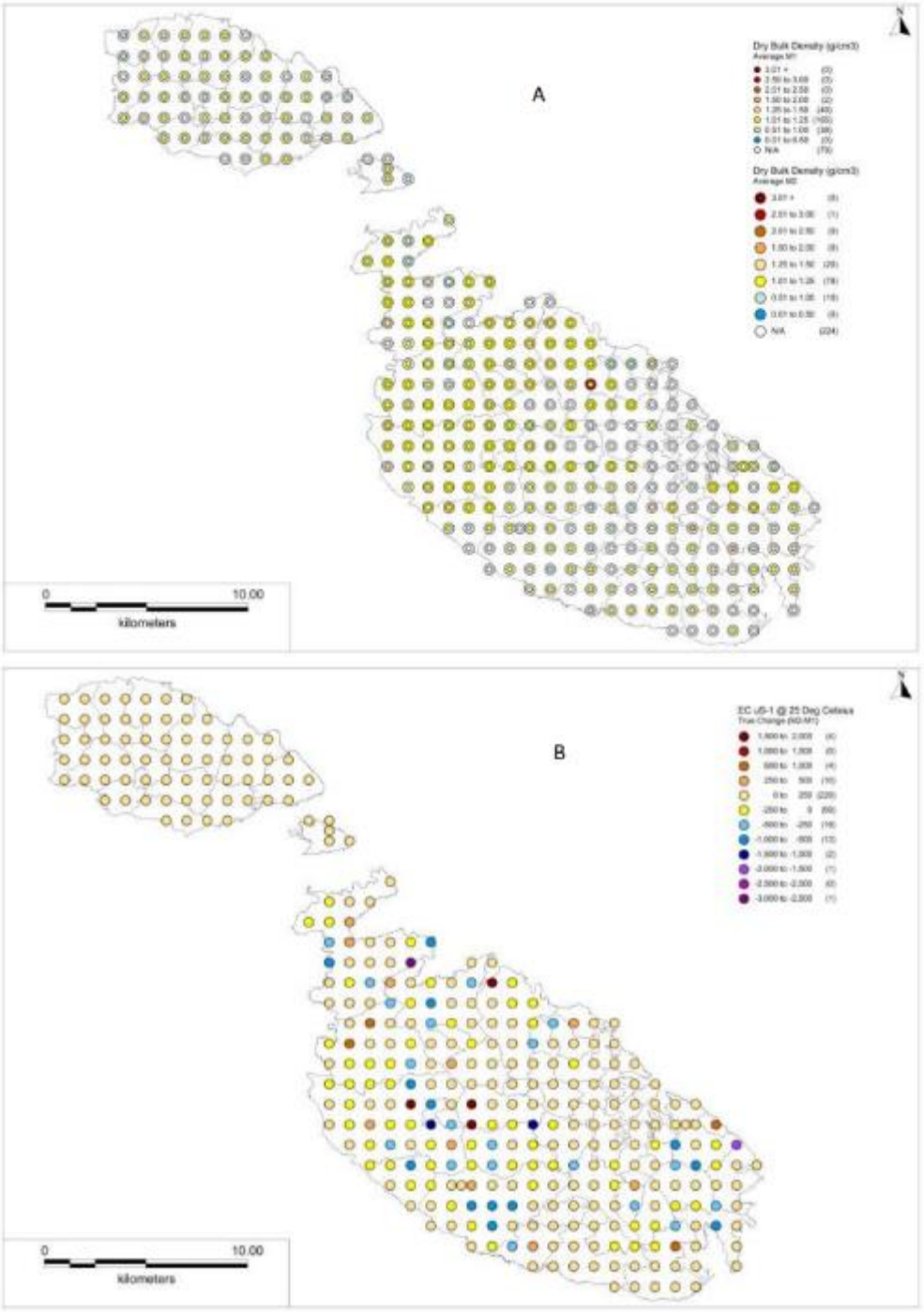
Figure 4.40: Bulk density



Source: ERA (2018) Land & Coast (Chapter 4) State of the Environment Report

(A) shows bulk density for M1 (2003) as the smaller circles, and M2 (2013) as the larger circle surrounding the other. (B) shows the change in bulk density between 2003 and 2013 (M2-M1)

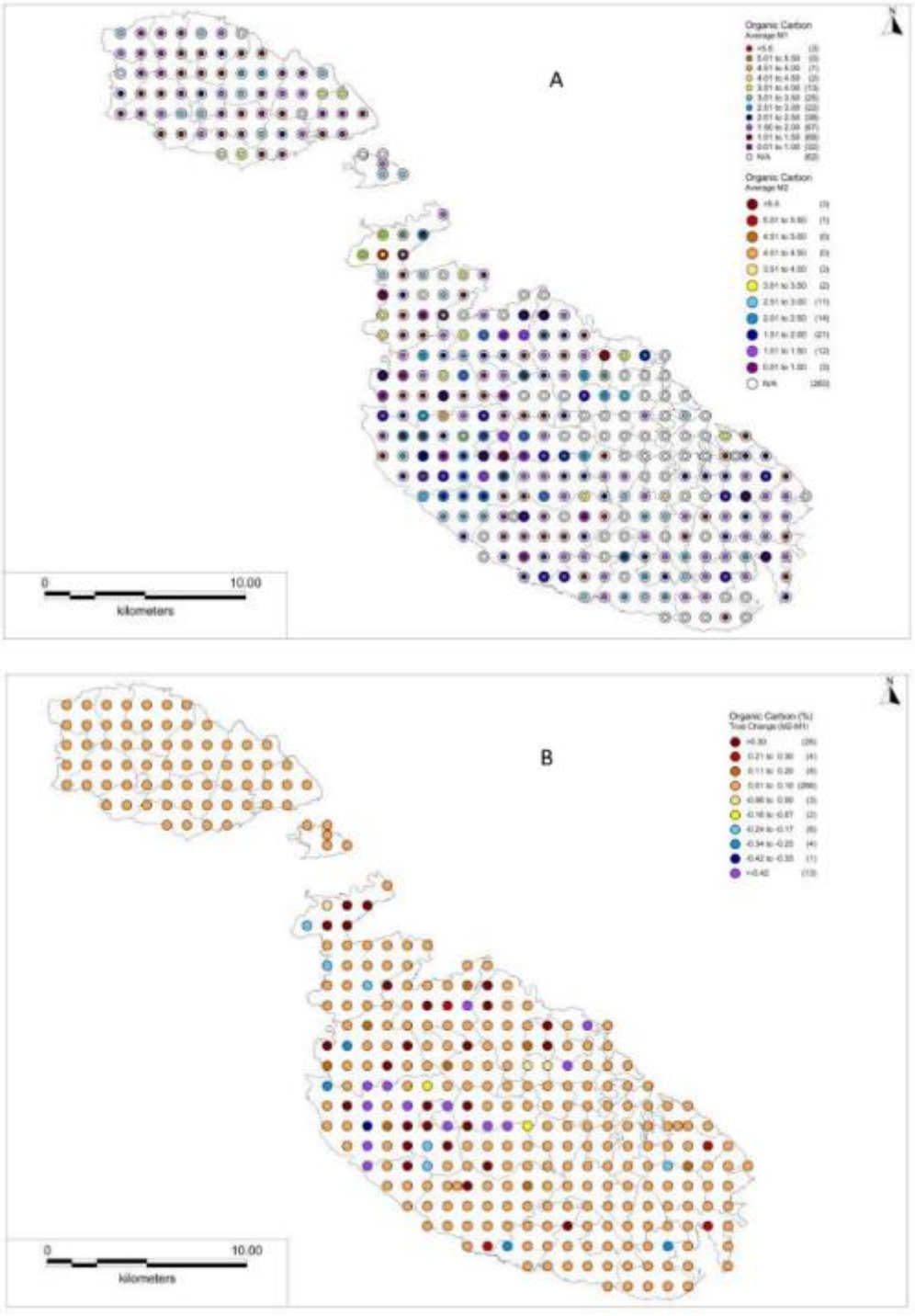
Figure 4.41: Electrical conductivity



Source: ERA (2018) Land & Coast (Chapter 4) State of the Environment Report

(A) shows average electrical conductivity for M1 (2003) as the smaller circles, and M2 (2013) as the larger circle surrounding the other. (B) shows the change in average electrical conductivity between 2003 and 2013 (M2-M1)

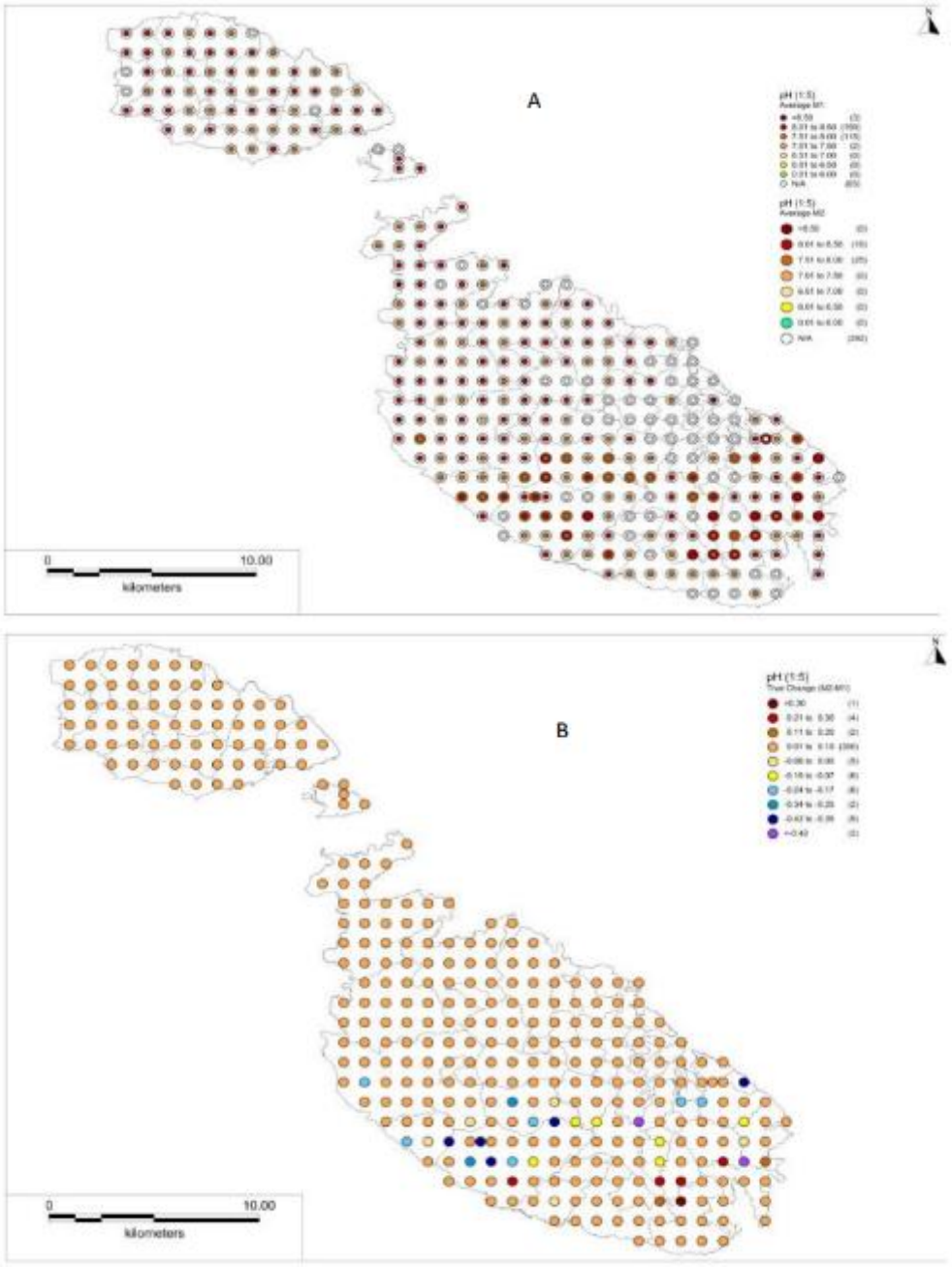
Figure 4.42: Organic carbon



Source: ERA (2018) Land & Coast (Chapter 4) State of the Environment Report

(A) shows average organic carbon for M1 (2003) as the smaller circles, and M2 (2013) as the larger circle surrounding the other. (B) shows the change in organic carbon between 2003 and 2013 (M2-M1)

Figure 4.43: Average pH values



Source: ERA (2018) Land & Coast (Chapter 4) State of the Environment Report

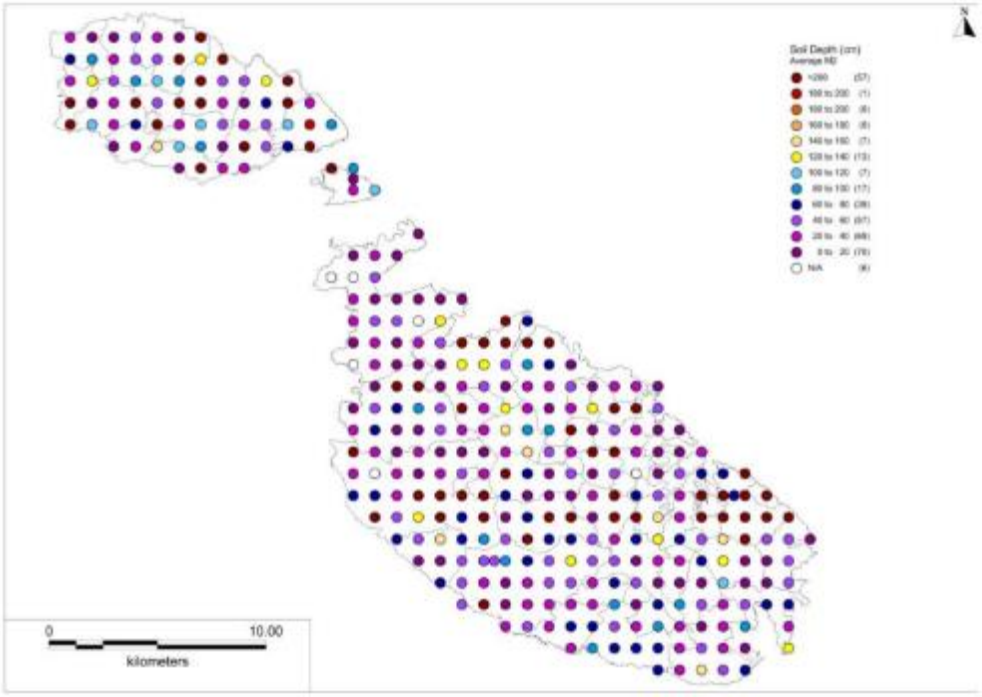
(A) shows average pH values for M1 (2003) as the smaller circles, and M2 (2013) as the larger circle surrounding the other. (B) shows the change average pH values between 2003 and 2013 (M2-M1)

Figure 4.44: Average soil moisture content

Source: ERA (2018) Land & Coast (Chapter 4) State of the Environment Report

(A) shows average soil moisture content values for M1 (2003) as the smaller circles, and M2 (2013) as the larger circle surrounding the other. (B) shows the change in soil moisture content values between 2003 and 2013 (M2-M1)

Figure 4.45: Average soil depth values in 2013

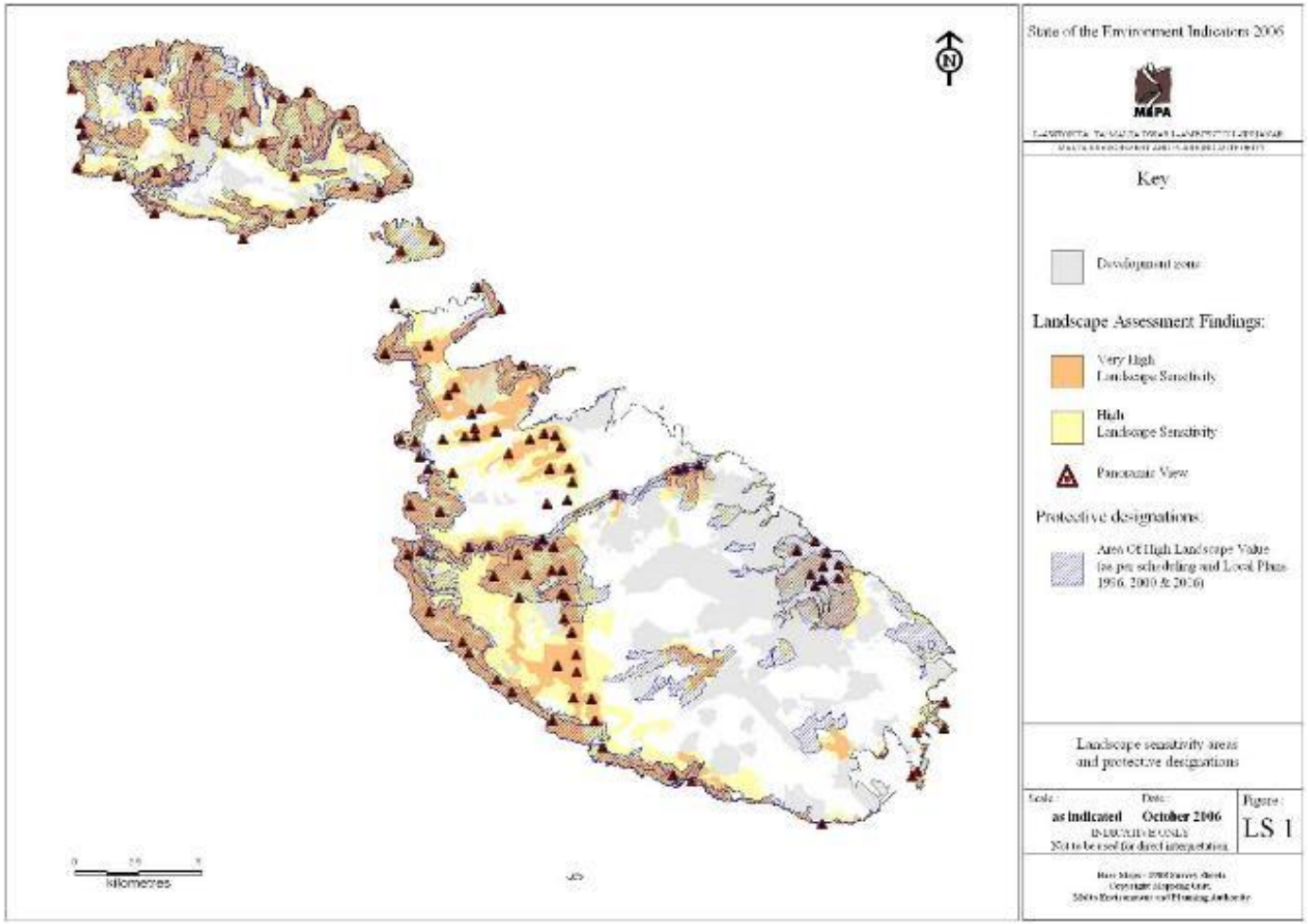


Source: ERA (2018) Land & Coast (Chapter 4) State of the Environment Report

LANDSCAPE

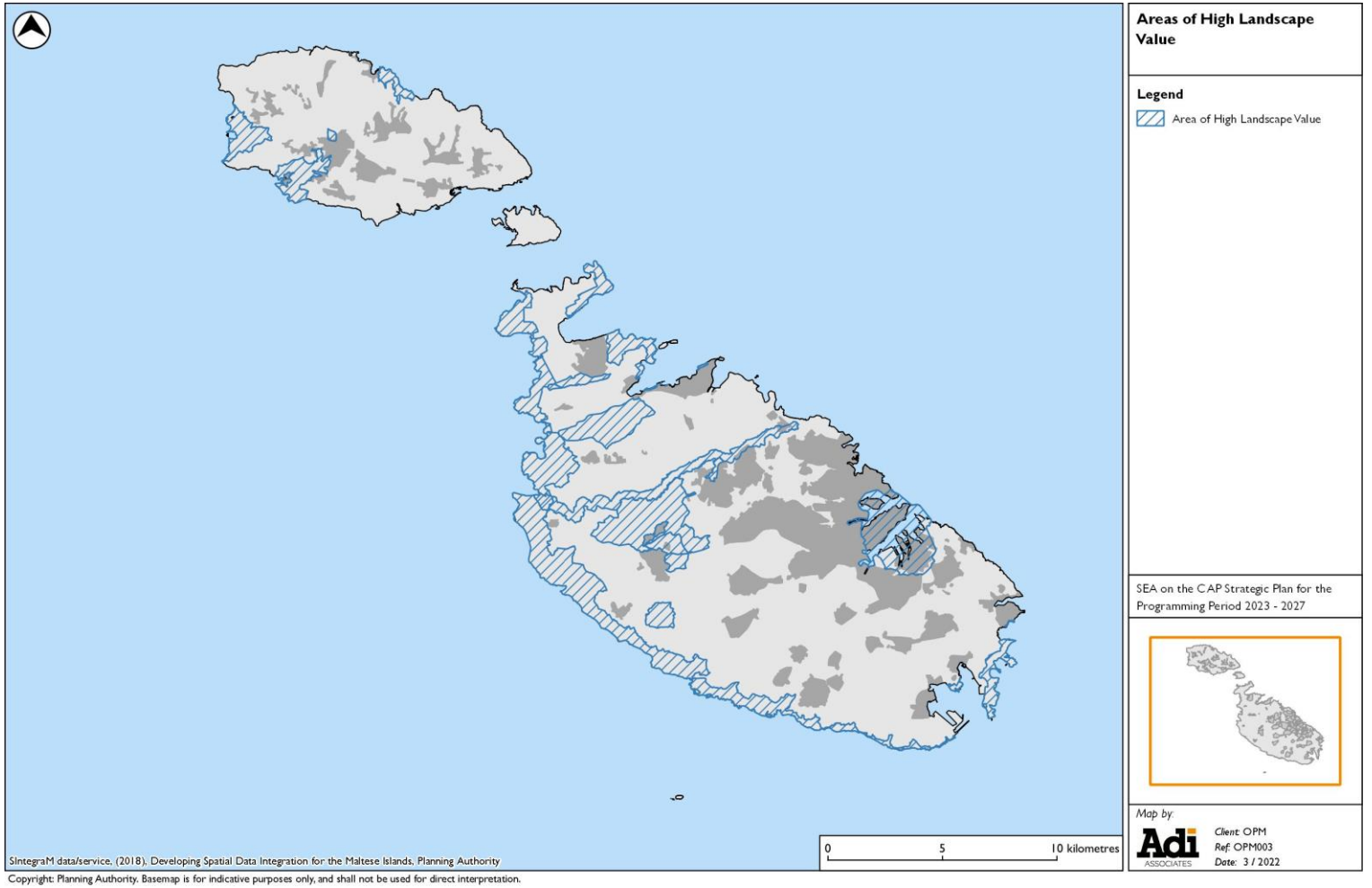
4.112. In 2004, MEPA published a Landscape Assessment Study. The Study concluded that 51 per cent of the landscape is of high or very high sensitivity, see **Figure 4.46**. Until 2021, there were 14 Areas of High Landscape Value (AHLV), which cover 64.2km^2, that is 20.3 per cent of the Maltese Islands, see **Figure 4.47**.

Figure 4.46: Landscape Sensitivity Areas and Landscape Protective Designations



Source: MEPA, State of the Environment Indicators 2006, 2007

Figure 4.47: Areas of High Landscape Value (AHLVs)



CULTURAL HERITAGE

4.113. Malta's history is reflected in its rich cultural heritage sites, buildings, and expressions. A Draft National Cultural Heritage and a Draft Tourism Policy for the Maltese Islands 2021 – 2030 were published for consultation in 2021. However, limited funding hinders the timely and efficient restoration and rehabilitation of the vast inventory of cultural heritage assets.

4.114. Buildings, monuments, and sites (including marine sites) are protected through the Cultural Heritage Act and the Development Planning Act. The former allows the Superintendent of the Cultural Heritage to commend PA to schedule sites and buildings for scheduling, whilst the latter establishes the PA as the competent authority to schedule culturally important buildings and sites. The PA Scheduling List reached 2,500 scheduled sites and areas in 2012[41]. In addition, three sites, namely the city of Valletta, Ħal Saflieni Hypogeum, and the megalithic temples (Ħaġar Qim, Mnajdra, Tarxien, Skorba, Ta' Ħaġrat and Ġgantija) are UNESCO World Heritage Sites. In 2020, the Maltese *ftira*, a flattened sourdough bread, was the first local product to be enlisted in the UNESCO's Intangible Cultural Heritage of Humanity list.

4.115. In 2014 there were 72 active museums and historical.

4.116. In addition to scheduled properties there are scheduled areas for landscapes and archaeology such as Areas of High Landscape Value (AHLVs) and Areas of Archaeological Importance (AAI).

4.117. Another important designated feature is the Urban Conservation Area (UCA) which is an urban area with a distinctive character making it worthy of protection and conservation. Urban Conservation Areas are protected from inadequate developments that can jeopardize the integrity of these zones.

4.118. The agricultural sector is also directly linked to the cultural heritage of the Maltese islands. The agricultural landscapes include vernacular rural structures with the most important feature being the dry rubble wall. Other typical features include traditional farmhouses and corbelled stone huts (*giren*). Agriculture also contributes to intangible cultural heritage assets such as traditional recipes and foods amongst others.

4.119. The typical dry-stone walls also known as rubble walls, together with non-habitable structures are protected through the Rubble Walls and Rural Structures (Conservation and Maintenance) Regulations as amended by LN 169 of 2004. These structures are protected because *of their historical and architectural importance, their exceptional beauty,*

[41] The Superintendence of Cultural Heritage (2021) *Annual Report 2020*

their affording a habitat for flora and fauna, and their vital importance in the conservation of the soil and of water.

4.120. Over the years Malta's Rural Development Programmes (RDP) have funded the building and repairing of rubble walls to protect soil from erosion and safeguard the traditional agricultural landscape.

MATERIAL ASSETS

Waste management infrastructure

4.121. According to EU regulations (EC 2150/2002), waste is divided into 4 categories: municipal waste, hazardous waste, construction and demolition waste, and commercial and industrial waste.

4.122. Waste generation poses multiple pressures on the environment: air and water quality and land management. The key priorities for the Waste Management Plan 2021-2030 are the following:

- Waste Prevention;
- Increasing Infrastructural Capacity;
- Expanding Extended Producer Responsibility;
- Modernising Waste Collection;
- Regulating Commercial Waste;
- Introducing Economic Instruments; and
- Strengthening Compliance and Enforcement[42].

4.123. The total waste generated in 2020 totalled to 2,310,937[43]. The main waste stream in Malta is inert waste. In 2020, 1,886,102 tonnes of inert waste were generated, an increase of 70.9% from 2016. This can be explained due to the increase in the demolition and excavation activities related to the latest construction boom, even though there was a dip in waste generated between 2019 and 2020. The amount of

[42] Ministry for the Environment, Climate Change and Planning (2020) *Long Term Waste Management Plan 2021-2030* – Consultation Document

[43] NSO (2022) NSO News Release 021/2022. Solid Waste Management: 2020.

inert waste that is being recycled has increased from 18% of the total amount in 2016 to 36.7% in 2020[44].

4.124. There are various public facilities related to waste management. In addition to the public facilities, there is also additional infrastructure provided by the private sector.

4.125. Public facilities include two engineered landfills, several bring-in sites that are located across the Maltese islands, six civic amenity sites, two materials recovery facilities at Marsaskala and Ix-Xewkija, two mechanical and biological treatment plants and a Thermal Treatment Facility at Marsa.

4.126. The table below shows that between 2016 and 2020, the share of recycled waste has increased from 24.1% of the total waste generated to 34%. In 2020, backfilling represented half of the total waste treated[45].

Table 4.10: Waste treatment by year, type of operation and location

Waste treatment operation	Location of treatment	2016	2017	2018	2019 2	2020
Disposal - Landfill	Malta	264,206	290,521	297,523	314,714	303,917
	Other countries	220	14,749	11,771	49,111	18,759
Disposal - Incineration	Malta	5,451	5,322	4,960	5,099	6,011
	Other countries	90	1,488	1,058	1,992	3,013
Disposal - Other [1]	Malta	16,000	425,000	120,000	-	26,908
	Other countries	59	-	-	-	-
Recovery - Energy recovery	Malta	-	-	-	-	-
	Other countries	973	746	161	-	43
Recovery - Recycling	Malta	198,291	317,682	395,626	819,544	696,190
	Other countries	175,927	102,757	108,876	86,946	89,516
Recovery - Backfilling	Malta	889,488	1,292,429	1,407,245	1,661,710	1,166,581
	Other countries	-	-	-	-	-
Total waste treatment		**1,550,706**	**2,450,694**	**2,347,220**	**2,939,116**	**2,310,937**

Source: NSO (2022) NSO News Release 021/2022. Solid Waste Management: 2020.

[44] Ibid.
[45] NSO (2022) NSO News Release 021/2022. Solid Waste Management: 2020.

Water management infrastructure

4.127. Water management infrastructure in Malta is the responsibility of the Water Services Corporation (WSC) that was set up in 1992. It is responsible for the production and distribution of potable water, and the collection and treatment of wastewater. In 2015, 31.2 million m^3 of water were produced to cater for the needs of both locals and visitors. 57% of this water is produced by the three reverse osmosis plants of the corporation which are located at Pembroke, Ċirkewwa and Għar Lapsi. The rest of the groundwater is pumped from the mean sea level aquifer. One of the main pumping stations is the Ta' Kandia Pumping Station. Ta' Kandia Galleries consist of a 6.2km network of galleries. There are a total of 42km galleries across Malta. Water is stored in 24 reservoirs that have a total capacity of 400,000m^3. The distribution network covers a length of over 2,136 km of pipes, pumps, reservoirs, automated and manual valves and other components. WSC has strived at controlling water losses through leaks. Even though consumption increased the total system demand has been removed through a leakage control programme. WSC also runs three new wastewater treatment plants one in Gozo, one at Iċ-Ċumnija l/o Mellieħa and another one at Ta' Barkat l/o Xgħajra.

4.128. There are also a number of private groundwater extraction sites.

Stormwater infrastructure

4.129. The topography and the urbanisation of the Maltese Islands have resulted in flooding problems in parts of the Maltese Islands. Flash floods can have a severe disruptive effect on the road network and property. This led to the adoption of a Storm Water Master Plan in 2008. This plan identified the areas which have a flooding problem and proposed a number of measures to address it though flood relief and the utilisation of flood water.

4.130. The Plan led to the National Flood Relief Project (NFRP) also known as 'An Integrated Water Management Approach to Flood Relief' (IWMAFR). The project aimed at managing the impacts of storm water in flood-prone urban areas and secondly promotes options for storm water harvesting. The project was made of five project components which would provide flood relief in different parts of Malta:

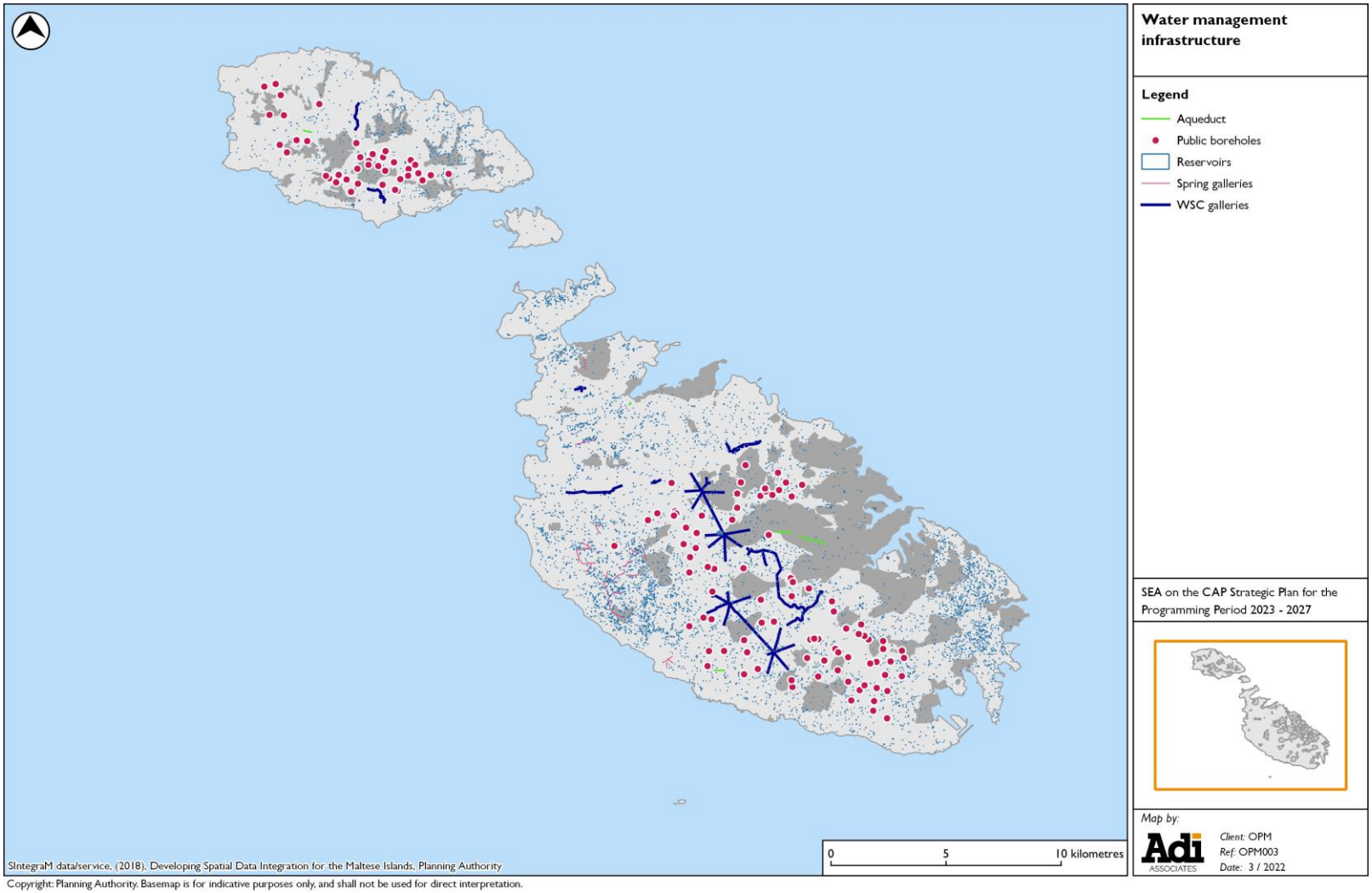
- Project Component 1: Birkirkara / Msida Valley;
- Project Component 2: Gzira / Wied Għollieqa;
- Project Component 3: Qormi / Wied is-Sewda;
- Project Component 4: Zebbug – Marsa; and

- Project Component 5: Zabbar – Marsascala[46].

4.131. The project included the construction of storm water collectors, underground tunnels, enlarging a number of collector basins and improving other existing infrastructure.

[46] Adi Associates Environmental Consultancy Ltd (2008) Project Description Status IWMAFR

Figure 4.48: Water management infrastructure



Transport infrastructure

4.132. Transport can be divided into three main branches: air transport, maritime transport, and land transport.

4.133. Malta has one international airport. In 2019 there was a 7% increase on the 2018 traffic. UK and Italy remained key destinations with 1,711,483 and 1,446,938 passengers respectively[47]. The following year there was a decrease of 76% on the 2019 levels. This was due to the COVID-19 pandemic.[48]

4.134. Malta has always been a maritime centre and has a number of harbours. The main port is the Grand Harbour at Valletta. Another harbour is the Marsaxlokk Port which has a container terminal and industrial storage facilities. The Ċirkewwa and Mġarr (Gozo) ports are the ports used for the Malta-Gozo ferry. In 2019, there were 27,631 inter-islands trips (Malta-Gozo) and 572,646 Valletta-Three Cities ferry trips. There are currently 12 yacht marinas with a total of 2,423 berths. 322 cruise liners called in Malta in the same year[49]. The 2020 figures were not considered due to the COVID-19 pandemic.

4.135. In 2020, Malta had 8,168 registered vessels: 5,061 pleasure yachts, 740 motor fishing vessels, 1,191 dry bulk carriers, 819 liquid bulk carriers (tankers) and 357 other types of vessels[50].

4.136. In 2020, there were 402,427 licensed vehicles in Malta. Passenger cars totalled to 76.6% of these vehicles. The number of traffic accidents during this year was that of 11,950 accidents, a decrease of 3,879 accidents. This is attributed to the lower traffic due to the COVID-19 pandemic. There was a total of 12 fatalities[51].

4.137. In 2020, there were 2,323 agricultural motor vehicles and 1,174 road tractors[52].

4.138. Currently the public transport is run by the Malta Public Transport which was set up in 2014 as the bus service operator. In 2019, the number of public transport commuters amounted to 57.4 million passengers. In 2020, this number of public transport commuters went down to 33.78 million passengers.

Green infrastructure

4.139. Green infrastructure has been defined as "a strategically planned network of natural and semi-natural areas with other environmental features designed and managed to deliver a wide range of ecosystem services. It incorporates green spaces (or blue if

[47] NSO (2020) *Transport Statistics 2019*
[48] NSO (2021) *Transport Statistics 2020*
[49] NSO (2020) *Transport Statistics 2019*
[50] NSO (2021) *Transport Statistics 2020*
[51] NSO (2021) *Transport Statistics 2020*
[52] Ibid.

aquatic ecosystems are concerned) and other physical features in terrestrial (including coastal) and marine areas. On land, GI is present in rural and urban settings"[53].

4.140. The 'Spatial analysis of green infrastructure in Europe' (EEA, 2014) shows that both the conservation and the restoration GI networks applicable for Malta are 0.0%. This value, which is also applicable to Cyprus, is explained through the fact that, when compared with the European average, Malta's size does not allow it to be described as an optimal/maximum ecosystem service provider. It is more appropriate, therefore, to also consider GI at national and regional level rather than at European level when describing GI in the Maltese Islands.

4.141. To this end, Malta's National Biodiversity Strategy and Action Plan makes reference to Malta's National Ecological Network and seeks to strengthen it, including through the wider integration of biodiversity conservation in spatial planning aiming to safeguard the countryside from urban sprawl and improve and support urban biodiversity whilst also contributing to EU priorities on Green Infrastructure.

4.142. At an EU level there is the Biodiversity Strategy for 2030, which is a comprehensive, ambitious and long-term plan to protect nature and reverse the degradation of ecosystems. The strategy aims to put Europe's biodiversity on a path to recovery by 2030 for the benefit of people, climate and the planet. This strategy forms part of the European Green Deal, that is a set of policies with an overarching aim of making the European Union climate neutral in 2050. The Strategy's objectives include to tackle climate change impacts, forest fires, food insecurity and disease outbreaks. The Strategy also addresses issues related to agriculture amongst which to ensure sustainability in the sector by bringing nature back to agricultural land through organic farming and soil protection. This will be done together with the new Farm to Fork Strategy, a strategy to make the food production chain sustainable, and the new Common Agricultural Policy (CAP).

[53] EC (2013) Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions - Green Infrastructure (GI) — Enhancing Europe's Natural Capital

EVALUTION OF THE BASELINE IN THE ABSENCE OF THE IMPLEMENTATION OF THE CAP SP

4.143. The SEA Regulations require a description of the relevant aspects of the current state of the environment and the likely evolution thereof without the implementation of the CAP SP with a particular emphasis on the future developments arising from other relevant plans and programmes.

4.144. The description of the likely future trends should the CAP SP not be implemented is further constrained by uncertainties including availability of data on future economic development, technological progress or advancements in regulatory frameworks that collectively influence future trends. The following assessment, therefore, includes certain assumptions.

4.145. This analysis focuses on the main environmental issues that have been identified and described above. It includes a description of the past and current trends from data available from existing monitoring systems or through expert judgement (in cases where data are lacking). It also outlines the likely evolution of these trends, if the CAP SP were not implemented.

Biodiversity

4.146. The main impacts on biodiversity resulting from the implementation of the CAP SP are likely to be positive given GAEC requirements, Eco-Schemes and agri-environment measures in addition to training of the farming community on relevant environmental issue. Additional measures related to the implementation of other policies and plans, such as Management Plans for natural areas including Natura2000 sites are for the conservation of species through, for example, a reduction in use of herbicides, pesticides and nutrients. It is anticipated that without the CAP SP impacts on biodiversity especially from the agricultural community would be much slower and important benefits to biodiversity will not be accrued.

Population & Human Health

4.147. In the absence of the CAP SP, core issues such as farm viability, land transfer, generational renewal with support for younger and female farmers would likely not be addressed. Planned improvements across the CAP SP, such as reductions in emissions, improved water quality, and climate change would not be accrued.

Emissions to air and climate change

4.148. Both emissions to air and climate change targets are regulated by legislation and requirements at EU level. It is anticipated that the CAP SP could contribute positively to climate change both from the proposed increase in RES and the sustained agricultural land use with support provided for the reduction in use of Plant Protection Products (PPPs). However, the degree to which the CAP SP contributes positively to targets is dependent on budget allocation and uptake of measures. Low targets and low uptake could result in an insignificant contribution of the CAP SP to reaching climate change targets. In the absence of the CAP SP, the attainment of the

climate change targets prescribed in the EU Climate and Energy Framework, 2030, may be more challenging.

Water

4.149. The CAP SP addresses issues from source through the Eco-schemes. In the absence of the plan, nutrient management may not be addressed to the same degree although there may be some form of this approach in Natura 2000 areas where management plans call for a reduction in the use of PPPs in the area. Without financial support, however, implementation is unlikely to be extensive.

Landscape

4.150. The CAP SP will contribute to the preservation of the Maltese rural landscape, preserving the agriculture sector and farming, and investing in the restoration of what have become traditional features of cultural heritage importance on the landscape including rubble walls, *giren* and other similar structures. In the absence of such support, the agricultural sector itself may be at risk and restoration of important rural features may not be carried out.

Cultural Heritage

4.151. As mentioned, cultural heritage features and their restoration are included as part of the CAP SP. In the absence of this instrument, these features additional landscape importance may become dilapidated if neglected.

Material Assets

4.152. Water bodies will be protected through current legislation and waste management regulated through current legislation as well. However, a targeted framework to regulate aid and control agricultural land use effects in the local context would be absent. Thus, there could be significant impacts on biodiversity, water, human health, landscape and soil and geology.

5. CHAPTER 5 – SEA FRAMEWORK

INTRODUCTION

5.1. This Chapter describes the identification of the objectives against which the CAP SP will be assessed in the SEA process.

5.2. Although the SEA Directive does not specifically require the use of objectives or indicators in SEA, they are a recognised way to describe, analyse and compare environmental effects. SEA objectives encompass the relevant national and EU environmental priorities that can be inferred from a number of relevant national documents, as outlined below. The CAP SP is assessed in light of the SEA objectives. The CAP SP's performance against the SEA objectives is generally measured by indicators. The SEA objectives are distinctly different from the CAP SP's objectives, though the two influence each other, and they may overlap. To fulfil the requirements of the SEA Directive and the SEA Regulations S.L. 549.61, the SEA objectives must cover: biodiversity; population; human health; fauna; flora; soil; water; air; climatic factors; material assets; cultural heritage; and landscape, as well as the interrelationships between them where these are relevant to the sector being addressed by the plan or programme. Those objectives relevant to the CAP SP are described in this chapter.

5.3. In developing appropriate objectives and indicators the following documents have been consulted:

- The GRDP "Handbook on SEA for Cohesion Policy 2007- 2013";
- The Commission's "Implementation of Directive 2001/42 on the Assessment of the Effects of Certain Plans and Programmes on the Environment";
- A Practical Guide to the Implementation of the SEA Directive, ODPM;
- The SEA Directive 2001/42/EC;
- SEA Regulations, 2010;
- The European Green Deal targets and associated plans and strategies;
- Malta's Sustainable Development Vision for 2050;
- National Environment Policy, 2012;
- National Strategy for the Environment, 2050; and
- Malta's State of the Environment Report, 2018.

SEA OBJECTIVES & INDICATORS

5.4. **Table 5.1** defines the set of objectives relating to the environmental issues identified in **Chapter 4**, in support of which relevant assessment criteria and possible data sources have also been identified.

5.5. The SEA indicators are measurements of trends over time. Changes in the indicators show whether the implementation of the CAP SP would be, or has been, successful in improving the environment. It is to be noted, however, that changes in the indicators could be the result of factors outside the influence of the CAP SP. Hence, the SEA process is both uncertain and constrained.

5.6. The proposed indicators will not all be relevant to all the recommendations.

Table 5.1: SEA environmental objectives & indicators for assessing impacts

Issue	SEA Objective	Criteria How will this measure…	SEA Indicator	Data source
Biodiversity, Flora & Fauna	• To maintain biodiversity (including terrestrial and marine) • To avoid negative effects on protected habitats and species • To avoid introduction of non-indigenous species into the natural environment • To ensure that populations of native species are within safe biological limits • To retain connectivity and avoid habitat fragmentation	• Affect the integrity of designated areas? • Affect protected species and habitats? • Affect take up of land which supports a natural environment? • Affect the introduction of non-indigenous species into the natural environment? • Affect the creation / maintenance of natural corridors and stepping stones?	• Number of interventions that are permitted in protected areas • Conservation status of habitats and species • Records of non-indigenous species in the natural environment that may have been introduced as a result of agriculture activities • Corinne land cover • Farmland Bird Index	Environmental monitoring through Environmental Impact Assessment (EIA), Appropriate Assessment (AA), or other regulatory requirements as relevant. Environment Resources Authority (ERA) Natura 2000 Management Plans Common Database on Designated Areas (CDDA) Land Parcel Identification System (LPIS) Integrated Administration and Control System (IACS) National scheduling and protection statuses
Human health and Population	• To ensure agricultural/livestock products are within the legal safety requirements (pesticides	• Affect the safe consumption of agricultural/livestock products? • Affect dust generation from construction and waste handling activities?	• Life expectancy at birth • Changes in demography • Number of walking and cycling routes • % of organic food produced • Young farmers	Malta Competition and Consumer Affairs Authority (MCCAA) Environment Resources Authority (ERA)

Issue	SEA Objective	Criteria How will this measure…	SEA Indicator	Data source
	and diseases) for human consumption • To protect and improve the health and well-being of the farming community	• Affect noise from construction, traffic and livestock farms? • Affect light pollution from development? • Affect odour generation? • Affect the provision of access to the countryside and outdoor recreation activities? • Affect access to fresh, quality and nutritious food? • Affect access to locally sourced food? • Encourage younger farmers' participation? • Encourage women farmers' participation? • Reduce health risks associated with farm activities?	• Female farmers	National Statistics Office (NSO) Department of Agriculture Ministry for the Environment, Energy and Enterprise Ministry for Gozo
Water	• To meet the standards required by the Water Framework Directive • To minimise pollution of groundwater from activities directly arising from the agricultural sector • To improve drinking water quality and supply • To avoid deterioration of water bodies	• Affect the existing supply infrastructure? • Affect the good status of water bodies? • Affect water efficiency within the sector?	• Drinking water quality over time. • Number of plans, programmes and projects to maintain the existing supply infrastructure over time • Number of projects funded by the CAP to assist in the attainment of WFD objectives • Number of water pollution accidents • Quality of water bodies	Environmental Health Directorate Water Services Corporation ERA (Environment Resources Authority) EWA (Energy and Water Agency).

Issue	SEA Objective	Criteria How will this measure…	SEA Indicator	Data source
			• Proportion of water abstraction by use • Distribution of nitrate concentration	
Emissions to air	• To avoid, prevent or reduce harmful effects on human health and the environment resulting from emissions to air	• Generate air pollutants?	• Air quality indicators	Environment Resources Authority (ERA) Ministry for the Environment, Energy and Enterprise
Climatic factors and climate change	• To contribute to climate change adaptation and/or mitigation • To increase reliance on renewable energy resources • To reduce GHG emissions from the agriculture sector	• Affect climate change (considering in particular mitigation, adaptation, renewable energy and GHGs?	• Use of renewable energy over time from the sector • GHG emission trends over time from agriculture	Environment & Resources Authority Malta Resources Authority
Soil	• To prevent soil erosion • To prevent soil sealing • To prevent soil contamination • To improve soil quality	• Affect soil quantity and quality?	• Number of projects implemented through the CAP SP that include soil conservation and improvement in soil quality	Environmental Impact Assessment, Environmental monitoring as part of permit Copernicus (Malta only) ESDAC website
Material assets	• To ensure efficient water management within the sector	• Affect sustainable water management practices? • Affect sustainable waste management practices?	• Water consumption by the sector over time • Groundwater quality results • Surface water quality results	Malta Resources Authority Environmental Health Directorate (for potable water)

Issue	SEA Objective	Criteria How will this measure…	SEA Indicator	Data source
	• To reduce waste production through the circular economy		• Waste generation by and waste management for the sector over time	WasteServ Malta Ltd Department of Agriculture Ministry for the Environment, Energy and Enterprise
Cultural heritage	• To maintain the conservation status of cultural heritage sites / areas with known cultural / archaeological remains • To maintain rubble & dry walls • To maintain intangible cultural heritage	• Affect cultural heritage including archaeological heritage? • Affect rubble & dry walls? • Affect intangible cultural heritage?	• Number of projects targeting the restoration of cultural heritage features including rubble walls and improvement of the cultural landscape including intangible cultural heritage	Planning Authority Heritage Malta Superintendence of Cultural Heritage
Landscape	• To maintain landscape quality distinctiveness	• Enhance and maintain key agricultural features of the landscape?	• Environmental Impact Assessment results on landscape assessment	Planning Authority

6. CHAPTER 6 – ASSESSMENT OF ALTERNATIVES

6.1. The SEA Directive Article 5(1) states:

Where an environmental assessment is required under Article 3(1), an environmental report shall be prepared in which the likely significant effects on the environment of implementing the plan or programme, and reasonable alternatives taking into account the objectives and the geographical scope of the plan or programme, are identified, described and evaluated.

6.2. Three alternatives were assessed.

6.3. The first scenario – the baseline scenario (or the do-nothing option) – describes development of the sector and associated environmental impacts in the absence of the CAP SP 2023-2027. It is considered that the sector will continue to develop in line with the National Agricultural Policy for the Maltese Islands 2018-2028, which has the following targets/vision:

- *Increasing the competitiveness of active farmers and livestock breeders by focusing on quality and embracing diversification;*
- *Facilitating the entry of young farmers by creating a cost-effective agri-business sector;*
- *Fostering sustainability of farming activities by adapting to the local geo-climatic conditions; and*
- *Ensuring that farmland is managed by genuine farmers for agricultural purposes and related activities.*

6.4. Based on this vision, six policy objectives were developed: 1) Food presentation, labelling and traceability; 2) Consolidation of land holdings; 3) Sustaining water and key resources; 4) Competitiveness and diversification; 5) Adaptation to and mitigation of geo-climatic conditions; and 6) Research and development. Operational objectives set for implementation are broadly divided into economic objectives, social regeneration, resources, and governance. There are seventy policy measures in total. The measures are in line with those of the CAP SP, including measures for the restoration of rubble walls, water conservation, soil conservation, planting of multipurpose trees, research on sustainable cultivation processes, a direction to increase organic farming, data gathering on Integrated Pest Management and enforcement on the use of PPPs. Measure 1 specifically includes the use of EU funds. €167 million euro will be available to the Maltese agricultural sector through the CAP SP. This extent of investment would not be available for implementation of the strategic direction (that is in line with EU policy) in the absence of the CAP SP and it is therefore likely that many of the measures would not be fully implemented, if at all especially those that are not direct investments into the sector.

6.5. Consequences could include a decrease in Utilised Agricultural Area (UAA), following the current trend (as described in **Chapter 4**). This is likely mainly

because of the difficulties faced by young farmers trying to enter the sector related to irregularity of income and lack of capital to invest in modern machinery and equipment. Declines in the livestock sector specifically for cattle and pigs is considered possible when considering current inefficiencies including with respect to waste management, resource use and reliance on importation, e.g. for feed. In the absence of the CAP SP, it is considered unlikely that the sector will invest significantly in aspects such as marketing, development of quality produce, etc. Also, cooperatives will continue to operate as they currently do with limited success in certain areas (livestock cooperatives have been more successful than those for growers). In the absence of the CAP SP, investment in projects such as rubble walls will unlikely be undertaken due to the high investment required to undertake such measures. Agri-environment measures related to more sustainable farming practices will also be unlikely to be taken up, despite the national policy direction. Notwithstanding, certain investment will still be carried out as farmers are required to adhere to local legislation and code of conduct. This would also depend on enforcement of legislation.

6.6. The second scenario reflects the development of the CAP SP, adhering to the minimum investment requirements in the green architecture of the programme as per the EU Regulation 2021/2115:

- In accordance with Article 92: at least 5% of the total EAFRD (Pillar II) contribution to the CAP Strategic Plan shall be reserved for LEADER;
- Article 28 covers eco-schemes, supported through EAGF (Pillar 1), for which minimum financial allocations required is 25%;
- Minimum CAP climate contribution over the total financial envelope: 40%; and
- Article 93 on minimum financial allocations for interventions addressing environmental and climate-related specific objectives requires at least 35% of the total EAFRD contribution.

6.7. The third scenario is the draft CAP SP. It differs from Scenario 2 in that it has increased financial contribution beyond the minimal under Pillar 2 as follows:

- 5.25% for LEADER (an increase of 0.25% over Scenario 2);
- Article 28 covers eco-schemes, supported through EAGF (Pillar 1), for which minimum financial allocations required is 25%. This will remain the same in Scenario 3;
- Minimum CAP climate contribution over the total financial envelope: 43% (an increase of 3% over Scenario 2); and
- Article 93 on minimum financial allocations for interventions addressing environmental and climate-related specific objectives – 48% of the total EAFRD contribution (an increase of 13% over Scenario 2).

6.8. In addition, based on lessons learned from the 2014-2020 RDP, the CAP SP 2023-2027 also contributes a significant portion of the budget towards capacity-building and cooperation in the sector.

6.9. **Table 6.1** summarises the potential impact of each of the scenarios against the SEA objectives. The symbols found in **Table 6.1** are in accordance with the key below:

Impact character	Symbol	Description of Impact
Probability	VP	Impact very likely to occur
	P	Impact likely to occur
Scale	++	Large positive impact
	+	Positive impact
	0	No impact
	-	Negative impact
	--	Large negative impact
Direct / Indirect	I	Indirect impact
	D	Direct impact
Frequency / duration	LT	Long term
	ST	Short term

Table 6.1: Alternatives assessment

		SEA Objectives								
		- To maintain biodiversity (including terrestrial and marine); - To avoid negative effects on protected habitats and species; -To avoid introduction of non-indigenous species into the natural environment; - To ensure that populations of native species are within safe biological limits; - To retain connectivity and avoid habitat fragmentation	- To ensure agricultural/livestock products are within the legal safety requirements (pesticides and diseases) for human consumption; - To protect and improve the health and well-being of the population	- To meet the standards required by the Water Framework Directive; - To minimise pollution of groundwater from activities directly arising from the agricultural sector; - To improve drinking water quality and supply; - To avoid deterioration of water bodies	- To avoid, prevent or reduce harmful effects on human health and the environment resulting from emissions to air	- To contribute to climate change adaptation and/or mitigation; - To increase reliance on renewable energy resources; - To reduce GHG emissions from the agriculture sector	- To prevent soil erosion; - To prevent soil sealing; - To prevent soil contamination; - To improve soil quality	- To ensure efficient water management within the sector; - To reduce waste production through the circular economy	- To maintain the conservation status of cultural heritage sites / areas with known cultural /archaeological remains; - To maintain rubble & dry walls; - To maintain intangible cultural heritage	- To maintain landscape quality distinctiveness
Alternatives	**Scenario 1: Do Nothing**	P -/0 D LT	P - D LT	P - D LT	P - D LT	P - / + D LT	P - D LT	P - D LT	P 0/- D LT	P 0/- D LT
	Scenario 2: Minimum ring-fencing requirements	P + D LT	P -/+ D LT	P -/0/+ D LT	P -/+ D LT	P + D LT	P + D LT	P + D LT	P + D LT	P + D LT
	Scenario 3: Increased environmental/social support in terms of increased budgets over minimum requirements and through investment in capacity-building	P ++ D LT	P ++ D LT	P -/0/+ D LT	P -/+ D LT	P ++ D LT	P + D LT	P ++ D LT	P ++ D LT	P ++ D LT

ALTERNATIVES ASSESSMENT CONCLUSIONS

6.10. Scenario 1 is likely to continue to result in environmental pressures as investment is likely to support production and reduce payment shifted to other measures even if identified in national policy for the sector with little to no investment in agri-environment-climate measures expected. As identified there could be aspects of the sector that may not remain viable, and if this remains the case, long-term, reductions may be accrued in terms of GHG emissions. In the meantime, however, it is likely that there could be significant impact on the environment if modern methods and investments are not made in relation to waste management, for instance.

6.11. The assessment illustrated in **Table 6.1** provides a summary assessment.

6.12. Implementation of the CAP SP utilising ring-fenced funds identified positive impacts through the implementation of Scenario 2 and investment of the CAP SP. Positive effects are expected across all environmental objectives.

6.13. With the additional capital available for green measures, in particular agri-environment-climate measures and Non-Productive on farm and off farm investments, Scenario 3 is expected to result in more significant positive impacts, assuming the complete take up of funds available for the implementation of measures, such as IPM, organic farming, the eco-schemes, and biodiversity conservation, to name a few. Synergistic impacts with investment in capacity-building together with investment opportunity to implement certain strategies that will likely result in direct positive environmental impacts, can also be expected.

6.14. In conclusion, in terms of environmental benefits, Scenario 2 (minimum ring-fenced amounts) and Scenario 3 (current plan) present the more favourable alternatives to Scenario 1 (Do Nothing). From an environmental point of view, Option 3 will likely result in more enhanced and significant positive environmental impacts.

6.15. Option 3 has been selected as the preferred option and also identified as the most favourable option in terms of the associated environmental effects. This option is assessed in detail in **Chapter 7**.

7. CHAPTER 7 – ASSESSMENT OF ENVIRONMENTAL EFFECTS AND PROPOSED MITIGATION

INTRODUCTION

7.1. This Chapter describes the assessment process followed in the SEA, and describes the results of the assessment and mitigation measures recommended to minimise or negate the impacts.

ASSESSING SIGNIFICANCE

7.2. Significance is assessed in accordance with the criteria listed in Schedule 2 of the SEA Regulations, 2010. It is already well established in Environmental Impact Assessment (EIA) literature whereby significance is a function of impact magnitude and the sensitivity of receptors. Significance may be determined in a number of ways, including expert judgement, the use of thresholds, reference to legislation, and consultation with stakeholders. Although this SEA draws on each of these methods, expert judgement and consultation predominate.

7.3. The assessment of significance is based on the probability of the impact occurring, on the scale of the impact, its duration, reversibility, whether it has transboundary effects, and the certainty of impact prediction. **Table 7.1** describes the assessment framework and the symbols used to denote the various types of impact.

7.4. The relevant SEA objectives identified in **Chapter 5** are used to assess the measures in accordance with the significance criteria described below.

Table 7.1: Assessment legend

Impact character	Symbol	Description of Impact
Probability	VP	Impact very likely to occur
	P	Impact likely to occur
Scale	++	Large positive impact
	+	Positive impact
	0	No impact
	-	Negative impact
	--	Large negative impact
Direct / Indirect	I	Indirect impact
	D	Direct impact
Frequency / duration	LT	Long term
	ST	Short term
Transboundary dimension	TR	Possible transboundary effect
Uncertainty	?	Impact uncertain

IMPACT ASSESSMENT

7.5. Based on the methodology described above, each of the Strategic Objectives was assessed against each SEA objective. The cross-cutting objective will fund soft

measures related to capacity-building and was therefore not assessed. The results are presented in **Table 7.2**. **N.B**. No potential significant transboundary impacts were identified.

Table 7.2: Impact assessment

SEA Objective	Assessment Criteria: How will this Strategic Objective…	Comment	Significance		Mitigation
			Symbols	Summary description	
Specific Objective 1: To support viable farm income and resilience of the agricultural sector across the Union in order to enhance long-term food security and agricultural diversity as well as to ensure the economic sustainability of agricultural production in the Union					
Income support to: • landless livestock sectors; • land-based farms (at a higher level of support than provided through the RDP 2014-2020 due to evidence that there has been further decline in this sector); • direct payments to small farms; • income support to the beef, sheep, dairy and tomato sectors; • complementary income support for young farmers; and • support for natural or other area specific constraints which will further support farm viability and resilience of the agricultural sector to prevent land abandonment.					
• To maintain biodiversity (including terrestrial and marine) • To avoid negative effects on protected habitats and species • To avoid introduction of non-indigenous species into the natural environment • To ensure that populations of native species are within safe biological limits • To retain connectivity and avoid habitat fragmentation	Affect the integrity of designated areas? Affect protected species and habitats? Affect take up of land which supports a natural environment? Affect the introduction of non-indigenous species into the natural environment? Affect the creation / maintenance of natural corridors and stepping stones?	Interventions to be funded under this Strategic Objective focus on providing income support to farmers, targeting 66% of Utilised Agricultural Land (UAA), and enhancing support for farms in areas with specific needs targets approximately 34%. A smaller percentage (approx. 4.5%) of farms in specific sectors within agriculture including landless livestock sectors, small farms, beef, sheep and tomato, as well as young farmers is targeted. In order to meet environmental objectives, certain direct payments will be reserved for eco-schemes.	P +/- D LT	This objective seeks to provide income support to farmers to avoid loss or abandonment of Utilised Agricultural Area (UAA), whilst ensuring a certain degree of food security, as well as enhancing support for farms with specific needs and providing support specific sectors as well as young farmers. Overall, the CAP SP aims to do so whilst ensuring that funded activities are more resource-efficient and environmentally sustainable in line too with cross-compliance and Good Agricultural and Environmental Conditions (GAEC) and Statutory Management Requirements (SMR) therein. Where improvements in this respect are consistently made, the impact would be positive. It is noted, however, that in 2018[54], Malta was again identified by the European Food Safety Authority (EFSA) as having been found to use excessive amounts of pesticides, including on tomatoes. Pesticides have a negative effect on biodiversity in the area as a result of drift and subsidising any activities that are not compliant with acceptable levels will potentially result in significant negative impacts on biodiversity, including with regards to a decrease in biodiversity on natural and semi-natural habitats, affecting ecosystem services, and bioaccumulation through the food chain, as well as limiting biological control potential. The intensification of agricultural activities could also have an impact on natural	Improvements over current practices to reduce existing impacts should be ensured. It is crucial that GAEC and SMR are adhered to. Spot checks and inspections should be carried out on a regular basis to address any non-conformances as soon as possible. A monitoring programme should be established to make sure that food safety is maintained. In the cases that these programmes are carried out by third parties, the Environmental Health Directorate (EHD) is to be informed with any products for human consumption that are not safe. However, the full implementation of the CAP SP whereby training and education are provided to the farming community, could also help to reduce the impact of practices that are incompatible with biodiversity conservation. Such training, for example, in relation to time of year to plant certain crops to reduce the need for pesticides, and use of integrated pest management should result in a reduced reliance on pesticides. It is noted too, that farmers report that the rising temperatures as a result of climate change have resulted in an increase in pests[55] and therefore, this support to farmers, in terms of seeking alternative methods to managing pests, is imperative in ensuring sustainability of the sector.

[54] Martin, I. 2018. Maltese Fruit and Veg Top EU Pesticides List. The Times of Malta.
[55] Cilia, J. 2018. 'We are Under Siege': Maltese Farmers Rally After Being Accused of High Pesticide Use. Lovin Malta.

				habitats and species and could lead to water usage/abstraction from areas supporting riparian habitats and species.	Where the CAP SP funds tree planting in urban and semi-urban settings, the use of plants/trees maximising the pollinator potential of green/outdoor spaces should be promoted, focusing on aspects such as a wide range of floral variety, favouring flower beds over decking or concrete, minimising use of pesticides known to harm bees, and allowing wildflowers to grow (for example, clearing of vegetation along verges of country roads should no longer be carried out).
• To ensure agricultural/livestock products are within the legal safety requirements (pesticides and diseases) for human consumption • To protect and improve the health and well-being of the population	• Affect the safe consumption of agricultural/livestock products? • Affect dust generation from construction and waste handling activities? • Affect noise from construction, traffic and livestock farms? • Affect light pollution from development? • Affect odour generation? • Affect the provision of access to the countryside and outdoor recreation activities? • Affect access to fresh, quality and nutritious food? • Affect access to locally sourced food? • Encourage younger farmers' participation? • Encourage women farmers' participation? • Reduce health risks associated with farm activities?	As above.	P +/- D/(I) LT	Direct support to specific sectors through this objective, helps to ensure that fresh and nutritious food grown locally is promoted and chosen by the consumer, enhancing food security for the Islands, resulting in a positive impact. Specific livestock sectors supported, generate waste that must be managed. It is imperative that waste is managed in accordance with standards to ensure that emissions and solid matter do not result in significant negative effects. It is noted, however, that in 2018[56], Malta was again identified by the European Food Safety Authority as having been found to use excessive amounts of pesticides, including on tomatoes. The use of pesticides has been linked to resulting in negative effects on human health and therefore overexposure can potentially result in significant negative effects, e.g. as reported by the Pesticide Action Network North America (PANNA) (www.panna.org).	Improvements over current practices to reduce existing impacts should be ensured. It is crucial that GAEC and SMR are adhered to. Spot checks and inspections should be carried out on a regular basis to address any non-conformances as soon as possible. However, the full implementation of the CAP SP whereby training and education are provided to the farming community, could also help to reduce the impact of practices that are incompatible with human health objectives. Such training, for example, in relation to time of year to plant certain crops to reduce the need for pesticides, and use of integrated pest management should result in a reduced reliance on pesticides. It is noted too, that farmers report that the rising temperatures as a result of climate change have resulted in an increase in pests[57] and therefore, this support to farmers, in terms of seeking alternative methods to managing pests, is imperative in ensuring sustainability of the sector. The CAP SP notes that the beef sector is a minor offshoot of dairy production which does not contribute greatly to the economy. Given the small scale, associated emissions are not significant, however, the need to manage the waste, and potential odour remains and it should be ensured that strict adherence to standards is

[56] Martin, I. 2018. Maltese Fruit and Veg Top EU Pesticides List. The Times of Malta.
[57] Cilia, J. 2018. 'We are Under Siege': Maltese Farmers Rally After Being Accused of High Pesticide Use. Lovin Malta.

					maintained. Disposal of waste and waste management is to be in accordance with Local Regulations and as directed by the Competent Authorities.
• To meet the standards required by the Water Framework Directive • To minimise pollution of groundwater from activities directly arising from the agricultural sector • To improve drinking water quality and supply • To avoid deterioration of water bodies	• Affect the existing supply infrastructure? • Affect the good status of water bodies? • Affect water efficiency within the sector?	As above.	P - D/(I) LT	As mentioned, this objective seeks to provide income support to farmers that adhere to standards, those in areas with specific needs, and to specific sectors as well as young farmers. As described in **Chapter 4**, agricultural activity contributes to the elevated nitrate levels in groundwater. The sector is also on of the main users of groundwater that has potential impacts of seawater intrusion as a result of over abstraction. Incorrect use of pesticides, which has previously been reported by EFSA, could also threaten surface and groundwaters	Improvements over current practices to reduce existing impacts should be ensured. It is crucial that GAEC and SMR are adhered to. This is currently supported through spot checks and inspections e carried out by ARPA to address any non-conformances in line with respective regulations. However, the full implementation of the CAP SP whereby training and education are provided to the farming community, could also help to reduce the impact of practices that are incompatible with water quality preservation and conservation. Such training, for example, in relation to time of year to plant certain crops to reduce the need for pesticides, and use of integrated pest management should result in a reduced reliance on pesticides. It is noted too, that farmers report that the rising temperatures as a result of climate change have resulted in an increase in pests[58] and therefore, this support to farmers, in terms of seeking alternative methods to managing pests, is imperative in ensuring sustainability of the sector.
• To avoid prevent or reduce harmful effects on human health and the environment resulting from emissions to air	• Generate air pollutants?	As above.	P - D LT	NPIC (the National Pesticide Information Center, a cooperative agreement between Oregon State University and the US Environmental Protection Agency) describe that pesticides in agriculture (and urban settings) have the potential to contaminate air, affecting human, animal and plant health. Some pesticide ingredients stay in the atmosphere for only a short period of time, while others can last longer. Pesticides released into the air can settle to the ground, be broken down by sun light and water in the atmosphere, or dissipate into the surrounding air.	As above.
• To contribute to climate change	• Affect climate change (considering in particular mitigation, adaptation renewable energy and GHGs?	As above.	P - D/(I)	As described in Malta's 2030 National Energy and Climate Plan, the agricultural sector contributes just 3% of national GHG	There are four main approaches to reducing livestock greenhouse gas emissions: husbandry (e.g. animal

[58] Cilia, J. 2018. 'We are Under Siege': Maltese Farmers Rally After Being Accused of High Pesticide Use. Lovin Malta.

adaptation and/or mitigation • To increase reliance on renewable energy resources • To reduce GHG emissions			LT	emissions although, together with the waste sector, agriculture is one of the main contributors to total national methane emissions. On a national scale, agriculture is also the main contributor to nitrous oxide emissions (Ritchie et al, 2020)[59], . Livestock urine and manure are significant sources of methane and nitrous oxide when broken down during anaerobic conditions. Nitrous oxide is produced during the nitrification-denitrification of the nitrogen contained in livestock waste. Methane has 25 times and nitrous oxide has nearly 300 times the global warming potential of carbon dioxide. Small amounts of nitrous oxide emissions are also released from fertiliser use. The amount of renewable energy produced from the sector is negligible and the sector still depends heavily on fossil fuels for energy.	breeding, feed supplements), management systems (stocking rates, biological control), numbers of livestock, and manure management. Reducing the number of unproductive animals on a farm can potentially improve profitability and reduce GHG emissions. Strategies such as extended lactation in dairying reduce herd energy demand which thus potentially also reduces methane emissions. Ensuring that the livestock sector maximises its efforts cost-effectively, to reduce GHG emissions, can result in potentially significant mitigation of emissions from this sector. .
• To prevent soil erosion • To prevent soil sealing • To prevent soil contamination • To improve soil quality	• Affect soil quantity and quality?	As above.	P+/- D LT	This objective seeks to support specific sectors as well as young farmers. It aims to do so whilst ensuring that their activities are more resource-efficient and environmentally sustainable in line too with cross-compliance and Good Agricultural and Environmental Conditions (GAEC) and Statutory Management Requirements (SMR) therein. Where improvements in this respect are consistently made, the impact would be positive in terms of maintaining agricultural land. However, in certain cases actions such as maintenance of rubble walls, cropping patterns and sustainable soil management practices would need to accompany the actions funded under this SO. Incorrect use of pesticides can contaminate the soil potentially resulting in soil pollution and may kill other nontarget organisms – as much as 80 to 90% of applied pesticides hit non-target vegetation and remain as pesticide residue in the environment which is potentially a significant risk to the agricultural ecosystem[60]. Therefore, there is a continued risk that there will	Improvements over current practices to reduce existing impacts should be ensured. It is crucial that GAEC and SMR are adhered to. Spot checks and inspections should be carried out on a regular basis to address any non-conformances as soon as possible. A monitoring programme should be established to make sure that food safety is maintained. In the cases that these programmes are carried out by third parties, the Environmental Health Directorate (EHD) is to be informed with any products for human consumption that are not safe. However, the full implementation of the CAP SP whereby training and education are provided to the farming community, could also help to reduce the impact of practices that are incompatible with reduction of pesticides in soil. Such training, for example, in relation to time of year to plant certain crops to reduce the need for pesticides, and use of integrated pest management should result in a reduced reliance on pesticides. It is

[59] Ritchie, H., Roser, M, Rosado, P. 2020. CO_2 and Greenhouse Gas Emissions: Malta: CO_2 Country Profile. Ourworldindata.org
[60] Sun, S., Sidhu V., Rong, Y., & Zhong, Yi. 2018. Pesticide Pollution in Agricultural Soils and Sustainable Remediation Methods: A Review. 4. Current Pollution Reports.

				nonetheless be negative impacts resulting from overuse of chemicals even by farmers receiving funding under the CAP SP.	noted too, that farmers report that the rising temperatures as a result of climate change have resulted in an increase in pests[61] and therefore, this support to farmers, in terms of seeking alternative methods to managing pests, is imperative in ensuring sustainability of the sector.
• To ensure efficient water management within the sector • To reduce waste production through the circular economy	• Affect sustainable water management practices? • Affect sustainable waste management practices?	As above.	P 0/+ I LT	As identified in the CAP SP, the installation of three Urban Waste Water Treatment Plants and eventual associated distribution infrastructure will encourage the use of 'New Water', putting less pressure on limited resources and allowing too for the eventual improvement in groundwater quality. It is expected that the CAP SP will fund the extended new water distribution network that will build on the investments supported by the RDP during 2014-2020 period. In cases where farms were to actively improve efficiency of water consumption, the impact will be positive. Implementation of GAEC and SMR should also result in positive effects. Good waste management of waste generated by the livestock sector is important to reduce impacts.	Ensure correct implementation of GAEC and SMR. Site-specific advice on how to improve water management and waste management should be delivered for projects funded through the CAP SP.
• To maintain the conservation status of cultural heritage sites / areas with known cultural / archaeological remains • To maintain rubble & dry walls • To maintain intangible cultural heritage	• Affect cultural heritage including archaeological heritage? • Affect rubble & dry walls? • Affect intangible cultural heritage?	As above.	P + I LT	This measure supports sectors that have a traditional and nostalgic element that contribute to the Maltese Islands' cultural heritage, such as honey-making through the support of apiculture and ġbejniet, through the support of the sheep sector. Maintenance of farming also benefits the rural landscape.	Positive impacts can be enhanced through the implementation of other aspects of the CAP SP related to branding and creating labels for certain products, and maintenance of rubble walls and rural structures.
• To maintain landscape quality distinctiveness	• Enhance and maintain key agricultural features of the landscape?	As above.	P + I LT	Providing support to ensure farm viability will ensure at least the short to medium term maintenance of a rural landscape, with well-maintained fields, etc.	N/A

[61] Cilia, J. 2018. 'We are Under Siege': Maltese Farmers Rally After Being Accused of High Pesticide Use. Lovin Malta.

Specific Objective 2: To enhance market orientation and increase farm competitiveness both in the short and long term, including greater focus on research, technology and digitalisation Interventions include: • off-farm investments relating to infrastructure: • off-farm productive investments; • quality schemes & other cooperation activities; • knowledge exchange including training and dissemination of information; • on-farm productive investments; • investment in agricultural holdings to support farm modernisation and restructuring; • development of innovative technological processes; • improvement in hygiene and soil management; and • improved waste management.					
• To maintain biodiversity (including terrestrial and marine) • To avoid negative effects on protected habitats and species • To avoid introduction of non-indigenous species into the natural environment • To ensure that populations of native species are within safe biological limits • To retain connectivity and avoid habitat fragmentation	• Affect the integrity of designated areas? • Affect protected species and habitats? • Affect take up of land which supports a natural environment? • Affect the introduction of non-indigenous species into the natural environment? • Affect the creation / maintenance of natural corridors and steppingstones?	Of particular relevance to this objective are the interventions related to infrastructure and interventions focussing on soil management.	P +/- D/I LT	Details of improvements in soil management are not included within the CAP SP at this stage, however, it is considered that improvements in soil management are likely to improve conditions that will support biodiversity. Technological improvements within holdings, modernisation, and training are also likely to result in indirect positive impacts, through improved efficiency and reduction in emissions. Waste management infrastructure could require provision of large-scale facilities, which may result in land take-up and impacts on the landscape, rural environment and biodiversity.	Project-level screening and potentially impact assessment should be carried out for those proposals that involve infrastructure development or development in the rural environment. This will be carried out through the planning and environmental permitting regime that are managed by the Planning Authority (PA) and the Environment and Resources Authority (ERA), respectively. Beneficiaries should be required to develop and implement soil management plans as a condition of funding, as applicable. Waste management infrastructure should also target practices that are harmful to the aquatic environment such as the disposal of slurry in the sewerage network. New infrastructure should not result in the take-up of additional undeveloped land unnecessarily and should avoid natural areas (such as valleys, watercourses, ridge-edges, garrigue, maquis, protected areas, etc.) and important landscapes in order to avoid major environmental impacts. It is recommended that any large-scale facilities related to waste management are to be directed towards already developed sites and similarly committed land. Upgrades to *support farms modernisation and restructuring,* should preferably take place within the farm

					curtilage as much as possible to avoid significant lateral expansions onto adjacent rural land. Large-scale facilities should preferably be accommodated on suitable already committed sites.
• To ensure agricultural/livestock products are within the legal safety requirements (pesticides and diseases) for human consumption • To protect and improve the health and well-being of the farming community	• Affect the safe consumption of agricultural/livestock products? • Affect dust generation from construction and waste handling activities? • Affect noise from construction, traffic and livestock farms? • Affect light pollution from development? • Affect odour generation? • Affect the provision of access to the countryside and outdoor recreation activities? • Affect access to fresh, quality and nutritious food? • Affect access to locally sourced food?	Interventions related to infrastructure as well as interventions focussing on soil management, investment in improved waste management, are of relevance for consideration of potential direct impacts.	P + D/I LT	Improvement in waste management can result in significant reduction of associated impacts such as odour. Modernisation, restructuring, development of innovative technological processes are expected to improve efficiency. Quality schemes could add to the choice the consumer will have and have positive benefits on human health.	To evaluate at project selection stage against environmental criteria to ensure that projects that contribute positively in terms of increased efficiency result in a net positive impact as far as possible.
• To meet the standards required by the Water Framework Directive • To minimise pollution of groundwater from activities directly arising from the agricultural sector • To improve drinking water quality and supply • To avoid deterioration of water bodies	• Affect the existing supply infrastructure? • Affect the good status of inland water bodies? • Affect water efficiency within the sector?	Interventions related to infrastructure as well as interventions focussing on soil management, investment in improved waste management, are of relevance for consideration of potential direct impacts.	P +/- I LT	Investment in waste management infrastructure to improve performance will result in positive environmental impact. Depending on the magnitude and site, infrastructure development could result in indirect impacts on surface water, and possibly groundwater as well during construction.	Project-level screening and potentially impact assessment will be carried out for those proposals that involve infrastructure development through the relevant authorities, as described above.
• To avoid, prevent or reduce harmful effects on human health and the environment resulting from emissions to air	• Generate air pollutants?	Interventions related to infrastructure as well as interventions focussing on soil management, investment in improved waste management, are of relevance for consideration of potential direct impacts.	P -/0/+ I LT	Infrastructure development may result in dust generation during construction, although this would be localised. Improved technologies, improvement in waste management, and investment in energy efficiency may result in emissions reduction, however, details would need to be assessed at project stage.	Project-level screening and potentially impact assessment should be carried out through the relevant authorities as described above.
• To contribute to climate change adaptation and/or mitigation	• Affect climate change (considering in particular mitigation, adaptation renewable energy and GHGs?	Interventions related to investment in energy efficiency and improved waste management, are of relevance for consideration of potential direct impacts.	P +/0 I LT	Investment in energy efficiency directly contributes to these environmental objectives but the extent of the impact would depend on uptake.	Projects with a component of energy efficiency should be given priority, where applicable[62].

[62] The necessary projects will be subject to an EIA / AA and planning permit procedure that should be obtained through the existing planning/environmental permitting regimes that are in place through the respective authorities.

• To increase reliance on renewable energy resources • To reduce GHG emissions from the sector					
• To prevent soil erosion • To prevent soil sealing • To prevent soil contamination • To improve soil quality	• Affect soil quantity and quality?	Interventions focussing on soil management, and improved waste management, are of relevance for consideration of potential direct impacts.	P + I LT	Although details of soil management techniques are not available as part of the strategic assessment, the general intention is in line with these environmental objectives.	Require soil management plans from potential beneficiaries under CAP SP. Evaluate the impacts of potential large projects at project level.
• To ensure efficient water management within the sector • To reduce waste production through the circular economy	• Affect sustainable water management practices? • Affect sustainable waste management practices?	Interventions related to improved waste management, are of direct relevance to this objective.	P + I LT	It is considered that improvements in efficiency and training, will result in a reduction in resource use including through water management practices. Improvements in waste management will likely contribute to these environmental objectives.	Projects aimed at addressing waste management and reduction in pressure on groundwater abstraction should be given priority.
• To maintain the conservation status of cultural heritage sites / areas with known cultural / archaeological remains • To maintain rubble & dry walls • To maintain intangible cultural heritage	• Affect cultural heritage including archaeological heritage? • Affect rubble & dry walls? • Affect intangible cultural heritage?	Interventions related to infrastructure as well as interventions focussing on soil management and improved waste management, are of relevance for consideration of potential direct impacts.	P + I LT	Given that this SO contributes to the viability of the sector (the CAP SP states that this SO is 'the highest priority for future survival of agriculture in Malta'), it also indirectly ensures a positive impact on intangible cultural heritage in terms of ensuring viability of the sector that contributes to the rural and cultural landscape of the Maltese countryside.	Investments in energy efficiency, must follow guidelines and policy relevant in this regard at project level. Assessment of potential impacts on the cultural landscape may be required.
• To maintain landscape quality distinctiveness	• Enhance and maintain key agricultural features of the landscape?	Interventions related to infrastructure as well as interventions focussing on soil management and improved waste management, are of relevance for consideration of potential direct impacts.	P +/? I LT	Given that this SO contributes to the viability of the sector (the CAP SP states that this SO is 'the highest priority for future survival of agriculture in Malta'), it also indirectly ensures a positive impact on intangible cultural heritage in terms of ensuring viability of the sector that contributes to the rural and cultural landscape of the Maltese countryside.	Investments in energy efficiency, must follow guidelines and policy relevant in this regard at project level. Assessment of potential impacts on the cultural landscape may be required.

Specific Objective 3: To improve the farmers' position in the value chain A toolkit of measures mainly from the EAFRD, provides a mix of soft and hard incentives to support product, market and producer knowledge and development. Interventions include: • Modernising and/or restructuring farm businesses and their holdings, including a simplified investment grant scheme for low budget grants, as well as the farm business development funding that was previously offered and is conditional on preparing a farm business plan in the case of investment offered to Young Farmers; • Improving processing and marketing facilities and initiatives, the upgrading of processing facilities for meat and other livestock products and pursuing stronger marketing of all Maltese fresh produce , amongst others; • Fostering cooperation within the sector, specific additional support will be offered to cooperatives and other groups of farmers and rural actors who act together to achieve coherent aims in line with these goals. Support will also target climate change adaptation, mitigation, sustainable use of energy and resources as well as the protection of biodiversity; • Grants and associated training will be offered to encourage and support more diversified farm-based businesses. This will especially encourage new business ideas initiated and run by women and young people, and businesses focused on celebrating and adding value to Maltese heritage, Maltese food and craft products and activities celebrating Maltese culture; and • Interventions under Quality Schemes can also provide support to encourage uptake of National Quality Standards.					
• To maintain biodiversity (including terrestrial and marine) • To avoid negative effects on protected habitats and species • To avoid introduction of non-indigenous species into the natural environment • To ensure that populations of native species are within safe biological limits • To retain connectivity and avoid habitat fragmentation	• Affect the integrity of designated areas? • Affect protected species and habitats? • Affect take up of land which supports a natural environment? • Affect the introduction of non-indigenous species into the natural environment? • Affect the creation / maintenance of natural corridors and steppingstones?	Soft measures such as training are likely to be neutral. Fostering cooperation and supporting those collaborations that target climate change adaptation, mitigation, sustainable use of energy and resources as well as the protection of biodiversity can result in cumulative (positive) effects.	P + D/I LT	Potential significant positive impacts on biodiversity protection are likely depending on the projects chosen.	Where appropriate, development of the detailed measures can include criteria requiring projects to include aspects that will result in positive impacts on biodiversity as well as a requirement to measure the potential impact (as appropriate and practicable through the development of relevant indicators) as part of project management. Such criteria will be developed in such a way that will also ensure that small projects are offered equal possibility to be supported.
• To ensure agricultural/livestock products are within the legal safety requirements (pesticides and diseases) for human consumption • To protect and improve the health and well-being of the population	• Affect the safe consumption of agricultural/livestock products? • Affect dust generation from construction and waste handling activities? • Affect noise from construction, traffic and livestock farms? • Affect light pollution from development? • Affect odour generation? • Affect the provision of access to the countryside and outdoor recreation activities? • Affect access to fresh, quality and nutritious food? • Affect access to locally sourced food?	Soft measures such as training are likely to be neutral. Fostering cooperation and supporting those collaborations that target climate change adaptation, mitigation, sustainable use of energy and resources as well as the protection of biodiversity can result in cumulative (positive) effects. Quality Schemes, initiatives for young people and women and investment in Maltese produce could have indirect effects on wellbeing.	P 0/+ I LT	Indirect positive impacts on health and well-being through offering more local products, involving women and youth and as well as quality schemes.	Where appropriate, development of the detailed measures included in the CAP SP can include criteria requiring projects to include aspects that will ensure the involvement of women and youth as well as a requirement to measure the potential impact as part of project management. Such criteria will be developed in such a way that will also ensure that small projects are offered equal possibility to be supported.
• To meet the standards required by the Water Framework Directive • To minimise pollution of groundwater from activities directly arising from the agricultural sector • To improve drinking water quality and supply	• Affect the existing supply infrastructure? • Affect the good status of inland surface waters? • Affect water efficiency within the sector?	The proposed interventions are unlikely to affect water objectives.	0	Impact neutral.	N/A

• To avoid deterioration of water bodies					
• To avoid, prevent or reduce harmful effects on human health and the environment resulting from emissions to air	• Generate air pollutants?	Soft measures such as training are likely to be neutral. Fostering cooperation and supporting those collaborations that target climate change adaptation, mitigation, sustainable use of energy and resources as well as the protection of biodiversity can result in cumulative (positive) effects.	P + D/I LT	Potential positive impacts on air quality through upgrading of facilities depending on the extent of the investment.	Where appropriate, development of the detailed measures included in the CAP SP can include criteria requiring projects to include aspects that will result in positive impacts on air quality as well as a requirement to measure the potential impact (as practicable and through the development of appropriate indicator/s) as part of project management. Such criteria will be developed in such a way that will also ensure that small projects are offered equal possibility to be supported.
• To contribute to climate change adaptation and/or mitigation • To increase reliance on renewable energy resources • To reduce GHG emissions from the agriculture sector	• Affect climate change (considering in particular mitigation, adaptation renewable energy and GHGs?	Soft measures such as training are likely to be neutral. Fostering cooperation and supporting those collaborations that target climate change adaptation, mitigation, sustainable use of energy and resources as well as the protection of biodiversity can result in cumulative (positive) effects.	P + I LT	Investment in renewable energy directly contributes to these environmental objectives.	Provision of further guidance at project proposal stage to enhance positive impacts.
• To prevent soil erosion • To prevent soil sealing • To prevent soil contamination • To improve soil quality	• Affect soil quantity and quality?	Soft measures such as training are likely to be neutral. The rest of the measures including fostering cooperation and supporting those collaborations that target climate change adaptation, mitigation, sustainable use of energy and resources as well as the protection of biodiversity are likely to result in neutral impacts as they don't affect soil.	0	Impact neutral as proposed interventions are unlikely to affect soil. However, investments related to climate change adaptation would need to be further assessed when details are known.	N/A
• To ensure efficient water management within the sector • To reduce waste production through the circular economy	• Affect sustainable water management practices? • Affect sustainable waste management practices?	Soft measures such as training are likely to be neutral. Fostering cooperation and supporting those collaborations that target climate change adaptation, mitigation, sustainable use of energy and resources as well as the protection of biodiversity can result in cumulative (positive) effects.	P + I LT	Potential positive impacts where initiatives that target sustainable use of resources are invested in.	Waste management projects should be considered favourably where they address pressing national waste management issues.
• To maintain the conservation status of cultural heritage sites / areas with known cultural / archaeological remains • To maintain rubble & dry walls	• Affect cultural heritage including archaeological heritage? • Affect rubble & dry walls? • Affect intangible cultural heritage?	Soft measures such as training are likely to be neutral. Fostering cooperation and supporting those collaborations that target climate change adaptation, mitigation, sustainable use of energy and resources as well as the protection	0	Impact neutral.	N/A

• To maintain intangible cultural heritage		of biodiversity are unlikely to affect cultural heritage.			
• To maintain landscape quality distinctiveness	• Enhance and maintain key agricultural features of the landscape?	Soft measures are likely to be neutral. Fostering cooperation and supporting those collaborations that target climate change adaptation, mitigation, sustainable use of energy and resources as well as the protection of biodiversity are unlikely to affect the landscape.	0	Impact neutral.	N/A

Specific Objective 4: To contribute to climate change mitigation and adaptation including by reducing greenhouse gas emissions and enhancing carbon sequestration, as well as to promote sustainable energy Measures: • Investment aids for farm and business development and diversification; • Support for training and education of farmers in climate-friendly technologies and modern farming systems development; • Improved distribution and utilisation of treated waste water to ensure sustainable irrigation • The use of animal and agricultural waste and residues for energy production • Interventions covering agri-environment-climate measures (funded under Pillar 2) and eco-schemes (actions that may include carbon-building soil management practices, tree planting and permanent cropping) • The eco-schemes (funded under Pillar 1) are: - Biodegradable mulch - this scheme will compensate farmers for costs incurred and income forgone when purchasing more expensive biodegradable mulch, instead of plastic mulch;Land parcels dedicated for biodiversity purposes – beneficiaries will commit an area of at least one land parcel to biodiversity for 2 years by refraining from cultivating the land for crop production and without the use of Plant Protection Products, including fertilisers; and - IPM and SMP for temporary crops – beneficiaries must commit to follow an Integrated Pest Management Plan on the area of the land parcel, as identified at application stage, for three consecutive years.					
• To maintain biodiversity (including terrestrial and marine) • To avoid negative effects on protected habitats and species • To avoid introduction of non-indigenous species into the natural environment • To ensure that populations of native species are within safe biological limits • To retain connectivity and avoid habitat fragmentation	• Affect the integrity of designated areas? • Affect protected species and habitats? • Affect take up of land which supports a natural environment? • Affect the introduction of non-indigenous species into the natural environment? • Affect the creation / maintenance of natural corridors and steppingstones?	Agri-environment-climate measures and the four eco-schemes coupled with training and education for farmers, seek to address climate adaptation and mitigation and can also have positive impacts on biodiversity through tree planting. Improved soil management practices and reduction in use of Plant Protection Products. The SO also foresees the upgrading of current water infrastructure and the provision of treated wastewater as well as energy production from animal waste.	P ++/-- D LT	Assuming the uptake of these measures, all four of the eco-schemes will likely result in direct, beneficial impacts on biodiversity. Indirect benefits from training, tree planting and improved soil management could also accrue. Whilst utilisation of animal and agricultural waste and residues for energy production has positive impacts (see below), this is likely to involve provision of large-scale facilities. Such installations could have a negative impact on biodiversity especially if they are located in rural environments that are uncommitted.	Promote uptake of eco-schemes and training and ensure that the budget allocated will attract farmers' participation. Siting of any large scale infrastructure should be on suitable already committed sites. The development of such facilities on undeveloped land should be avoided.
• To ensure agricultural/livestock products are within the legal safety requirements (pesticides and diseases) for human consumption • To protect and improve the health and well-being of the farming community	• Affect the safe consumption of agricultural/livestock products? • Affect ground water quality? • Affect dust generation from construction and waste handling activities? • Affect noise from construction, traffic and livestock farms? • Affect light pollution from development? • Affect odour generation? • Affect the provision of access to the countryside and outdoor recreation activities? • Affect access to fresh, quality and nutritious food? • Affect access to locally sourced food?	Implementation of the eco-schemes agri-environment-climate measures and will result in less dependence of Plant Protection Products.	P + D LT	Reduction in use of Plant Protection Products will reduce pressure on surface and groundwater quality, threats to non-target species, biodiversity, and soil quality, as well as improved safety in relation to agricultural products, for example. The significance of the positive impact will depend on the uptake and implementation of these measures.	Promote uptake of eco-schemes and training & investment in cleaner technologies – ensure that the budget allocated will attract farmers' participation.
• To meet the standards required by the Water Framework Directive • To minimise pollution of groundwater from activities directly arising from the agricultural sector	• Affect the existing supply infrastructure? • Affect the good status of water bodies? • Affect water efficiency within the sector?	Implementation of the agri-environment-climate measures and eco-schemes will result in less dependence of Plant Protection Products.	P + D LT	Reduction in use of Plant Protection Products will reduce pressure on surface and groundwater quality, threats to non-target species, biodiversity, and soil quality, for example. The significance of the positive impact will depend on the uptake and implementation of these measures.	Promote uptake of eco-schemes and training & investment in cleaner technologies – ensure that the budget allocated will attract farmers' participation.

• To improve drinking water quality and supply • To avoid deterioration of water bodies					
• To avoid, prevent or reduce harmful effects on human health and environment resulting from emissions to air	• Generate air pollutants?	This Strategic Objective seeks to provide investment and training in improved technologies that will reduce GHG emissions. IPM will also potentially result in reduced application of PPP.	P + D LT	The extent of this positive impact will relate to the types of technologies adopted and degree of uptake.	Promote training and upgrading and improvement of technologies amongst farmers to maximise positive impacts long term.
• To contribute to climate change adaptation and/or mitigation • To increase reliance on renewable energy resources • To reduce GHG emissions from the agriculture sector	• Affect climate change (considering in particular mitigation, adaptation renewable energy and GHGs?	This Strategic Objective seeks to provide investment and training in improved technologies that will reduce GHG emissions. An indicator for this SO is associated with green energy from agriculture and forestry and other renewable sources, with a target of 2MW.	P +/++ D LT	The extent of this positive impact will relate to the types of technologies adopted and degree of uptake. A small percentage (0.18%) has been assigned as the target for investments related to climate change and mitigation and adaptation as well as the production of renewable energy or biomaterials. The share of UAA receiving funding to improve climate adaptation has a more ambitious target of 66% associated with it.	Promote training and upgrading and improvement of technologies amongst farmers to maximise positive impacts long term.
• To prevent soil erosion • To prevent soil sealing • To prevent soil contamination • To improve soil quality	• Affect soil quantity and quality?	The eco-schemes and agri-environment measures and seek to directly result in a positive impact on soil quality.	P ++ D LT	All four eco-schemes will contribute to the environmental objectives to improve soil quality and prevent soil contamination.	Promote uptake of eco-schemes – ensure that the budget allocated will attract farmers' participation.
• To ensure efficient water management within the sector • To reduce waste production through the circular economy	• Affect sustainable water management practices? • Affect sustainable waste management practices?	Implementation of the eco-schemes will result in less dependence on Plant Protection Products.	P += D LT	Reduction in use of Plant Protection Products will reduce pressure on surface and groundwater quality, threats to non-target species, biodiversity, and soil quality, for example. The significance of the positive impact will depend on the uptake and implementation of these measures. The provision of treated sewage effluent for use in agriculture could have beneficial impacts on groundwater through a reduction in demand on this natural resource. The application of bio-degradable mulch results in reduced waste generation, given that plastic mulch is non-recyclable and is thus disposed of in landfill	Promote uptake of eco-schemes and training & investment in cleaner technologies – ensure that the budget allocated will attract farmers' participation.
• To maintain the conservation status of cultural heritage sites /	• Affect cultural heritage including archaeological heritage? • Affect rubble & dry walls?	Direct interventions on cultural heritage are not envisaged through this SO.	P 0/- D	The construction of waste treatment facilities could negatively affect cultural	Siting of any infrastructure should avoid cultural heritage assets as well as impacts on the cultural landscape.

areas with known cultural / archaeological remains • To maintain rubble & dry walls • To maintain intangible cultural heritage	• Affect intangible cultural heritage?		LT	landscape / heritage depending on their siting.	
• To maintain landscape quality distinctiveness	• Enhance and maintain hey agricultural features of the landscape?	Implementation of the eco-schemes will ensure the continued rural nature where measures are taken up.	P +/0 D LT	Implementation of eco-schemes and agri-environment measures are expected to enhance the rural landscape. The construction of waste treatment facilities could negatively affect landscape depending on their siting	Ensure that implementation is coordinated where relevant so that there is consistency in implementation that could enhance the landscape. Siting of any infrastructure should avoid impacts on the landscape.

Specific Objective 5: To foster sustainable development and efficient management of natural resources such as water, soil and air, including by reducing chemical dependency Measures include: • At national scale, investments in water infrastructure for treated urban wastewater are to continue distribution to the main agricultural areas of the Maltase Islands; • Smaller scale investment will include enhanced water capture facilities on farms, restoration and renovation of water management features in the landscape; • Adequate treatment of farm waste to reduce groundwater pollution • Maintenance of traditional field boundaries for soil protection; • Interventions through agri-environment-climate measures (Pillar 2) and eco-schemes (Pillar 1) (as described and assessed under SO4) can contribute to enhanced soil, water and air protection • Farm-level and higher technical training for all commercial (trading) Maltese farmers in soil and water protection and enhancement techniques and support in the form of aids for cooperation and collaboration, including support for Operational Groups.					
• To maintain biodiversity (including terrestrial and marine) • To avoid negative effects on protected habitats and species • To avoid introduction of non-indigenous species into the natural environment • To ensure that populations of native species are within safe biological limits • To retain connectivity and avoid habitat fragmentation	• Affect the integrity of designated areas? • Affect protected species and habitats? • Affect take up of land which supports a natural environment? • Affect the introduction of non-indigenous species into the natural environment? • Affect the creation / maintenance of natural corridors and steppingstones?	Interventions as listed above including relating to water storage, rubble wall maintenance, planting trees and shrubs along field boundaries, as described. It is noted that the targets identified are less ambitious when compared to certain economic indicators. The target for organic farming is 0.77% of UAA, environmental performance in the livestock sector is 0.57%, sustainable use of pesticides is 2.6% of UAA and improving and protecting soils is 12.57% of UAA.	P ++/- D LT	Direct positive impacts through habitat management and restoration and eco-schemes. The extent of the impact will depend on the degree of implementation and uptake of eco-schemes. In practice, site interventions involving dams, interventions on watercourses and their banks, dredging of watercourses, etc. tend to be relatively intensive interventions and could impact the biodiversity, geomorphological heritage and landscape value of valley systems. Reclamation and restoration of land should only be considered on legitimate agricultural land as these could end up damaging ecosystems, natural habitats and the rural landscape, for instance deposition of inert material and soil onto natural sites (e.g. garrigue) under the pretext of reclaiming or restoring of marginal or derelict land. Any rural infrastructure and planting could have an impact on biodiversity if inadequate species are chosen or the infrastructure is built on natural habitats.	Promote uptake of eco-schemes – ensure that the support rates will attract farmers' participation. Furthermore, promotion and marketing of such measures should be strongly supported to enhance the take up of such measures and potential positive impacts. Works in valleys and other water features (such as springs) that are still in a relatively pristine state or which would be adversely affected by any site reengineering should be avoided in the first instance. Natural habitats and features should be effectively conserved and restored to their pristine state for their ecological natural and landscape value. It is recommended that any proposed works in valleys and watercourses are to be discussed with ERA at an early stage with the intention of avoiding and mitigating adverse environmental impacts on the site and its surroundings. With regards to the maintenance of traditional field boundaries, these should respect the rural characteristics of the local area by using traditional methods and materials. Rubble walls should retain their original height to ensure compatibility with the surrounding context. Retaining walls along field terraces should not be raised higher than the upper soil level. New/reconstructed/re-developed rubble walls should respect the natural topography and the height of traditional rubble walls in the surrounding context, without obstructing rural views.

					Measures addressing actions in Natura 2000 sites should be discussed with ERA at an early stage. The proposed measures should not affect the integrity of Natura 2000 sites or relevant species and habitats and avoids conflicts with the environmental priorities of other environmental plans and policies.
• To ensure agricultural/livestock products are within the legal safety requirements (pesticides and diseases) for human consumption • To protect and improve the health and well-being of the population	• Affect the safe consumption of agricultural/livestock products? • Affect ground water quality? • Affect dust generation from construction and waste handling activities? • Affect noise from construction, traffic and livestock farms? • Affect light pollution from development? • Affect odour generation? • Affect the provision of access to the countryside and outdoor recreation activities? • Affect access to fresh, quality and nutritious food? • Affect access to locally sourced food? • Encourage younger farmers' participation? • Encourage women farmers' participation? • Reduce health risks associated with farm activities?	Interventions as listed above including relating to water storage, rubble wall maintenance, planting trees and shrubs along field boundaries, as described. It is noted that the targets identified are less ambitious when compared to certain economic indicators. The target for organic farming is 0.77% of UAA, environmental performance in the livestock sector is 0.57%, sustainable use of pesticides is 2.6% of UAA and improving and protecting soils is 12.57% of UAA.	P + D LT	Positive impacts on agricultural products and water quality through reduced inputs as well as training to farmers.	Promote uptake of eco-schemes – ensure that the budget allocated will attract farmers' participation. More ambitious targets should be set under this SO to enhance potential positive impacts.
• To meet the standards required by the Water Framework Directive • To minimise pollution of groundwater from activities directly arising from the agricultural sector • To improve drinking water quality and supply • To avoid deterioration of water bodies	• Affect drinking water quality while meeting demand? • Affect marine water quality? • Affect the existing supply infrastructure? • Affect the good status of water bodies? • Affect water efficiency within the sector?	Interventions as listed above including relating to water storage, rubble wall maintenance, planting trees and shrubs along field boundaries, as described. It is noted that the targets identified are less ambitious when compared to certain economic indicators. The target for organic farming is 077% of UAA, environmental performance in the livestock sector is 0.57%, sustainable use of pesticides is 2.6% of UAA and improving and protecting soils is 12.57% of UAA.	P + D LT	Positive impacts on water quality through reduced inputs as well as training to farmers.	Promote uptake of eco-schemes – ensure that the budget allocated will attract farmers' participation. More ambitious targets should be set under this SO to enhance potential positive impacts.
• To avoid, prevent or reduce harmful effects on human heath and the environment resulting from emissions to air.	• Generate air pollutants?	Interventions as listed above including relating to water storage, rubble wall maintenance, planting trees and shrubs along field boundaries, as described. It is noted that the targets identified are less ambitious when compared to certain economic indicators. The target for organic farming is 077% of UAA, environmental performance in the livestock sector is 0.57%, sustainable use of pesticides is 2.6%	P + D LT	Positive impacts on air quality through reduced inputs as well as training to farmers.	Promote uptake of eco-schemes – ensure that the budget allocated will attract farmers' participation. More ambitious targets should be set under this SO to enhance potential positive impacts.

		of UAA and improving and protecting soils is 12.57% of UAA.			
• To contribute to climate change adaptation and/or mitigation • To increase reliance on renewable energy resources • To reduce GHG emissions from the agriculture sector	• Affect climate change (considering in particular mitigation, adaptation renewable energy and GHGs?	Interventions as listed above including relating to water storage, rubble wall maintenance planting trees and shrubs along field boundaries, as described. It is noted that the targets identified are less ambitious when compared to certain economic indicators. The target for organic farming is 077% of UAA, environmental performance in the livestock sector is 0.57%, sustainable use of pesticides is 2.6% of UAA and improving and protecting soils is 12.57% of UAA.	P + D LT	Improvement in efficiency and farming techniques will help to ensure climate change adaptation.	Promote uptake of eco-schemes – ensure that the budget allocated will attract farmers' participation. More ambitious targets should be set under this SO to enhance potential positive impacts.
• To prevent soil erosion • To prevent soil sealing • To prevent soil contamination • To improve soil quality	• Affect soil quantity and quality?	Reinstatement and repair of rubble walls and implementation of eco-schemes, together with training and encouraged collaboration, addresses these environmental objectives.	P ++ D LT	Investment in rubble wall repair and maintenance together with implementation of the eco-schemes will contribute to the environmental objectives to improve soil quality, reduce erosion and prevent soil contamination.	Promote uptake of eco-schemes – ensure that the budget allocated will attract farmers' participation. More ambitious targets should be set under this SO to enhance potential positive impacts.
• To ensure efficient water management within the sector • To reduce waste production through the circular economy	• Affect sustainable water management practices? • Affect sustainable waste management practices?	Investment in water capture, renovations of water storage features on the landscape and training in water protection and enhancement techniques.	P + D LT	This objective contributes to the environmental objective related to efficient water management within the sector.	Considered strategically with other water management measures, including TSE (treated sewage effluent, or 'new water'), cumulative positive impacts are likely. It is important that any water storage does not become stagnant which might cause harbourage of pests.
• To maintain the conservation status of cultural heritage sites / areas with known cultural / archaeological remains • To maintain rubble & dry walls • To maintain intangible cultural heritage	• Affect cultural heritage including archaeological heritage? • Affect rubble & dry walls? • Affect intangible cultural heritage?	Investment in traditional water capture features on the landscape, maintenance of rubble walls.	P + D LT	Maintenance of existing features in the rural landscape of rubble walls and features related to water storage will contribute positively to these environmental objectives as long as features retain their traditional aesthetics.	Ensure that interventions respect the rural/cultural landscape.
• To maintain landscape quality distinctiveness	• Enhance and maintain key agricultural features?	Investment in traditional water capture features on the landscape, maintenance of rubble walls.	P + D LT	Maintenance of existing features in the rural landscape of rubble walls and features related to water storage will contribute positively to these environmental objectives if features are restored in line with their traditional aesthetics.	Ensure that interventions respect the rural/cultural landscape. This will be addressed through existing planning and environmental permitting regimes.

Specific Objective 6: To contribute to halting and reversing biodiversity loss, enhance ecosystem services and preserve habitats and landscapes EAFRD interventions will include: • Non-productive and productive investments; • Conservation and sustainable use of genetic resources; • Land-based management commitments. Interventions under EAGF will include: • Eco Schemes; and • Support to the apiculture sector including support for labs, varroasis, restocking and transhumance, training and research Programmes amongst others.					
• To maintain biodiversity (including terrestrial and marine) • To avoid negative effects on protected habitats and species • To avoid introduction of non-indigenous species into the natural environment • To ensure that populations of native species are within safe biological limits • To retain connectivity and avoid habitat fragmentation	• Affect the integrity of designated areas? • Affect protected species and habitats? • Affect take up of land which supports a natural environment? • Affect the introduction of non-indigenous species into the natural environment? • Affect the creation / maintenance of natural corridors and steppingstones?	Sub-measures of this SO include preservation of species that are vulnerable to genetic erosion; land-based management commitments (relevant under all the environmental SOs). These are commitments taken by farmers to implement management practices over a period of 5 years. The commitments aim to reduce pressures on semi-natural features caused by significant agricultural intensification and neglect which would otherwise continue and spread: -Maintenance of trees (newly planted and recommended); -Control weeds in orchards and vineyards by mechanical (grass cutter / mower), instead of chemical methods; -Maintenance of trees; -Introduction of bee boxes on holdings; -Implementation of soil management and conservation plan on a parcel – targeting erosion, compaction and low soil organic matter; -Organic conversion and maintenance; -Integration and maintenance of autochthonous Maltese species.	P +/- I/D LT	Contributes to the maintenance of local genetic resources in agriculture; aims to reduce use of Plant Productive Products (PPPs); combination of eco-schemes and land-based commitments can have cumulative and synergistic beneficial impacts. Investment in apiculture is also featured. Potential negative impacts with respect to biodiversity could arise if domestic honeybees become too numerous, or if there are not enough flowers available whereby they risk outcompeting wild bee/pollinator populations (Lazaro et al, 2021)[63] and also risk exposing them to disease (McAfee, 2020)[64]. Domesticated bees are less effective at pollination than wild bees because they return pollen to their hives, not only to flowers that they visit. If wild populations are affected, therefore, there could be a secondary impact on the plant community. Valido et al, 2019[65] also demostrate that beekeeping reduces the diversity of wild pollinators and interaction links in the pollination networls.	Encourage uptake of measures. Targets for environmental enhancement measures, such as organic farming, should be more ambitious. Selection criteria should ensure that siting of apiculture operations does not result in large operations near wildflower / natural areas; locating the larger operations near agriculture will be beneficial for agriculture in the area. Consultation with the Environment and Resources Authority should be carried out.

[63] Lazaro, A., Muller, A., Ebmer, A.W., Dathe, H.H., Scheuchl, E., Schwarz, M., Risch, S., Pauly, Devalez, J., Tscheulin, T., Gomex-Martinex, C., Papas, E., Pickering, J., Waser, N.M., Petanidou, T. 2021. Impacts of beekeeping on wild bee diversity and pollination networks in the Aegean Archipelago. 44. Ecography.
[64] McAfee. 2020. The Problem with Honey Bees. Scientific American
[65] Valido, A., Rodriguez-Rodriguez, M.C., Jordano, P. Honeybeeds disrupt the structure and functionality of plant-pollinator networks. 2019. 9. Scientific Reports.

		It is noted that the target percentage take up by UAA under this SO, is largely aimed at enhancing support for farms in areas with specific needs (34%) and preserving beehives (66.5%), other targets related to potential beneficial impacts are as follows: improving and protecting soils (12.57%), preserving habitats and species (4.10%), sustainable and reduced use of pesticides (2.98%), preserving landscape features (0.89%), development of organic agriculture (0.77%) and investments related to biodiversity (0.27%).			
• To ensure agricultural/livestock products are within the legal safety requirements (pesticides and diseases) for human consumption • To protect and improve the health and well-being of the population	• Affect the safe consumption of agricultural/livestock products? • Affect dust generation from construction and waste handling activities? • Affect noise from construction, traffic and livestock farms? • Affect light pollution from development? • Affect odour generation? • Affect the provision of access to the countryside and outdoor recreation activities? • Affect access to fresh, quality and nutritious food? • Affect access to locally sourced food? • Encourage younger farmers' participation? • Encourage women farmers' participation? • Reduce health risks associated with farm activities?	The SO aims to avoid loss of genetic resources. This SO includes measures to reduce use of Plan Protection Products. It is noted that the target percentage take up by UAA under this SO, is largely aimed at enhancing support for farms in areas with specific needs (34%) and preserving beehives (66.5%), other targets related to potential beneficial impacts are as follows: improving and protecting soils (12.57%), preserving habitats and species (4.10%), sustainable and reduced use of pesticides (2.98%), preserving landscape features (0.89%), development of organic agriculture (0.77%) and investments related to biodiversity (0.27%).	P + I/D LT	Preservation of agricultural genotypes, aimed reduction of use of PPS (through soil management plans, organic conversion, etc.) will contribute to achieve these environmental objectives.	Promote uptake of eco-schemes – ensure that the budget allocated will attract farmers' participation. Targets for environmental enhancement measures should be more ambitious.
• To meet the standards required by the Water Framework Directive • To minimise pollution of groundwater from activities directly arising from the agricultural sector • To improve drinking water quality and supply • To avoid deterioration of water bodies	• Affect drinking water quality while meeting demand? • Affect marine water quality? • Affect the existing supply infrastructure? • Affect the good status of water bodies? • Affect water efficiency within the sector?	Sub-measures of this SO include preservation of species that are vulnerable to genetic erosion; -Land-based management commitments (relevant under all the environmental SOs). These are commitments taken by farmers to implement management practices over a period of 5 years. The commitments aim to reduce pressures on semi-natural features caused by significant agricultural intensification and neglect which would otherwise continue and spread: -Maintenance of trees (newly planted and recommended);	P + I/D LT	All measures and sub-measures targeting reduction in use of PPPs will cumulatively, likely help to improve water quality.	Promote uptake of eco-schemes – ensure that the budget allocated will attract farmers' participation. Targets for environmental enhancement measures should be more ambitious.

		-Control weeds in orchards and vineyards by mechanical (grass cutter / mower), instead of chemical methods; -Maintenance of trees; -Introduction of bee boxes on holdings; -Implementation of soil management and conservation plan on a parcel – targeting erosion, compaction and low soil organic matter; -Organic conversion and maintenance -Integration and maintenance of autochthonous Maltese species It is noted that the target percentage take up by UAA under this SO, is largely aimed at enhancing support for farms in areas with specific needs (34%) and preserving beehives (66.5%), other targets related to potential beneficial impacts are as follows: improving and protecting soils (12.57%), preserving habitats and species (4.10%), sustainable and reduced use of pesticides (2.98%), preserving landscape features (0.89%), development of organic agriculture (0.77%) and investments related to biodiversity (0.27%).			
• To avoid, prevent or reduce harmful effects on human health and the environment resulting from emissions to air.	• Generate air pollutants?	Land-based commitments. It is noted that the target percentage take up by UAA under this SO, is largely aimed at enhancing support for farms in areas with specific needs (34%) and preserving beehives (66.5%), other targets related to potential beneficial impacts are as follows: improving and protecting soils (12.57%), preserving habitats and species (4.10%), sustainable and reduced use of pesticides (2.98%), preserving landscape features (0.89%), development of organic agriculture (0.77%) and investments related to biodiversity (0.27%).	P + I/D LT	All measures and sub-measures targeting reduction in use of PPPs will cumulatively, likely help to improve air quality.	Promote uptake of eco-schemes – ensure that the budget allocated will attract farmers' participation. Targets for environmental enhancement measures should be more ambitious.

• To contribute to climate change adaptation and/or mitigation • To increase reliance on renewable energy resources • To reduce GHG emissions from the agriculture sector	• Affect climate change (considering in particular mitigation, adaptation renewable energy and GHGs?	Land based commitments. It is noted that the target percentage take up by UAA under this SO, is largely aimed at enhancing support for farms in areas with specific needs (34%) and preserving beehives (66.5%), other targets related to potential beneficial impacts are as follows: improving and protecting soils (12.57%), preserving habitats and species (4.10%), sustainable and reduced use of pesticides (2.98%), preserving landscape features (0.89%), development of organic agriculture (0.77%) and investments related to biodiversity (0.27%).	P + I/D LT	Land based commitments that seek to improve soil structure and function, improve the ability of the soil to act as a C sink and thus assist in mitigation.	Promote uptake of these measures and sub-measures. Targets for environmental enhancement measures should be more ambitious.
• To prevent soil erosion • To prevent soil sealing • To prevent soil contamination • To improve soil quality	• Affect soil quantity and quality?	Land based commitments. It is noted that the target percentage take up by UAA under this SO, is largely aimed at enhancing support for farms in areas with specific needs (34%) and preserving beehives (66.5%), other targets related to potential beneficial impacts are as follows: improving and protecting soils (12.57%), preserving habitats and species (4.10%), sustainable and reduced use of pesticides (2.98%), preserving landscape features (0.89%), development of organic agriculture (0.77%) and investments related to biodiversity (0.27%).	P + I/D LT	Land based commitments that seek to improve soil structure and function, improve its quality.	Promote uptake of these measures and sub-measures. Targets for environmental enhancement measures should be more ambitious.
• To ensure efficient water management within the sector • To reduce waste production through the circular economy	• Affect sustainable water management practices? • Affect sustainable waste management practices?	This SO does not directly contribute to the environmental objectives.	0	Neutral	N/A
• To maintain the conservation status of cultural heritage sites / areas with known cultural / archaeological remains • To maintain rubble & dry walls • To maintain intangible cultural heritage	• Affect cultural heritage including archaeological heritage? • Affect rubble & dry walls? • Affect intangible cultural heritage?	Rubble walls and rural heritage features will be repaired through this SO. It is noted that the target percentage take up by UAA under this SO, is largely aimed at enhancing support for farms in areas with specific needs (34%) and preserving beehives (66.5%), other targets related to potential beneficial impacts are as follows: improving and protecting soils (12.57%), preserving habitats and species (4.10%), sustainable and reduced use of pesticides (2.98%),	P + I/D LT	Restoration of these features will result in a positive impact in the rural environment.	Targets for environmental enhancement measures should be more ambitious, whilst taking into account the local context, and the plan's timeframes.

		preserving landscape features (0.89%), development of organic agriculture (0.77%) and investments related to biodiversity (0.27%).			
• To maintain landscape quality distinctiveness	• Enhance and maintain key agricultural features of the landscape?	Rubble walls and rural heritage features will be repaired through this SO. It is noted that the target percentage take up by UAA under this SO, is largely aimed at enhancing support for farms in areas with specific needs (34%) and preserving beehives (66.5%), other targets related to potential beneficial impacts are as follows: improving and protecting soils (12.57%), preserving habitats and species (4.10%), sustainable and reduced use of pesticides (2.98%), preserving landscape features (0.89%), development of organic agriculture (0.77%) and investments related to biodiversity (0.27%).	P + I/D LT	Restoration of these features will result in a positive impact in the rural environment.	Targets for environmental enhancement measures should be more ambitious whilst taking into account the local context, and the plan's timeframes..

Specific Objective 7: To attract and sustain young farmers and new farmers and facilitate sustainable business development in rural areas • Assistance in business start-ups for young farmers in Malta including the setting up of a business plan, management marketing and financial skills development and other training and technical advisory support as required. • Support new rural business ventures that add value to rural income and promote rural quality of life • Facilitate land consolidation and farm transfer through legislative changes and fiscal incentives					
• To maintain biodiversity (including terrestrial and marine) • To avoid negative effects on protected habitats and species • To avoid introduction of non-indigenous species into the natural environment • To ensure that populations of native species are within safe biological limits • To retain connectivity and avoid habitat fragmentation	• Affect the integrity of designated areas? • Affect protected species and habitats? • Affect take up of land which supports a natural environment? • Affect the introduction of non-indigenous species into the natural environment? • Affect the creation / maintenance of natural corridors and steppingstones?	This SO will provide business development support, however, young farmers may also receive funding through EAFRD for interventions including the possible construction of structures, etc as required. However, details are project specific and this is reflected in the assessment.	P -/0 D LT	In the absence of project details, it is uncertain whether significant impacts would be accrued on site. Potential negative effects could occcur in the case of development on natural land, for example. The impact is therefore assessed as neutral to negative. The Plan's proposals to facilitate land consolidation, that involves restructuring of the land is considered as positive, as long as within suitable site contexts.	Impact assessment at project level where potential impacts may occur. With regards to *'Stimulate new business activities in rural areas',* (e.g. environmental labelling) it is recommended that the proposed measures in the Plan are directed towards increasing further the valorisation of Malta's touristic product, without promoting additional development pressures in the rural environment. The CAP SP should regard rural tourism accommodation as any other physical development in the countryside. Rural recreation and tourism tend to increase demand for the take-up of rural land for ancillary facilities such as buildings, access routes, widened roads, new or formalised car parks, etc. Other individually trivial interventions such as street furniture, CCTV camera poles, signage and panels, infrastructural services etc., may also be problematic, particularly if excessive in quantity (cumulative impact) or poorly designed/located. Physical interventions related to land consolidation should not result in adverse environmental impacts, such as topographical re-engineering, demolition of old rubble walls, destruction of non-arable elements and rural features such as natural outcrops, clumps of trees, diversion or channelisation of watercourses, etc..
• To ensure agricultural/livestock products are within the legal safety requirements (pesticides and diseases) for human consumption	• Affect the safe consumption of agricultural/livestock products? • Affect dust generation from construction and waste handling activities? • Affect noise from construction, traffic and livestock farms? • Affect light pollution from development? • Affect odour generation?	This measure encourages young farmers to work in this sector.	P + I/D LT	This contributes to the sustainability of the sector.	Ensure suitable capacity-building and training so that young farmers operate in accordance with code of conduct, standards and other requirements.

• To protect and improve the health and well-being of the population	• Affect the provision of access to the countryside and outdoor recreation activities? • Affect access to fresh, quality and nutritious food? • Affect access to locally sourced food? • Encourage younger farmers' participation? • Encourage women farmers' participation? • Reduce health risks associated with farm activities?				
• To meet the standards required by the Water Framework Directive • To minimise pollution of groundwater from activities directly arising from the agricultural sector • To improve drinking water quality and supply • To avoid deterioration of water bodies	• Affect drinking water quality while meeting demand? • Affect marine water quality? • Affect the existing supply infrastructure? • Affect the good status of water bodies? • Affect water efficiency within the sector?	As above.	P - I/D LT	Young farmers entering the sector could result in an impact on resources, however, if they operate in accordance with all regulations, code of conduct and environmental standards, significant negative impacts could be avoided.	Ensure suitable capacity-building and training so that young farmers operate in accordance with code of conduct, standards and other requirements.
• To avoid, prevent or reduce harmful effects on human health and the environment resulting from emissions to air.	• Generate air pollutants?	As above.	P - I/D LT	Young farmers entering the sector will be carrying out activities that can result in a negative impact on air quality.	Ensure suitable capacity-building and training so that young farmers operate in accordance with code of conduct, standards and other requirements.
• To contribute to climate change adaptation and/or mitigation • To increase reliance on renewable energy resources • To reduce GHG emissions from the agriculture sector	• Affect climate change (considering in particular mitigation, adaptation renewable energy and GHGs?	As above.	P -/+ I/D LT	Young farmers entering the sector will be carrying out activities that can contribute negatively to climate change. On the other hand, some projects may invest in renewable energy.	Ensure suitable capacity-building and training so that young farmers operate in accordance with code of conduct, standards and other requirements.
• To prevent soil erosion • To prevent soil sealing • To prevent soil contamination • To improve soil quality	• Affect soil quantity and quality?	As above.	P - I/D LT	Young farmers entering the sector will result in an impact on resources, however, if they operate in accordance with all regulations, code of conduct and environmental standards, significant negative impacts could be avoided.	Ensure suitable capacity-building and training so that young farmers operate in accordance with code of conduct, standards and other requirements.
• To ensure efficient water management within the sector • To reduce waste production through the circular economy	• Affect sustainable water management practices? • Affect sustainable waste management practices?	As above.	P - I/D LT	Young farmers entering the sector will result in an impact on resources, however, if they operate in accordance with all regulations, code of conduct and environmental standards, significant negative impacts could be avoided.	Ensure suitable capacity-building and training so that young farmers operate in accordance with code of conduct, standards and other requirements.

• To maintain the conservation status of cultural heritage sites / areas with known cultural / archaeological remains • To maintain rubble & dry walls • To maintain intangible cultural heritage	• Affect cultural heritage including archaeological heritage? • Affect rubble & dry walls? • Affect intangible cultural heritage?	As above.	0	It is assumed that should a project require intervention on cultural heritage, funding will be allocated through the appropriate SO.	Impacts on cultural heritage features / landscape should be avoided.
• To maintain landscape quality distinctiveness	• Enhance and maintain key agricultural features of the landscape?	As above.	P -/0 I/D LT	Impacts on landscape will depend on the project. Certain interventions may result in impacts on the landscape whereas others may not have significant effects.	To be screened / assessed at project level. Impacts on the landscape should be avoided.

Specific Objective 8: To promote employment, growth, gender equality, including the participation of women in farming, social inclusion and local development in rural areas, including the circular bio-economy and sustainable forestry					
This SO will fund: • Local investment in community infrastructure and activities relating to LEADER including the development and update of the Local Development Strategy (LDS), the implementation of the LEADER programme that will be carried out by the Local Action Groups, and training measures for potential LAG staff and other local stakeholders. • Focused support may be especially targeted to young people and women providing capacity-building in business management, leadership, and entrepreneurship, combining training with start-up/seed funding as outlined in the LDS. • Restoration of existing heritage structures, in rural areas and overall regeneration of rural area, which aim towards strengthening the socio-economic and cultural fabric of rural areas.					
• To maintain biodiversity (including terrestrial and marine) • To avoid negative effects on protected habitats and species • To avoid introduction of non-indigenous species into the natural environment • To ensure that populations of native species are within safe biological limits • To retain connectivity and avoid habitat fragmentation	• Affect the integrity of designated areas? • Affect protected species and habitats? • Affect take up of land which supports a natural environment? • Affect the introduction of non-indigenous species into the natural environment? • Affect the creation / maintenance of natural corridors and steppingstones?	Direct impacts on biodiversity are not expected from implementation of the Local Development Strategies (LDSs). This can be confirmed once the LDSs are available. Similarly support to young people and women and investment in heritage structures are unlikely to affect this objective.	0	Neutral	N/A
• To ensure agricultural/livestock products are within the legal safety requirements (pesticides and diseases) for human consumption • To protect and improve the health and well-being of the farming community	• Affect the safe consumption of agricultural/livestock products? • Affect dust generation from construction and waste handling activities? • Affect noise from construction, traffic and livestock farms? • Affect light pollution from development? • Affect odour generation? • Affect the provision of access to the countryside and outdoor recreation activities? • Affect access to fresh, quality and nutritious food? • Affect access to locally sourced food? • Encourage younger farmers' participation? • Encourage women farmers' participation? • Reduce health risks associated with farm activities?	Implementation of the LDSs are expected to improve the well-being of the population, the extent to which this would occur will be better determined once the LDSs are produced. Similarly support to young people and women and investment in heritage structures could positively affect this objective.	P + I/D LT	Implementation of LEADER can result in positive impacts on the well-being of the rural community. Focused support to young people and women providing capacity-building in business management, leadership, and entrepreneurship, combining training with start-up/seed funding could also contribute to wellbeing. Restoration of heritage structures, in rural areas could indirectly also contribute to the wellbeing of communities in these areas.	Ensure that effective measures for improved well-being of rural communities are included as part of the LDSs. Priority to investments that meet a number of needs should be given. Criteria to this effect can be included during the development of the LDS which takes a bottom-up approach.
• To meet the standards required by the Water Framework Directive • To minimise pollution of groundwater from activities directly arising from the agricultural sector	• Affect drinking water quality while meeting demand? • Affect marine water quality? • Affect the existing supply infrastructure? • Affect the ecological status of inland surface waters? • Affect water efficiency within the sector?	Direct impacts from LEADER and investments in rural heritage are not expected.	0	Neutral	N/A

• To improve drinking water quality and supply • To avoid deterioration of water bodies including the marine environment					
• To avoid, prevent or reduce harmful effects on human health and the environment resulting from emissions to air.	• Generate air pollutants?	Direct impacts from LEADER and investments in rural heritage are not expected.	0	Neutral	N/A
• To contribute to climate change adaptation and/or mitigation • To increase reliance on renewable energy resources • To reduce GHG emissions from the agriculture sector	• Affect climate change (considering in particular mitigation, adaptation renewable energy and GHGs?	Direct impacts from LEADER and investments in rural heritage are not expected.	0	Neutral	N/A
• To prevent soil erosion • To prevent soil sealing • To prevent soil contamination • To improve soil quality	• Affect soil quantity and quality?	Direct impacts from LEADER and investments in rural heritage are not expected.	0	Neutral	N/A
• To ensure efficient water management within the sector • To reduce waste production through the circular economy	• Affect sustainable water management practices? • Affect sustainable waste management practices?	Direct impacts from LEADER and investments in rural heritage are not expected.	0	Neutral	N/A
• To maintain the conservation status of cultural heritage sites / areas with known cultural / archaeological remains • To maintain rubble & dry walls • To maintain intangible cultural heritage	• Affect cultural heritage including archaeological heritage? • Affect rubble & dry walls? • Affect intangible cultural heritage?	Investment in the restoration of rural structures is directly in line with these environmental objectives.	P +/++ D LT	There is a potential for the LDSs to result in significant beneficial impacts to the cultural heritage features on the rural landscape.	Encourage inclusion of restoration of rural structures and projects addressing rural areas in a holistic manner.
• To maintain landscape quality distinctiveness	• Enhance and maintain key agricultural features of the landscape?	Investment in the restoration of rural structures is directly in line with these environmental objectives.	P +/++ I/D LT	There is a potential for the LDSs to result in significant beneficial impacts to the cultural heritage features on the rural landscape.	Encourage inclusion of restoration of rural structures and projects addressing rural areas in a holistic manner.

Specific Objective 9: To improve the response of Union agriculture to societal demands on food and health, including high quality, safe, and nutritious food produced in a sustainable way, the reduction of food waste, as well as improving animal welfare and combatting antimicrobial resistances.					
Actions are aimed towards: • Investing in agricultural holdings by improving animal welfare as well as combatting antimicrobial resistance; • Supporting better dietary and health requirements through public awareness campaigns, amongst others; • Supporting organic farming practices and methods ; • Training and advice in animal welfare ; • Investments targeting the enhancement and mainstreaming of higher standards of production in environmental, nutritional and welfare terms, across Maltese farm sectors; • Aids to promote greater public awareness of local products meeting these standards; • Interventions to enable farmers to better understand consumers' choices and preferences for food and drink products and their attitudes towards Maltese products; • Training and advice to raise production standards and producer awareness of consumer demand; • Direct consumer education can be promoted via funding for farmers organisations to pursue awareness campaigns or it can involve direct action by the public administration, or new partnerships that can be CAP-supported and created especially for these purposes under the co-operation measure.					
• To maintain biodiversity (including terrestrial and marine) • To avoid negative effects on protected habitats and species • To avoid introduction of non-indigenous species into the natural environment • To ensure that populations of native species are within safe biological limits • To retain connectivity and avoid habitat fragmentation	• Affect the integrity of designated areas? • Affect protected species and habitats? • Affect take up of land which supports a natural environment? • Affect the introduction of non-indigenous species into the natural environment? • Affect the creation / maintenance of natural corridors and stepping stones?	Potential for investment in organic farming and methods. Adherence to standards to reduce negative effects and investments targeting the enhancement and mainstreaming of higher standards of production in environmental terms can contribute to this objective.	P + I/D LT	If there is investment in organic farming, and adherence to strict standards, there will likely be a positive impact on biodiversity in the area, allowing it to thrive.	Ensure investment in organic farming despite the low take up in previous years.
• To ensure agricultural/livestock products are within the legal safety requirements (pesticides and diseases) for human consumption • To protect and improve the health and well-being of the farming community	• Affect the safe consumption of agricultural/livestock products? • • Affect dust generation from construction and waste handling activities? • Affect noise from construction, traffic and livestock farms? • Affect light pollution from development? • Affect odour generation? • Affect the provision of access to the countryside and outdoor recreation activities? • Affect access to fresh, quality and nutritious food? • Affect access to locally sourced food? • Encourage younger farmers' participation? • Encourage women farmers' participation? • Reduce health risks associated with farm activities?	Investments under this SO such as improvement in animal welfare, organic farming, promotion of dietary and health requirements and various campaigns aim to contribute to the well- being on the population.	P + I/D LT	Positive impacts are expected, even cumulatively across the implementation of the CAP SP.	Encourage take up of these measures, for example, through awareness-raising and through the setting of award criteria during the selection process.
• To meet the standards required by the Water Framework Directive • To minimise pollution of groundwater from	• Affect the existing supply infrastructure? • Affect the ecological status of inland surface waters? • Affect water efficiency within the sector?	Direct significant impacts are not expected.	P 0/+ I LT	If organic farming is invested in, there could be positive impacts on water; impacts would only likely be significant if uptake is relatively extensive or at least coupled with good take up of other measures aiming to reduce PPPs, such as IPM.	Encourage take up of measures that actively seek to reduce use of PPPs.

activities directly arising from the agricultural sector • To improve drinking water quality and supply • To avoid deterioration of water bodies					
• To avoid, prevent or reduce harmful effects on human health and the environment resulting from emissions to air	• Generate air pollutants?	If investment in organic farming is provided and uptake is significant, a reduction in air pollutants can be expected.	P 0/+ I/D LT	As indicated in the CAP SP and from experience of past RDPs, however, it is not considered that uptake of organic farming is likely rendering the impact neutral to slightly positive, if at all.	Promote cooperation amongst neighbouring farmers to adopt organic farming. The promotion / public awareness aspects under this SO could assist in promoting organic farming.
• To contribute to climate change adaptation and/or mitigation • To increase reliance on renewable energy resources • To reduce GHG emissions from the agriculture sector	• Affect climate change (considering in particular mitigation, adaptation renewable energy and GHGs?	Direct, significant impacts are not expected.	0	Neutral	N/A
• To prevent soil erosion • To prevent soil sealing • To prevent soil contamination • To improve soil quality	• Affect soil quantity and quality?	If investment in organic farming is provided and uptake is significant, significant improvements in soil could be accrued.	P 0/+ I/D LT	As indicated in the CAP SP and from experience of past RDPs, organic farming has been implemented in a modest manner thus far. A renewed impetus for improvement in this sector could be spearheaded through the implementation of Malta's Organic Action Plan which is currently under development.	Promote cooperation amongst neighbouring farmers to adopt organic farming. The promotion / public awareness aspects under this SO could assist in promoting organic farming.
• To ensure efficient water management within the sector • To reduce waste production through the circular economy	• Affect sustainable water management practices? • Affect sustainable waste management practices?	If standards are adopted and if investment in organic farming is provided and uptake is significant, significant improvements in water and waste management could be accrued. Reduction in food waste is also targeted under this Strategic Objective.	P 0/+ I/D LT	As indicated in the CAP SP and from experience of past RDPs, however, it is not considered likely, that organic farming will be adopted at a significant level. A renewed drive for improvement could be brought about though the launch of the Organic Action Plan.	Promote cooperation amongst neighbouring farmers to adopt organic farming. The promotion / public awareness aspects under this SO could assist in promoting organic farming.
• To maintain the conservation status of cultural heritage sites / areas with known cultural / archaeological remains • To maintain rubble & dry walls • To maintain intangible cultural heritage	• Affect cultural heritage including archaeological heritage? • Affect rubble & dry walls? • Affect intangible cultural heritage?	N/A	0	Neutral	N/A
• To maintain landscape quality distinctiveness	• Affect landscape quality distinctiveness?	Direct impacts are not envisaged.	0	Neutral	N/A

SUMMARY OF THE ASSESSMENT

7.6. The assessment identifies several opportunities for beneficial impacts in relation to the environmental objectives. Areas where potential significant negative impacts could arise are related to the three economic strategic objectives. However, if managed appropriately, the assessment identified that impacts could be mitigated and any beneficial impacts could be enhanced.

7.7. Potential negative impacts are largely related to issues that the sector traditionally generates including, impacts associated with the overuse of Plant Protection Products and fertilisers, resource use, especially water and other issues as identified in the assessment.

7.8. The SP includes three environmental objectives that will directly result in beneficial impacts if their implementation is successful, and if they are fully taken up. Based on previous experience of the implementation of the RDPs the take up of some of these measures has been limited, for instance, organic farming. Ideally, the target set for this particular measure in the CAP SP would be more ambitious, however, it must be ensured that the funds available are then spent in this regard. An increase in organic farming, even identification of entire areas with organic farming could significantly reduce pressures and environmental impacts. This is true of many of the measures listed under SO4, 5 and 6 and therefore a mitigation measure that would result in significant residual impact is the enhanced uptake of measures that reach the CAP SP's environmental objectives (SO4-6). In order for this to happen, a mechanism/s may need to be set up for the encouragement of uptake. This could include a variety of approaches, for example, incentivising uptake of environmental measures during the project selection process, workshops/guidance outreach to potential applicants, and liaison with managers of protected areas to work with farmers that are located within the protected area or management plan area (where the latter exists).

7.9. The social objectives were largely not identified to have potentially significant environmental impacts, therefore no mitigation is proposed.

7.10. Overall, therefore, the CAP SP is expected to result in beneficial impacts, in particular if it is successful in improving resource use efficiency and reducing the use of chemicals (pesticides, fertilisers) during operation. However, the significance of the beneficial impacts is uncertain given the relatively low targets assigned to some of the measures that were identified to likely result in beneficial impacts and without additional measures to encourage uptake, as described above. With regard to livestock and animal husbandry, the potential impacts and mitigation measures should be taken account of and considered in taking policy forward for this sector.

CUMULATIVE & SYNERGISTIC IMPACTS

7.11. Cumulative effects are those effects that result from incremental changes caused by other past, present, or reasonably foreseeable, actions together with the proposal. Cumulative effects can result from individually minor but collectively significant actions taking place over a period of time.

7.12. Synergistic effects interact to produce a total effect that is greater than the sum of the individual effects.

7.13. **Table 7.3** provides a general overview of the key issues identified for each environmental topic considered within the assessment process.

Table 7.3: Summary of cumulative environmental effects of CAP SP

Environmental Receptor	Key impacts of the Draft CAP SP
Biodiversity, Flora and Fauna	Impacts on biodiversity, flora and fauna, as discussed in **Table 7.2** are closely related with the use of chemicals in the environment. Potential negative effects from the operation of apiaries were also highlighted, however, if managed correctly, as indicated in the assessment, the impact is expected to be mitigated. Other measures such as the eco-schemes and non productive on farm and off farm investments are expected to further enhance biodiversity, however, the targets related to take up of these measures are relatively low and therefore it is uncertain whether cumulative impacts will result in net benefits.
Population and Human health	Reduction in the use of Plant Protection Products will have a positive effect on human health. Additionally, measures to improve public awareness and improve animal welfare could also benefit populations. More ambitious targets in this respect will enhance the significance of impacts.
Water	Water quality is expected to improve as a result of measures aiming to reduce Plant Protection Products as well as measures to improve efficiency. The investment in and use of new water will also contribute to reducing pressure on this resource. The capacity building element of the CAP SP will be important in ensuring long-term changes in practice and associated long-term environmental improvements.
Emissions to air	A reduction in dependence on pesticides through strategies such as Integrated Pest Management should result in a positive impact relative to the baseline, assuming further improvements over the previous programming period and significant uptake of the measures.
Climatic factors and climate change	As identified in the assessment, GHG emissions from livestock are a concern and the CAP SP will be supporting the beef industry, which is not a major economic contributor. The dairy industry, is however, of relatively significant importance to the economy. Improvements to soil structure and function can improve its role as a carbon sink. Increased efficiency through new technologies could also reduce GHG emissions.
Soil	Improvements to soil can be expected through various measures including implementation of the eco-scheme measures, investment in organic farming, coupled with capacity-building. A cumulative positive effect could be expected, the significance of which will depend on uptake of the relevant measures and the setting of more meaningful targets.
Material assets	Water management is addressed with waste management being addressed to a lesser extent, related mainly to food waste. A positive cumulative impact is expected through the implementation of various measures to reduce inputs, and investment in infrastructure enhances the positive effects of making most efficient use of water.
Cultural heritage	Investment in restoration of cultural heritage features as well as the rural/cultural landscape should result in positive cumulative effects arising from the implementation of the CAP SP.
Landscape	Investment in restoration of cultural heritage features as well as the rural/cultural landscape should result in positive cumulative effects arising from the implementation of the CAP SP.

8. CHAPTER 8 – RECOMMENDATIONS

8.1. When considering the need for mitigation, a hierarchy of mitigation measures was considered:

- Avoiding the implementation of unsustainable actions;
- Reducing the extent of unsustainable actions;
- Remedying or compensating for any negative impacts by incorporating mitigation measures into the actions to prevent or minimise the impacts; and
- Enhancing positive impacts.

8.2. Potential mitigation measures for each of the Strategic Objectives are listed in **Table 7.2** above. Whilst finalising the CAP SP, following the issuance of the Environmental Report and the public consultation, these measures should be considered. These mitigation measures are discussed below.

Monitoring

8.3. Monitoring forms part of the SEA process. It has been identified in this assessment as an integral part of mitigation given the past performance in the sector with regards to certain aspects such was water use, use of pesticides and fertilisers, and potential impacts on biodiversity. The data obtained should feed back into the process and where any potential significant negative effects have been identified (or where positive impacts identified during the assessment are not being accrued) corrective action should be planned and implemented.

8.4. **Chapter 9** provides more details on monitoring.

Reducing greenhouse gas emissions and addressing climate change

8.5. In terms of emissions, Malta's agricultural sector has high emissions of greenhouse gasses (GHG), mainly coming from livestock. Measures to decrease emissions from enteric fermentation and manure should be encouraged. In terms of the agriculture sector's energy consumption this is relatively high, and continues to increase. Climate change mitigation and adaptation should be encouraged through supporting the reintroduction of local breeds and crop varieties that are more resilient in drier conditions, promoting afforestation, and energy efficiency.

8.6. As identified in **Table 7.2**, there are four main approaches to reducing livestock greenhouse gas emissions: husbandry (animal breeding, feed supplements), management systems (stocking rates, biological control), numbers of livestock, and manure management. Reducing the number of unproductive animals on a farm can potentially improve profitability and reduce GHG emissions. Strategies such as extended lactation in dairying reduce herd energy demand which thus potentially also reduces methane emissions. Ensuring that the livestock sector maximises its efforts cost-effectively, to reduce GHG emissions, can result in potentially significant

mitigation of emissions from this sector. Farmers can be requested to identify measures that they will implement to help reduce GHG emissions.

8.7. Climate change is likely to affect soil erosion, water quantity and water quality increasing risk of droughts and extreme heat with the agricultural sector being particularly vulnerable to these impacts. The uptake of the proposed targeted investments in more eco-friendly and adaptive systems, as well as less water-intensive farming, should be well promoted to ensure adequate uptake over the life span of the CAP SP.

Enhancing biodiversity

8.8. The conservation of biodiversity and preservation of habitats and landscape have been identified as potential positive impacts from the CAP SP. The CAP SP's role in implementing these impacts should be fully exploited. Measures addressing actions in Natura 2000 areas should be encouraged.

8.9. In addition to having a positive impact on biodiversity, the encouragement of integrated pest management practices also contribute to the EU Green Deal target on reducing the risk and use of pesticides by supporting lower use and the use of less hazardous pesticides.

Selection of projects during implementation

8.10. One of the key recommendations 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 to ensure that project proponents actively pursue environmental requirements.

8.11. Additionally, and in accordance with the feedback received from the Environment & Resources Authority, preference should be given to proposed development, infrastructure and similar interventions which are least harmful to the environment, which are primarily accommodated in existing suitable committed sites, away from important environmental areas, such as valleys, ridge-edges, cliffs, escarpments, natural habitats and sites, natural coast, etc. Moreover, it is important to ensure that the siting of development and similar interventions on site avoid impacts on site features like rubble walls, trees, etc.

8.12. Furthermore the CAP Strategic Plan should support projects that seek to:

- make efficient use of existing legitimate buildings, structures and infrastructure, so as to avoid new development pressures scattered in the countryside;
- restore already degraded land, natural habitats and landscapes where reasonably possible as well as prevent adverse environmental impacts that may arise from indirect and consequential implications of development, such as impacts associated with infrastructure, rural tourism, etc; and

- improve specific aspects of the environment, including the protection and conservation of the natural/rural environment, including site topography, natural physical features, valleys and watercourses, cliffs/escarpments, old rubble walls, traditional terraced fields, mature trees (e.g. carobs), areas of garrigue(xaghri), maquis or mosaic landscapes (made up of a mix of patches of arable land and patches of garrigue/maquis, and/or characterised by non-trivial rock outcrops, etc.). If implemented correctly, depending on the type of interventions envisaged and other site-specific issues, such measures could also have a beneficial impact on protected sites (SACs and SPAs).

9. CHAPTER 9 – MONITORING REQUIREMENTS

INTRODUCTION

9.1. Monitoring the environmental performance of the CAP SP should make it possible to identify corrective actions and establish how well the CAP SP conforms to SEA objectives during implementation.

9.2. The European Commission Guidance suggests that SEA monitoring activities and reporting can be integrated into the regular planning cycle or may coincide with the regular revision of a plan. Other SEA guidance indicates that the existing monitoring arrangements of the plan and that undertaken for other plans can be used to obtain the required information.

9.3. Monitoring significant environmental effects resulting from the implementation of the CAP SP is an important aspect of the SEA process.

9.4. The SEA objectives and indicators outlined in **Table 5.1** provide the most appropriate tools for monitoring significant environmental impacts that may arise from implementation of the CAP SP. It is recommended that the CAP SP should include a monitoring framework. SEA monitoring can be carried out as part of the CAP SP monitoring framework, where possible. It is likely, however, that SEA monitoring will utilise data collected for the purposes of monitoring the CAP SP, or other sectoral strategies as relevant, so as to avoid duplication of effort.

9.5. Difficulties associated with monitoring include data collection itself. In addition, it may be difficult to relate data directly to the implementation of the Plan, given that there are other factors that may be affecting that data. This could present difficulties when deciding on appropriate remedial action.

Monitoring Plan

9.6. **Table 9.1** summarises the proposed monitoring plan of potential negative impacts identified in **Table 7.2**.

9.7. Although positive impacts are expected from the CAP SP, it is recommended that these impacts are also monitored. **Table 9.1** proposes a monitoring plan for such impacts.

Table 9.1: Monitoring Plan

SEA Theme	Potential cumulative significant effects	Monitoring parameters
Biodiversity, Flora and Fauna	Impacts on biodiversity, flora and fauna, as discussed in **Table 7.2** are closely related with the use of chemicals in the environment. Potential negative effects from the operation of apiaries was also highlighted, however, if managed correctly, as indicated in the assessment, the impact is expected to be mitigated. Other measures such as the eco-schemes and non-productive on farm and off farm investments, are expected to further enhance biodiversity and therefore, overall, a cumulative positive impact can be expected assuming the use of Plant Protection Products decreases, as a result of the implementation of the CAP SP and uptake of eco-schemes is successful.	• Number of interventions that are permitted in protected areas • Conservation status of habitats and species • Records of non-indigenous species in the natural environment that may have been introduced as a result of agriculture activities • Corinne land cover • Farmland Bird Index
Population and Human health	Reduction in the use of Plant Protection Products will have a positive effect on human health.	• Life expectancy at birth • Changes in demography • Number of walking and cycling routes • % of organic food produced • Young farmers • Female farmers
Water	Water quality is expected to improve as a result of measures aiming to reduce Plant Protection Products as well as measures to improve efficiency. The investment in and use of new water will also contribute to reducing pressure on this resource. The capacity building element of the CAP SP will be important in ensuring long-term changes in practice and associated long-term environmental improvements.	• Water abstraction in agriculture • Number of plans, programmes and projects to maintain the existing supply infrastructure over time • Pesticide use (kg/ha) • % of agricultural land under management contracts to improve water management • Number of water pollution accidents from the sector • Official water quality indicators • Proportion of water abstraction by use • Distribution of nitrate concentration
Emissions to air	A reduction in dependence on pesticides through strategies such as	• Air quality indicators

SEA Theme	Potential cumulative significant effects	Monitoring parameters
	Integrated Pest Management should result in a positive impact relative to the baseline, assuming further improvements over the previous programming period.	
Climatic factors and climate change	As identified in the assessment, GHG emissions from livestock are a concern and the CAP SP will be subsidising the beef industry, which is not a major economic contributor. The dairy industry, is however, of relatively significant importance to the economy. Increased efficiency through new technologies could reduce GHG emissions somewhat.	• GHG emission trends over time from agriculture • Energy use in agriculture and food industry • Increase in efficiency of energy use in agriculture and food-processing in RDP supported projects
Soil	Improvements to soil can be expected through various measures including implementation of the eco-scheme measures, investment in organic farming, coupled too with capacity-building. A cumulative positive effect could be expected, the significance of which will depend on uptake of the relevant measures.	• Number of projects implemented through the CAP SP that include soil conservation • Soil organic matters in arable land • Soil erosion by water • Soil quality
Material assets	Water management is addressed with waste management being addressed to a lesser extent, related mainly to food waste. A positive cumulative impact is expected through the implementation of various measures to reduce inputs, and investment in infrastructure enhances the positive effects of making most efficient use of water.	• Water consumption by the sector over time • Groundwater quality results • Surface water quality results • Waste generation by and waste management for the sector over time
Cultural heritage	Investment in restoration of cultural heritage features as well as the rural/cultural landscape should result in positive cumulative effects arising from the implementation of the CAP SP.	• Number of projects targeting the restoration of cultural heritage features including rubble walls and improvement of the cultural landscape including intangible cultural heritage
Landscape	Investment in restoration of cultural heritage features as well as the rural/cultural landscape should result in positive cumulative effects arising from the implementation of the CAP	• Number of projects resulting in a positive impact on landscape • Number of projects resulting in a negative impact on landscape

SEA Theme	Potential cumulative significant effects	Monitoring parameters
	SP.	• Percentage of land uptake and land-use change as a result of the CAP SP in comparison to baseline data.

Other data sources

9.8. In addition to the above framework to gather data, other assessments, both at project and at planning level, will likely gather monitoring data that can feed into the CAP SP SEA monitoring programme.

9.9. Projects developed through implementation of the CAP SP that require planning permission and possibly, depending on the project, an EIA, are likely to be monitored either through the EIA or by ERA to ensure permit conditions are being abided by. The information gathered can inform the CAP SP. Additionally, the evaluations required to be prepared throughout the implementation of the CAP SP could also provide some of the indicators.

CONCLUSIONS & NEXT STEPS

9.10. Following consultation on the SEA and the draft CAP SP, changes may be made to the draft Plan. Any significant changes will be re-assessed and all public consultation comments will be documented.

9.11. An Adoption Statement will be prepared indicating how the CAP SP took into consideration the findings and recommendations of the SEA, if at all. Where recommendations were not adopted, a justification must be provided.

Appendix 1: Scoping Report

Strategy and Implementation Division within the Ministry for the Economy, European Funds and Lands

STRATEGIC ENVIRONMENTAL ASSESSMENT ON THE CAP STRATEGIC PLAN FOR MALTA FOR THE PROGRAMMING PERIOD 2023-2027

SCOPING REPORT

Version 2: March 2022

Report Reference:

Adi Associates Environmental Consultants Ltd, 2022. Strategic Environmental Assessment on the CAP Strategic Plan for Malta for the Programming Period 2023-2027. Scoping Report Version 2. San Gwann, March 2022; vi + 23 + 2 Appendices.

THIS IS A DIGITAL COPY OF THE REPORT.

RESPECT THE ENVIRONMENT – KEEP IT DIGITAL

Quality Assurance

Strategic Environmental Assessment on the CAP Strategic Plan for Malta for the Programming Period 2023-2027
Scoping Report
March 2022

Report for: **The Strategy and Implementation Division within the Ministry for the Economy, European Funds and Lands**

Revision Schedule

Rev	Date	Details	Written by:	Checked by:	Approved by:
00	Jan 22	Submission to Client	**Krista Farrugia** Senior Environmental Consultant	**Yury Zammit** Consultant	**Adrian Mallia** Managing Director
01	Mar 22	Post-Consultation	**Krista Farrugia** Senior Environmental Consultant	**Yury Zammit** Consultant	**Adrian Mallia** Managing Director

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APPENDICES

ACRONYMS

AA	Appropriate Assessment
CAP	Common Agricultural Policy
CoGAP	Code of Good Agricultural Practice
EAFRD	European Agricultural Fund for Rural Development
EAGF	European Agricultural Guarantee Fund
EIA	Environmental Impact Assessment
ERA	Environment and Resources Authority
ETS	Emissions Trading Scheme
EU	European Union
GHG	Green House Gas
GRDP	Greening Regional Development Programme
MCCAA	Malta Competition and Consumer Affairs Authority
MDG	Millennium Development Goal
MFEA	Ministry for Foreign & European Affairs
MRA	Malta Resources Authority
NCCAS	National Climate Change Adaptation Strategy
NECP	National Energy and Climate Plan
NH_3	Ammonia
NO_x	Nitrogen oxides
NMVOC	Non-Methane Volatile Organic Compounds
NSO	National Statistics Office
$PM_{2.5}$; PM_{10}	Particulate matter
RDP	Rural Development Programme
SDS	Sustainable Development Strategy
SEA	Strategic Environmental Assessment

SID	Strategy and Implementation Division
SMR	Statutory Management Requirements
SO_2	Sulphur dioxide
SPED	Strategic Plan for the Environment and Development
UK	United Kingdom
UNEP	United Nations Environment Programme
WCMP	Water Catchment Management Plan

SCOPING REPORT

INTRODUCTION

1. The Strategy and Implementation Division (SID) within the Ministry for the Economy, European Funds and Lands is responsible for the drafting of the Common Agricultural Policy (CAP) Strategic Plan for Malta 2023-2027. The aim of the Plan is to set a strategy to provide measures to implement the European Union's strategic priorities for agriculture and rural development.

2. Screening of the CAP Strategic Plan determined that it qualifies for a Strategic Environmental Assessment (SEA) in accordance with Legal Notice 497 of 2010 (S.L 549.61), the Strategic Environmental Assessment Regulations, 2010. **Appendix I** presents the completed screening template. The SEA is being undertaken by Adi Associates Environmental Consultants Ltd. The Team is working closely with SID.

3. This is the Scoping Report for the Strategic Environmental Assessment (SEA) of the CAP Strategic Plan for Malta 2023-2027 covering the entire territory of the Maltese Islands. The aim of the Report is to set out the framework for the SEA including setting the context of the SEA, establishing the baseline, setting the SEA objectives and indicators for the assessment, and identifying any potential significant impacts on the environment that could result from the implementation of the CAP Strategic Plan, which is hereafter referred to as 'the Plan'.

4. Stakeholder consultation was carried out on the first version of the Scoping Report. A copy of the Scoping Report was sent to the following consultees:

   - Environment & Resources Authority;
   - Planning Authority;
   - Malta Resources Authority;
   - Ambjent Malta
   - Parks Malta
   - Ministry for the Environment, Climate Change & Planning;
   - Ministry for Energy and Water Management / Energy & Water Agency
   - Regulator for Energy and Water Services;
   - Marine and Storm Water Unit
   - Ministry for Health;
   - Environmental Health Directorate;

- Agriculture Directorate;
- Managing Authority for Rural Development;
- Ministry for Gozo;
- Ministry for Agriculture, Fisheries and Animal Rights;
- Superintendence of Cultural Heritage;
- Malta Tourism Authority; and
- Ministry for the National Heritage, the Arts and Local Government.

5. All of the above consultees were also invited to a brief workshop where an overview about the SEA to the CAP Strategic Plan was presented to those that attended. The workshop was held on the 27th January 2022. The workshop was repeated on the 1st February 2022 to accommodate those consultees that could not attend the first one. Version 2 of the Scoping Report includes updates made to the report following consultation. All comments received are presented and addressed in **Appendix 2**.

Strategic Environmental Assessment

6. European Directive 2001/42/EC on the assessment of the effects of certain plans and programmes on the environment requires that a SEA of a wide range of plans and programmes is carried out prior to the implementation of the plan or programme. The objective of the "SEA Directive" is to provide a high level of protection of the environment and to contribute to the integration of environmental considerations into the preparation and adoption of plans with a view to promoting sustainable development. SEA comprises:

- Preparing an Environmental Report on the likely significant effects of the draft plan or programme;
- Consulting on the draft plan or programme and the accompanying Environmental Report;
- Considering the Environmental Report and the results of consultation in decision making; and
- A discussion of how the results of the environmental assessment would be considered in the plan or programme.

7. The information to be included in the Environmental Report for the Plan will include:

- A description of the baseline environment;
- Links between the Plan and other relevant policies, plans, programmes, and environmental objectives;

- An identification of existing environmental problems affecting the Plan;
- The Plan's likely significant effects on the environment, including issues such as biodiversity, population, human health, fauna, flora, soil, water, air, climate, material assets, cultural heritage, landscape, and the interrelationship between such factors;
- The mitigation measures envisaged;
- A description of the alternatives considered and those discarded in favour of the selected action(s);
- Monitoring measures envisaged; and
- A non-technical summary.

8. The SEA Directive (2001/42/EC) has been transposed into national legislation by the SEA Regulations, 2010 (Legal Notice 497 of 2010).

CAP Strategic Plan 2023-2027

9. The CAP Strategic Plans to be developed by each Member State will identify targeted interventions to address the specific needs of EU countries and deliver tangible results in relation to the new CAP EU-level objectives and Green Deal goals. At the same time, the CAP Strategic Plans will address national objectives and targets.

10. Article 5 and Article 6 of the Regulation for CAP Strategic Plans[1] lists general and specific objectives, respectively. The general objectives laid out in Article 5 are as follows:

> *Support from the EAGF and EAFRD shall aim to further improve the sustainable development of farming, food and rural areas and shall contribute to achieving the following general objectives:*
>
> *(a) To foster a smart, resilient and diversified agricultural sector ensuring food security;*
>
> *(b) To bolster environmental care and climate action and to contribute to the environmental- and climate-related objectives of the Union;*
>
> *(c) To strengthen the socio-economic fabric of rural areas.*

[1] Regulation (EU) 2021/2115 Of The European Parliament And Of The Council of 2 December 2021 establishing rules on support for strategic plans to be drawn up by Member States under the common agricultural policy (CAP Strategic Plans) and financed by the European Agricultural Guarantee Fund (EAGF) and by the European Agricultural Fund for Rural Development (EAFRD) and repealing Regulations (EU) No 1305/2013 and (EU) No 1307/2013.

Those objectives shall be complemented by the cross-cutting objective of modernising the sector by fostering and sharing of knowledge, innovation and digitalisation in agriculture and rural areas, and encouraging their uptake.

11. The specific objectives listed in Article 6 will facilitate the achievement of the general objectives. The specific objectives are:

(a) Support viable farm income and resilience across the Union to enhance food security;

(b) Enhance market orientation and increase competitiveness, including greater focus on research, technology and digitalisation;

(c) Improve the farmers' position in the value chain;

(d) Contribute to climate change mitigation and adaptation, as well as sustainable energy;

(e) Foster sustainable development and efficient management of natural resources such as water, soil and air;

(f) Contribute to the protection of biodiversity, enhance ecosystem services and preserve habitats and landscapes;

(g) Attract young farmers and facilitate business development in rural areas;

(h) Promote employment, growth, social inclusion and local development in rural areas, including bio-economy and sustainable forestry;

(i) Improve the response of EU agriculture to societal demands on food and health, including safe, nutritious and sustainable food, food waste, as well as animal welfare.

12. At this stage in the planning process, SID has prepared a list of interventions to be funded through the CAP Strategic Plan. These are:

- **Direct payments supported under EAGF**
    - Basic income support for sustainability;
    - Basic Income Support for Sustainability for Small Farmers;
    - Complementary income support for young farmers;

- Eco-schemes:
  - Encouraging the cultivation of catch crops and/or nitrogen-fixing crops as soil cover;
  - Land parcels dedicated for biodiversity purposes;
  - IPM and SSP for temporary crops;
  - Stubble management practices;
- Coupled income support supporting the beef, diary, sheep and tomato sectors.
- Apiculture:
  - Training, Information and Networks;
  - Control of varroasis; restocking of beehives and transhumance;
  - Support for labs;
  - Research Programmes.

- **Rural Development supported under EAFRD**
  - Conservation and sustainable use of genetic resources;
  - Land Based management commitments;
  - Areas under natural or other area-specific constraints;
  - On-Farm Non-Productive Investments;
  - Off-farm Non-Productive Investments and Afforestation;
  - Off Farm Investments – Infrastructure;
  - Off-farm Productive Investments;
  - On-farm Productive Investments;
  - Setting up of young farmers;
  - Quality Schemes;
  - LEADER;
  - Other Cooperation Activities;
  - Knowledge exchange, training and dissemination of information.

THE SEA PROCESS

13. The SEA on the CAP Strategic Plan for Malta started in June 2021, after Adi Associates Environmental Consultants Ltd was awarded the contract to carry out this SEA by the Strategy and Implementation Division (SID) within the Office of the Prime Minister (OPM) through a competitive tender procedure.

14. The SEA involves several key stages:

- The *screening stage* that determines whether the plan / programme requires a SEA;

- The *scoping stage* aims to agree the scope and level of detail of information which must be included in the Environmental Report. This sets out the context for the assessment and defines its scope. It is one of the most important stages in the process as it identifies the issues for consideration in the Environmental Report. Although no longer a legal requirement, it is considered good practice to clearly document the scoping process. Consultation on the draft Scoping Report will be undertaken with a number of identified stakeholders including the SEA Focal Point, the Environment & Resources Authority (ERA), the Planning Authority (PA), the Malta Resources Authority (MRA), the Ministry for the Environment, Climate Change & Planning, the Ministry for Health, Ministry for Energy and Water / Energy & Water Agency / Regulator for Energy and Water, the Agriculture Directorate, Managing Authority for Rural Development, Ministry for Gozo, Ministry for Agriculture, Fisheries and Animal Rights, the Superintendence of Cultural Heritage and the Environmental Health Directorate. The comments received during the public consultation process will be included in **Appendix 2** of the final version of this report.

- The *collection of baseline data* and *analysis of relevant plans, programmes, and environmental objectives* has already commenced. The Consultants collected baseline data from a wide range of sources, including studies of the key growth areas, and analysing a wide range of plans/programmes/objectives using matrices to structure the data collection. Maps of key environmental issues are being prepared.

- Preparation of the *Environmental Report* – this commences once all relevant information is collected and following consultation with the stakeholders and the Managing Authority. Following public consultation on the Environmental Report, the latter is amended and includes the responses to any comments received during the public consultation process.

- Preparation of an *Adoption and Monitoring Report* which, in accordance with the SEA Regulations, produces a statement of how the findings of the environmental report and the results of the consultations have been integrated into the plan and the reasons for choosing the plan as adopted in light of the other reasonable alternatives considered. Part 11 of the Regulation lays out the monitoring

requirements. A monitoring framework will also be included in this report.

Guidance

15. Draft guidance on SEA for Malta has not yet been published. The Environmental Report therefore draws on other European Guidance, namely, the Greening Regional Development Programme (GRDP) (2006) "*Handbook on SEA for Cohesion Policy 2007-2013*", the Commission's "*Implementation of Directive 2001/42 on the Assessment of the Effects of Certain Plans and Programmes on the Environment*" and the UK's (2005) "*A Practical Guide to the Implementation of the SEA Directive*". The EU Commission published a guidance document in 2013 entitled "*Guidance on Integrating Climate Change and Biodiversity into Strategic Environmental Assessment*".

RELATION OF MALTA'S CAP STRATEGIC PLAN TO OTHER NATIONAL DOCUMENTS & LEGISLATION

16. Schedule 2 of the SEA Regulations requires a discussion on the "the degree to which the plan or programme sets a framework for projects and other activities, either with regard to the location, nature, size and operating conditions or by allocating resources" and "the relevance of the plan or programme for the implementation of Community legislation on the environment, such as plans and programmes linked to waste-management or water protection". **Appendix 1** provides a list of the policies, plans, and programmes relevant to the CAP Strategic Plan, which have been analysed.

17. The analysis has been subdivided into four main categories:

(i) **International Commitments**: this category covers the international environment and sustainability policy framework within which Malta must work. It includes a selection of global commitments, such as those arising from the Millennium Development Goals (MDGs), UN Framework Convention on Climate Change (UNFCCC) and Kyoto Protocol.

(ii) **EU requirements**: Relevant EU Directives and communications have been included and summarised;

(iii) **National Environmental & Planning Documents** including the Malta's Strategic Plan for Environment and Development, the National Sustainable Development Strategy, the National Environment Policy, and the National Reform Programme. The review provided herein summarises the key issues raised; further information can be obtained from the original documents;

(iv) **National Sectoral Policies and Strategies**: this section covers highest-level policy and strategy documents published by the Government, such as the National Strategic Plan. Rather than summarise entire documents this review seeks to emphasise the key sustainability objectives and priorities;

(iv) **National legislation**: no attempt will be made to assess the individual regulations, as is done at the project level EIA (Environmental Impact Assessment).

However, the main areas of concern for the CAP Strategic Plan will be highlighted. Given the scale (and evolutionary nature of this field) this review is not exhaustive and represents a current (January 2022) snapshot.

BASELINE DATA

18. A good understanding of the environment of the areas covered by the SEA is essential for the performance of a sound assessment. It is therefore necessary to establish the environmental baseline relevant to the plan or programme being proposed. This provides a snapshot of the existing state of the environment and a description of the likely future trends (based on past trends) in the absence of the plan or programme.

19. Existing environmental and sustainability data will be collected from a wide range of sources. **Table 1** summarises this broad-brush description. The list is not exhaustive and may be modified in the Environmental Report. It will also depend on the availability of data.

20. The following environmental parameters were identified:

- Air quality;
- Climatic factors and climate change;
- Energy-efficiency and renewable energy resources;
- Biodiversity including the marine environment;
- Water;
- Waste;
- Land use;
- Soils;
- Landscape;
- Cultural heritage;
- Population and human health; and
- Material assets.

21. The SEA baseline will focus on the parameters listed under Schedule 1(f) of the SEA Regulations, 2010 - Information to be included in the Environmental Report.

22. **Table 1** shows how the Environmental Report will draw together the issues and baseline data. Sources of information included the statistics produced by the National Statistics Office, the State of the Environment Report, 2018 (and subsequent updates) and the documents prepared in connection with the Structure Plan Review process and the SPED. As the Environmental Report is developed the baseline may be modified to reflect available and other relevant data.

Table 1: Environmental baseline

Issue	Relevant baseline data	Illustrative material
Emissions to air and climate change	• GHG inventory (if relevant) • Air emissions inventory • Emissions from various sectors • Coastal erosion, sea level rise, changing weather patterns resulting from climate change • Energy from renewables • Energy consumption	Graphs and figures
Biodiversity / fauna and flora	• Areas protected and managed under international and local legislation • Areas known to support priority Annex I habitats and/or Annex II species under the Habitats Directive • Overall conservation status and trends of habitats and species of importance • Protected species • Areas for which surveys have been carried out • Natura 2000 network • Farmland Bird Index	Designated, managed and surveyed areas; where relevant, any data related to areas, habitats and/or species that are not formally protected although they are considered to be of conservation value, will be included
Water	• Freshwater and marine ecosystems • Water production and consumption by sector • Nitrate and chloride levels in groundwater • Groundwater bodies • Surface water bodies (including linear) • Users and use of ground/surface water sources • Classification of groundwater sources • Boreholes • Estimated volume of groundwater that may be abstracted from source (m3 / annum) • Treated Sewage Effluent • Water Framework Directive targets, objectives, protected areas	Maps / graphs / tables
Soil	• Contamination of soil (including salinity) • Quantities of imported	Published data and figures

Issue	Relevant baseline data	Illustrative material
	pesticides and fertilisers • Soil erosion • Soil sealing • Soil Organic Matter • Land productivity	
Landscape	• Areas protected for landscape value	Landscape sensitivity areas and protective designations
Cultural heritage	• Sites protected for cultural heritage & cultural landscape • Traditional structures related to agricultural and rural activities as important elements of the rural landscape • Intangible cultural heritage linked to the rural environment/landscape and traditional agricultural practices	Maps
Human health	• Groundwater safeguard zones • Nitrate and Chloride levels in groundwater • Air quality	Graphs and tables Published data
Material assets and population	• Work force in the agricultural and rural sectors • Infrastructure related to the agricultural and rural sectors • Rural tourism • Waste generation and disposal trends especially with regards to animal wastes • Livestock farms • Urban land take up • Population density	Maps and figures

23. Quantitative data will be presented in the form of maps, tables, and figures, where possible. A brief description of the baseline and any trends will be given, where these are available. Where difficulties in obtaining data are encountered they will be described in the Environmental Report.

EVALUATION OF THE CURRENT SITUATION

24. The SEA Regulations require a description of the relevant aspects of the current state of the environment and the likely evolution thereof without the implementation of the policy document with a particular emphasis on the future developments arising from other relevant plans and programmes.

25. This analysis will focus on the main environmental issues that are identified in **Table 1**. It will include a description of the past and current trends from data available from

existing monitoring systems or through expert judgements (in cases where data are lacking). It will also outline the likely evolution of these trends, if the CAP Strategic Plan were not implemented.

26. The description of the likely future trends should the CAP Strategic Plan not be implemented is constrained by uncertainties, including availability of data on future economic development, technological progress, or advancements in regulatory frameworks that collectively influence future trends. The assessment will include a list of major uncertainties.

SEA OBJECTIVES

27. The SEA Directive does not specifically require the use of objectives or indicators in SEA, although they are a recognised way through which environmental effects can be described, analysed, and compared.

28. It is therefore preferable to use indicators to monitor the performance of the policy against the SEA objectives. The SEA objectives are meant to be separate from the policy objectives, and provide a way to assess the potential environmental performance of the policy objectives. Thus, the environmental objectives should influence the policy objectives, and the two may even overlap. To fulfil the requirements of the SEA Directive and the SEA Regulations, 2010, the SEA objectives must cover biodiversity, population, human health, fauna, flora, soil, water, air, climatic factors, material assets, cultural heritage, landscape, and interrelationships between them.

29. In developing appropriate objectives, the following documents have been consulted:

- GRDP's Handbook on SEA for Cohesion Policy 2007- 2011;
- Guidance on Integrating Climate Change and Biodiversity into Strategic Environmental Assessment. 2013;
- The Commission's "*Implementation of Directive 2001/42 on the Assessment of the Effects of Certain Plans and Programmes on the Environment*";
- The Office of the Deputy Prime Minister (UK), 2005, A Practical Guide to the Implementation of the SEA Directive;
- The SEA Directive 2001/42/EC; and
- SEA Regulations, 2010.

30. In developing appropriate indicators the following documents have been consulted:

- National Environment Policy, 2012;
- Malta's Sustainable Development Vision for 2050; and

- Malta's State of the Environment Report, 2018 and subsequent updates.

31. **Table 2** defines the set of objectives relating to the environmental issues identified in **Table 1.** Alongside these, relevant criteria for assessment and possible data sources have been identified.

32. The SEA indicators are measurements of trends over time. They will be used as a means of ascertaining the success of implementation of the CAP Strategic Plan against the various SEA Objectives. Where possible the SEA process endeavours to identify how the CAP Strategic Plan would affect these indicators (i.e. the trends); such a process is constrained by the fact that the SEA indicators themselves depend on other factors outside the control of the CAP Strategic Plan.

Table 2: SEA Environmental Objectives & Indicators for Assessing Impacts

Issue	SEA Objective	Criteria How will this measure…	SEA Indicator	Data source
Biodiversity, Flora & Fauna	• To maintain biodiversity (including terrestrial and marine) • To avoid negative effects on protected habitats and species • To avoid introduction of non-indigenous species into the natural environment • To ensure that populations of native species are within safe biological limits • To retain connectivity and avoid habitat fragmentation	• Affect the integrity of designated areas? • Affect protected species and habitats? • Affect take up of land which supports a natural environment? • Affect the introduction of non-indigenous species into the natural environment? • Affect the creation / maintenance of natural corridors and stepping stones?	• Number of permitted sites in protected areas • Conservation status of habitats and species • Records of non-indigenous species in the natural environment that may have been introduced as a result of agriculture activities	Environmental monitoring through Environmental Impact Assessment (EIA), Appropriate Assessment (AA), or other regulatory requirements as relevant. Environment Resources Authority (ERA) Natura 2000 Management Plans CDDA National scheduling and protection statuses
Human health and Population	• To ensure agricultural/livestock products are within the legal safety requirements (pesticides and diseases) for human consumption • To ensure ground water quality does not deteriorate as a result of agricultural activity	• Affect the safe consumption of agricultural/livestock products? • Affect ground water quality? • Affect dust generation from construction and waste handling activities? • Affect noise from construction, traffic and livestock farms? • Affect light pollution from development? • Affect odour generation?	• Analyses and test results as required by legislation / operational permit requirements • Ground water quality results • Life expectancy at birth • Changes in demography • Number of walking and cycling routes • % of organic food produced	Malta Competition and Consumer Affairs Authority (MCCAA) Environment Resources Authority (ERA) National Statistics Office (NSO) Department of Agriculture Ministry for the Environment, Climate Change and Planning

Issue	SEA Objective	Criteria How will this measure…	SEA Indicator	Data source
	• To reduce noise, dust, odour, and light pollution • To protect and improve the health and well-being of the population	• Affect the provision of access to the countryside and outdoor recreation activities? • Affect access to fresh, quality and nutritious food? • Affect access to locally sourced food?		Ministry for Gozo
Water	• To meet the standards required by the Water Framework Directive • To minimise pollution of groundwater from activities directly arising from the agricultural sector • To improve drinking water quality and supply • To avoid deterioration of water bodies including the marine environment	• Affect drinking water quality while meeting demand? • Affect marine water quality? • Affect the existing supply infrastructure? • Affect the ecological status of inland surface waters? • Affect water efficiency within the sector?	• Drinking water quality over time. • Number of plans, programmes and projects to maintain the existing supply infrastructure over time • Chemical analysis • Number of projects funded by the CAP to assist in the attainment of WFD objectives • Likely compliance with WFD objectives • Number of water pollution accidents • Quality of water bodies • Proportion of water abstraction by use • Distribution of nitrate concentration	Environmental Health Directorate Water Services Corporation ERA (Environment Resources Authority) EWA (Energy and Water Agency).
Emissions to air	• To ensure air pollutants are minimised	• Generate air pollutants?	• Air quality	Environment Resources Authority (ERA)

Issue	SEA Objective	Criteria How will this measure…	SEA Indicator	Data source
				Ministry for the Environment, Climate Change and Planning
Climatic factors and climate change	• To contribute to climate change adaptation and/or mitigation • To increase reliance on renewable energy resources • To reduce GHG emissions	• Affect climate change (considering in particular mitigation, adaptation, renewable energy and GHGs?	• Use of renewable energy over time • GHG emission trends over time	Environmental Health Directorate Malta Resources Authority
Soil	• To prevent soil erosion • To prevent soil sealing • To prevent soil contamination • To improve soil quality	• Affect soil quantity and quality?	• Number of projects implemented through the SP that include soil conservation	Environmental Impact Assessment, Environmental monitoring as part of permit Copernicus (Malta only)
Material assets	• To ensure efficient water management within the sector • To ensure sustainable waste management within the sector	• Affect sustainable water management practices? • Affect sustainable waste management practices?	• Water consumption by the sector over time • Groundwater quality results • Surface water quality results • Waste generation by and waste management for the sector over time	Malta Resources Authority Environmental Health Directorate WasteServ Department of Agriculture Ministry for the Environment, Climate Change and Planning

Issue	SEA Objective	Criteria How will this measure…	SEA Indicator	Data source
Cultural heritage	• To maintain the conservation status of cultural heritage sites / areas with known cultural / archaeological remains • To maintain rubble & dry walls • To maintain intangible cultural heritage	• Affect cultural heritage including archaeological heritage? • Affect rubble & dry walls? • Affect intangible cultural heritage?	• Number of operations located away from cultural heritage sites / areas or areas with known cultural / archaeological remains as a percentage of the total number of operations • Number of projects targeting the restoration of cultural heritage features including rubble walls and improvement of the cultural landscape including intangible cultural heritage	Planning Authority Heritage Malta Superintendence of Cultural Heritage
Landscape	• To maintain landscape quality distinctiveness	• Affect landscape quality distinctiveness?	• Environmental Impact Assessment results on landscape assessment	Planning Authority

LIKELY SIGNIFICANT EFFECTS AND CONSTRAINTS

33. Significance will also be assessed in accordance with the criteria listed in Schedule 4 of the SEA Regulations, 2010. Consultation will ensure that all factors are considered. Reference documents will include the National Environment Policy, Sustainable Development Vision and the State of the Environment Report, 2018 (and subsequent updates). Subsequent sections further describe how impacts will be assessed.

34. The assessment of significance is already well established in Environmental Impact Assessment (EIA) literature. Significance is a function of impact magnitude and the sensitivity of receptors. Various methods can be used to determine significance including expert judgements, the use of thresholds, reference to legislation, and consultation with stakeholders. It is expected that, during the SEA process, all these techniques will be used.

35. The assessment of significance is based on the probability of the impact occurring, on the scale of the impact, its duration, reversibility, whether it has transboundary impacts, and whether the impact is uncertain. **Table 3** describes the assessment framework and the symbols used to denote the various types of impact. Potential secondary, cumulative or synergistic impacts will also be identified as relevant.

36. The relevant SEA objectives identified in **Table 2** will then be used to assess the CAP Strategic Plan initiatives in accordance with the significance criteria described in **Table 3**. The results of the assessment will be presented in the format indicated in **Table 3**.

Table 3: Assessment legend

Impact character	Symbol	Description of Impact
Probability	VP	Impact very likely to occur
	P	Impact likely to occur
Scale	++	Large positive impact
	+	Positive impact
	0	No impact
	-	Negative impact
	--	Large negative impact
Direct / Indirect	I	Indirect impact
	D	Direct impact
Frequency / duration	LT	Long term
	ST	Short term
Transboundary dimension	TR	Possible transboundary effect
Uncertainty	?	Impact uncertain

Table 4: Example CAP Strategic Plan Assessment framework and format for Environmental Report

Relevant SEA Aspect	SEA Objectives	Criteria How will this measure.....	Comment	Significance		Mitigation
				Symbols	Summary description	
Measure/Initiative:						
Biodiversity, Flora & Fauna	• To maintain biodiversity (including terrestrial and marine) • To avoid negative effects on protected habitats and species • To avoid introduction of non-indigenous species into the natural environment • To ensure that populations of native species are within safe biological limits • To retain connectivity and avoid habitat fragmentation	• Affect the integrity of designated areas? • Affect protected species and habitats? • Affect take up of land which supports a natural environment? • Affect the introduction of non-indigenous species into the natural environment? • Affect the creation / maintenance of natural corridors and stepping stones?	What is the potential impact?	Impact assessment in accordance with the criteria listed in **Table 4**	Justification of the impact assessment	Description of mitigation measures, if these are necessary
		• Affect the integrity of designated areas? • Affect protected species and habitats?				

Relevant SEA Aspect	SEA Objectives	Criteria How will this measure.....	Comment	Significance		Mitigation
				Symbols	Summary description	
		• Affect take up of land which supports a natural environment? • Affect the introduction of non-indigenous species into the natural environment? • Affect the creation / maintenance of natural corridors and stepping stones?				

Cumulative & Synergistic Impacts

37. This stage of the process involves an assessment of the cumulative and synergistic effects of all proposed priorities in the CAP Strategic Plan on the relevant environmental issues, objectives, and indicators. Cumulative effects are effects that result from incremental changes caused by other past, present, or reasonably foreseeable actions together with the proposal. Cumulative effects can result from individually minor but collectively significant actions taking place over a period of time.

38. Synergistic effects interact to produce a total effect that is greater than the sum of the individual effects. Synergistic effects often happen as habitats or human communities begin to reach carrying capacity and/or non-renewable resources are depleted unsustainably.

39. The cumulative and synergistic impact assessment will be based on the information generated by the preceding assessments (described above) of the individual priorities. Any identified cumulative and synergistic effects will be summarised and used as recommendations for final adjustments to the programming document.

ALTERNATIVES

40. The SEA Directive requires that an assessment must identify the likely significant effects on the environment of implementing the plan or programme, and reasonable alternatives considering the objectives and the geographical scope of the plan or programme.

41. During the development of the CAP Strategic Plan, feasible alternatives considered by the Programming Unit will also be assessed from an environmental viewpoint against the SEA objectives identified in **Table 2**.

MONITORING

42. The Environmental Report will include a section that describes how the success of the CAP Strategic Plan's implementation will be measured with respect to the SEA objectives, by measuring (monitoring) the significant effects of the CAP Strategic Plan on the environment.

43. The SEA will assess the monitoring arrangements proposed for the CAP Strategic Plan and may recommend incorporation of new indicators based on the relevant environmental issues, objectives, and indicators for the programming document.

44. Again, it is noted that the correlation between indicators for monitoring and the CAP Strategic Plan objectives may be constrained because indicators may be affected by other initiatives, including private sector initiatives, other plans and programmes, and legislative measures that are outside the scope of the CAP Strategic Plan.

THE ENVIRONMENTAL REPORT

45. The proposed structure of the Environmental Report is as set out in **Table 5**. It is noted that as the Report develops the structure may change slightly; however, the following table gives the general framework. It is in accordance with the provisions of Schedule 1 of the SEA Regulations, 2010.

Table 5: Structure of the Environmental Report

Section	Content
Summary and outcomes	Non-technical summary
Introduction	Strategic Environmental Assessment (compliance with the SEA Regulations, 2010) Aim and structure of the report CAP Strategic Plan background
Methodology	Approach adopted Stages of SEA process (timings and responsibilities) Limitations Consultation
Baseline	The environmental baseline Summary of environmental issues Links to other relevant policies, plans, programmes
SEA framework	Objectives and indicators Assessment of significance
Assessment of alternatives	Alternatives considered Comparison of alternatives Consideration of environmental issues in development of alternatives Preferred alternative (including reasons for rejection of others)
Detailed Assessment of the CAP Strategic Plan	Assessment of each CAP Strategic Plan initiative/measures Recommended changes to the CAP Strategic Plan (if any) Proposed mitigation Uncertainties and risks
Monitoring proposals	A description of the monitoring requirements
Appendices	As necessary

STRUCTURE OF ENVIRONMENTAL REPORT

46. The structure of the Environmental Report has been developed following consideration of European Guidance and as described in the Scoping Report. The Environmental Report structure is detailed below:

- Non-technical summary;
- Glossary of abbreviations;
- **Chapter 1** – Introduction (overview of the CAP Strategic Plan and its purpose; layout of report);
- **Chapter 2** – Summary of the CAP Strategic Plan and its context (brief description of the CAP Strategic Plan and related documents; links to other plans / programmes);
- **Chapter 3** – Methodology (identification of main options: approach taken, who has been consulted, and when);
- **Chapter 4** – Baseline environmental information and trends (and limitations of data) including evolution of baseline without the implementation of the CAP Strategic Plan;
- **Chapter 5** – SEA objectives and context (key environmental aspects, relevant environmental objectives and criteria, and likely environmental implications without the SEA);
- **Chapter 6** – Assessment of Alternatives including reasons for selecting alternatives dealt with;
- **Chapter 7** – Assessment of environmental effects and proposed mitigation;
- **Chapter 8** – Recommendations; and
- **Chapter 9** – Monitoring requirements.

Appendix 1: Analysis of Related Plans, Programmes, and Legislation

Plan, Programme, Legislation	Description	Implications for the CAP Strategic Plan
1. International Commitments		
UN 2030 Sustainable Development Agenda	The Agenda identifies 17 Sustainable Development Goals and 169 targets which build on the Millenium Development Goals (MDGs) and aim to achieve what was not by the MDGs. The Goals seek to realise the human rights of all and to achieve gender equality and the empowerment of all women and girls. They are integrated and balance the three pillars, economic, social and environmental, of sustainable development.	The CAP Strategic Plan is to be developed within the principles of this Agenda.
UN Framework Convention on Climate Change	The ultimate objective of this Convention, and any related legal instruments that the Conference of the Parties may adopt, is to achieve stabilisation of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system. Such a level should be achieved within a timeframe sufficient to allow ecosystems to adapt naturally to climate change, to ensure that food production is not threatened, and to enable economic development to proceed in a sustainable manner. Malta is not an Annex I country, which means that it does not have to meet quantified targets for a reduction in greenhouse emissions. It does, however, support efforts to reduce greenhouse gas emissions and is bound by EU legislation.	The CAP Strategic Plan should be aware of Malta's efforts to combat and adapt to climate change and encourage efforts to reduce emissions. The SEA proposes indicators related to climate change.
Gothenburg Protocol of the Convention of Long Range Transboundary Air Pollution (CLRTAP)	Cooperation under the convention includes development of policies and strategies to cut emissions of air pollutants through protocols with emission control obligations, exchanges of information, consultation, research and monitoring. The Gothenburg Protocol establishes mandatory emission reductions for the following major air pollutants – sulphur dioxide, nitrogen oxides, ammonia, volatile organic compounds, and particles.	The CAP SP will need to be aware of potential contribution to emissions and opportunities to reduce.
Bern Convention on the Conservation of European Wildlife and Natural Habitats (1979)	Malta is a party to the Bern Convention. The Convention aims to ensure conservation of wild flora and fauna species and their habitats. Special attention is given to endangered and vulnerable species, including endangered and vulnerable migratory species specified in appendices. The Parties to the Convention must undertake to take all appropriate measures to ensure the conservation of the habitats of the wild flora and fauna species. Such measures should be included in the Parties' planning and	The CAP Strategic Plan should be aware of the endangered and vulnerable species of flora and fauna in Malta and ensure that the RDP is not in conflict with measures for their protection and conservation and those of their habitats. This will be done through the assessment of the RDP using the SEA objectives on biodiversity.

Plan, Programme, Legislation	Description	Implications for the CAP Strategic Plan
	development policies and pollution control, with particular attention to the conservation of wild flora and fauna. They should also undertake to promote education and disseminate general information concerning the need to conserve species of wild flora and fauna and their habitats.	
The Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean, 1976 (the Barcelona Convention)	This Convention, known as the Barcelona Convention, requires the Contracting Parties to "…*individually or jointly take all appropriate measures in accordance with the provisions of this Convention and those Protocols in force to which they are party to prevent, abate, combat and to the fullest possible extent eliminate pollution of the Mediterranean Sea Area and to protect and enhance the marine environment in that Area so as to contribute towards its sustainable development*" (UNEP, 2004[2]). The Convention, as revised in 1995, strives to "*take all appropriate measures to prevent, abate and to the fullest possible extent eliminate pollution of the Mediterranean Sea Area caused by dumping from ships and aircraft or incineration at sea*." This is in line with similar moves in other international and regional conventions (e.g. the London Dumping Convention, the Oslo Convention[3], and the Helsinki Convention[4]), and is based on the precautionary principle, which has set a new level of priority in emerging international legislation, including EU Directives. These various amendments include the extension of the Convention's geographical field of application to the coast, the application of the precautionary and "polluter pays" principles, the obligation on the Parties to carry out and promote impact assessments, protect and preserve biological diversity as well as combat pollution from cross-border movements of dangerous waste, and access to information and public participation (EU, 2005[5]).	The application of the precautionary and "polluter pays" principles, the obligation on the Parties to carry out and promote impact assessments, protect and preserve biological diversity, and access to information and public participation are of relevance to the CAP Strategic Plan.

[2] http://www.unep.ch/seas/main/med/medconvii.html. As accessed in March 2005.
[3] The Convention for the Prevention of Marine Pollution from Ships and Aircraft (1972).
[4] The Convention of the Protection of the Marine Environment of the Baltic Sea Area (1974 revised in 1992).
[5] Europa website. Accessed on http://europa.eu.int/scadplus/leg/en/lvb/l28084.htm; March 2005.

Plan, Programme, Legislation	Description	Implications for the CAP Strategic Plan
The Protocol of the Barcelona Convention concerning Specially Protected Areas and Biological Diversity in the Mediterranean, 1999	This Protocol, promulgated by the Contracting Parties to the Barcelona Convention in 1999, aims to protect, preserve, and manage in a sustainable and environmentally sound way the areas of particular natural or cultural value of the Mediterranean through the establishment of Specially Protected Areas (SPAs), and to protect, preserve and manage threatened or endangered species of flora and fauna. To date, 4 SPAs have been designated in Malta under this Protocol, namely l-Ghadira, Il-Gzejjer ta' San Pawl, Filfla & surrounding islets and l-Gebla tal-General.	Its relevance to the CAP Strategic Plan lies in its requirement for EIA for any industrial or other projects that could significantly affect protected areas and species and their habitats (Article 17 of the Protocol). The requirement for EIA will also be highlighted in the Environment Report.
The Convention on Biological Diversity, 1992	The Convention on Biological Diversity, also known as the Rio Convention, was enacted in 1992. Its objective is to "*conserve the maximum possible biological diversity for the benefit of present and future generations and for its intrinsic value*". This pact among the vast majority of the world's governments sets out commitments for maintaining the world's ecological underpinnings while maintaining economic development. The Convention establishes three main goals: the conservation of biological diversity, the sustainable use of its components, and the fair and equitable sharing of the benefits from the use of genetic resources. Relevant aspects of the Convention are the emphasis on the sustainable use of components of biological diversity, the requirement for EIA, and the inclusion of biodiversity issues. A direct result of the Rio Convention was the concept of Agenda 21 – a global partnership for sustainable development. Agenda 21 addresses today's pressing problems aiming to prepare the world to meet its challenges. It reflects a global consensus and political commitment at the highest level on development and environment cooperation. Its successful implementation is first and foremost the responsibility of Governments but the broadest public participation and the active involvement of the non-governmental organizations and other groups should also be encouraged. National strategies, plans, policies, and processes are crucial in achieving	The sustainable conservation of resources is particularly relevant to the CAP Strategic Plan and will be assessed in the Environment Report.

Plan, Programme, Legislation	Description	Implications for the CAP Strategic Plan
	this (UNEP, 2005[6]). Agenda 21 has four sections: Social and economic dimensions; Conservation and management of resources for development; Strengthening the role of major groups; and Means of implementation.	
Strategic Plan for Biodiversity 2011-2020	At the tenth meeting at the Conference of the Parties of the Convention on Biological Diversity held in 2010 in Japan, a Strategic Plan for Biodiversity 2011-2020 was adopted. This new plan provides the new overarching international framework for biodiversity including the Aichi Biodiversity targets for the period 2011-2020. There are twenty targets in all, divided into five strategic goal areas as follows: • Strategic Goal A: Address the underlying causes of biodiversity loss by mainstreaming biodiversity across government and society; • Strategic Goal B: Reduce the direct pressures on biodiversity and promote sustainable use; • Strategic Goal C: To improve the status of biodiversity by safeguarding ecosystems, species and genetic diversity; • Strategic Goal D: Enhance the benefits to all from biodiversity and ecosystem services; and • Strategic Goal E: Enhance implementation through participatory planning, knowledge management and capacity building. It was agreed that all signatories to the Convention would translate this Plan into national biodiversity strategies and action plans.	The SEA will consider the biodiversity targets in the assessment of the Strategic Plan for Biodiversity. The CAP SP can actively contribute to the achievement of targets.

[6] UNEP Earthwatch website, 2005. Accessed at http://earthwatch.grid.unep.ch/agenda21/ in March 2005.

Plan, Programme, Legislation	Description	Implications for the CAP Strategic Plan
	The Plan needs to take into account the new goals, milestones and targets of the first draft of the post-2020 global biodiversity framework, which will replace the Aichi Targets	
Nagoya Protocol on Access to Genetic Resources and their Fair and Equitable Sharing of Benefits arising from their Utilisation in the Union	This is a supplementary agreement to the Convention on Biological Diversity (adopted in 2010) and provides a legal framework for the implementation of one of the three objectives of the CBD in relation to the fair and equitable sharing of benefits arising out of the utilisation of genetic resources. The Protocol applies to genetic resources covered by the CBD and to the benefits accrued by their utilisation, it also covers traditional knowledge from the use and benefits from utilisation.	The SEA will consider the Nagaya Protocol in the assessment as relevant.
2. EU requirements		
The European Green Deal (a Commission priority 2019-2024)	In order to combat climate change and environmental degradation, the EU aims to transform the EU into a modern, resource-efficient and competitive economy, aiming for: • No net emissions by 2050; • Economic growth decoupled from resource use; and • No person and no place left behind. In the context of agriculture, the Green Deal aims to ensure a healthy food system for people and planet. The EU's goals are: • To ensure food security in the face of climate change and biodiversity loss; • Reduce the environmental and climate footprint of the EU food system; • Strengthen the EU food system's resilience; and	The SEA will consider the European Green Deal targets in its assessment of the CAP Strategic Plan.

Plan, Programme, Legislation	Description	Implications for the CAP Strategic Plan
	• Lead a global transition towards competitive sustainability from farm to fork. The European Commission adopted a set of proposals to make the EU's climate, energy, transport and taxation policies fit for reducing net greenhouse gas emissions by at last 55% by 2030, compared to 1990 levels.	
Farm to Fork Strategy (part of the EU Green Deal), 2020	This Strategy is at the heart of the European Green Deal and seeks to ensure a fair, healthy and environmentally-friendly food system. It seeks to accelerate transitions to a sustainable food system that should: • Have a neutral or positive environmental impact; • Help to mitigate climate change and adapt to its impacts; • Reverse the loss of biodiversity; • Ensure food security, nutrition and public health, making sure that everyone has access to sufficient, safe, nutritious, sustainable food; and • Preserve affordability of food while generating fairer economic returns, fostering competitiveness of the EU supply sector and promoting fair trade.	The SEA will consider the Farm to Fork in the context of contributing to the achievement of a sustainable food system.
EU Soil Strategy, 2030	The vision and objectives of the EU Soil Strategy seek to achieve good soil health by 2050: - Combat desertification restore degraded land and soil, including land affected by desertification, drought and floods, and strive to achieve a land degradation-neutral world (Sustainable Development Goal 15.3)	The SEA and the CAP Strategic Plan will identify any conflicts between Plan measures and the Soil Strategy objectives.

Plan, Programme, Legislation	Description	Implications for the CAP Strategic Plan
	- Significant areas of degraded and carbon-rich ecosystems, including soils, are restored - Achieve an EU net greenhouse has removal of 310 million tonnes CO_2 equivalent per year for the land use, land use change and forestry (LULUCF) sector - Reach good ecological and chemical status in surface waters and good chemical and quantitative status in groundwater by 2027 - Reduce nutrient losses by at least 50%, the overall use and risk of chemical pesticides by 50% and the use of more hazardous pesticides by 50% by 2030 - Significant progress has been made in the remediation of contaminated sites - Reach no net land take - Soil pollution should be reduced to levels no longer considered harmful to human health and natural ecosystems and respect the boundaries out planed can cope with, thus creating a toxic-free environment - Achieve a climate-neutral Europe and, as the first step, aim to achieve land-based climate neutrality in the EU by 2035 - Achieve for EU a climate-resilient society, fully adapted to the unavoidable impacts of climate change by 2050 - provide food and biomass production, including in agriculture and forestry;	

Plan, Programme, Legislation	Description	Implications for the CAP Strategic Plan
	- absorb, store and filter water and transform nutrients and substances, thus protecting groundwater bodies; - provide the basis for life and biodiversity, including habitats, species and genes; - act as a carbon reservoir; - provide a physical platform and cultural services for humans and their activities; - act as a source of raw materials; - constitute an archive of geological, geomorphological and archaeological heritage. The strategy addresses the importance of soil in addressing challenges such as climate change mitigation and adaptation. Mid-term objectives are assigned associated with these topics such as those related to increasing soil organic carbon and restoring sustainable carbon cycles in a climate-neutral EU economy. Other relevant aspects addressed include limiting land take and soil sealing, enhancing soil biodiversity for human, animal and plant health, preventing soil and land degradation and restoring healthy soils. Regarding land take, the strategy defines the need for a hierarchy approach whereby, priority is given to reusing and recycling land with a view to avoiding land take. Financial incentives that would contradict this hierarchy, such as fiscal benefits for converting agricultural or natural land into built environment must be phased out.	
Zero Pollution Action Plan	A key deliverable of the Green Deal, the EU Action Plan: Towards a Zero Pollution for Air, Water and Soil (and annexes), was adopted on 12th May	The CAP Strategic Plan can contribute to the achievement of some of these targets.

Plan, Programme, Legislation	Description	Implications for the CAP Strategic Plan
	2021. The zero pollution vision for 2050 is *for air, water and soil pollution to be reduced to levels no longer considered harmful to health and natural ecosystems, that respect the boundaries with which our planet can cope, thereby creating a toxic-free environment.* The following key 2030 targets are aimed at accelerating reduction of pollution at source: -improving air quality to reduce the number of premature deaths caused by air pollution by 55%; - improving water quality by reducing waste, plastic litter at sea (by 50%) and microplastics released into the environment (by 30%); - improving soil quality by reducing nutrient losses and chemical pesticides' use by 50%; - reducing by 25% the EU ecosystems where air pollution threatens biodiversity; - reducing the share of people chronically disturbed by transport noise by 30%, and - significantly reducing waste generation and by 50% residual municipal waste.	
EU Pollinators Initiative	This initiative sets strategic objectives and a set of actions to be implemented by the EU and its Member States to reverse the decline of pollinators in the EU and contribute to its global conservation efforts. There are three long-term objectives (towards 2030) and short-term actions under three priorities: - improving knowledge on pollinator decline, its causes and consequences	The CAP SP can take an active role in assisting in fulfilling Initiative objectives and actions.

Plan, Programme, Legislation	Description	Implications for the CAP Strategic Plan
	-tackling the causes of pollinator decline -raising awareness, engaging society-at-large and promoting collaboration.	
European Landscape Convention	This is the first international treaty that exclusively addresses all aspects of European landscape and covers natural, rural, urban and peri-urban areas. The Convention aims to protect, manage and plan landscape and raises awareness of the value of a living landscape. Signatory States are *…concerned to achieve sustainable development based on a balanced and harmonius relationship between social needs, economic activity and the environment…'* considering the cultural dimension of the landscape.	The measures proposed in the CAP SP need to consider the implications of the strategic direction and aims of this Convention, which will also be addressed through the environmental assessment process.
EU Climate and Energy Framework, 2030	The 2030 climate and energy framework includes EU-wide targets and policy objectives for the period from 2021to 2030. As part of the European Green Deal, in 2020, the Commission proposed to raise the 2030 greenhouse gas emission reduction target including emissions and removals, to at least 55% compared to 1990. Actions required across all sectors were analysed to understand what was needed to achieve this. The EU will thus be able to move towards a climate-neutral economy and implement its commitments under the Paris Agreement by updating its Nationally Determined Contribution. Key targets for 2030 are: • At least 40% cuts in greenhouse gas emissions (from 1990 levels); • At least 32% share for renewable energy; and • At least 32.5% improvement in energy efficiency.	The SEA will consider the key targets in the assessment of the CAP Strategic Plan.
EU Circular Economy Action Plan	Europe's new agenda for sustainable growth, the circular economy action plan is one of the main building blocks of the European Green Deal. One area that the Action Plan addresses is food, water and nutrients. The food	The CAP Strategic Plan will need to consider the circular economy approach in its development.

Plan, Programme, Legislation	Description	Implications for the CAP Strategic Plan
	value chain is responsible for significant resource and environmental pressures. The Commission will consider several specific measures to increase the sustainability of food distribution and consumption. The new Water Reuse Regulation will encourage circular approaches to water reuse in agriculture. The Commission will also develop an Integrated Nutrient Management Plan, with a view to ensuring more sustainable application of nutrients and stimulating the markets for revovered nutrients.	
Directive 2016/2284 reduction of national emissions of certain atmospheric pollutants	This Directive includes a requirement for Member States to draw up, adopt and implement their national air pollution control programmes. The Directive makes a requirement for emission reduction measures, specifically for the agriculture and animal husbandry sectors to control ammonia emissions, fine particulate matter and black carbon, whilst preventing impacts on small farms.	The CAP SP should remain aware of the requirements of this Directive.
Directive 2009/29/EC of the European Parliament and of the Council of 23 April 2009 amending Directive 2003/87/EC so as to improve and extend the greenhouse gas emission allowance trading scheme in the Community	This Directive intends to extend and improve the EU emissions trading scheme (EU ETS) applicable from 2013.	The effect of this Directive is that large installations, which in Malta include the generation plant of Enemalta will have to buy the CO_2 allowances through auctioning. An amount of allowances which will decrease every year up to 2020 will be allocated to Malta for auctioning.
Decision No 406/2009/EC of the European Parliament and of the Council of 23 April 2009 on the effort of Member States to reduce their greenhouse gas emissions to meet the Community's greenhouse gas	This decision sets targets for Member States for greenhouse gas emissions that do not fall within the scope of the EU ETS.	The GHG emissions from the non EU ETS sector in Malta cannot increase by more than 5% (over the 2005 level) by 2020

Plan, Programme, Legislation	Description	Implications for the CAP Strategic Plan
emission reduction commitments up to 2020.		
Directive 2009/28/EC of the European Parliament and of the Council of 23 April 2009 on the promotion of the use of energy from renewable sources and amending and subsequently repealing Directives 2001/77/EC and 2003/30/EC	This directive sets out new renewable energy targets for EU Member States aimed at reaching the overall EU share of 20% of energy from renewable energy sources by 2020. Member States may comply with their obligations under this Directive either by investing in renewable energy sources and/or using the flexible mechanisms provided by the same Directive such as statistical transfers and participation in joint projects in other Member States or in non-member states subject to a number of conditions.	Malta has an obligation to reach a 10% share of renewable energy in the energy consumption by 2020 (including a separate 10% target of renewable fuel in transport) with interim targets.
European Commission Communication Energy Roadmap 2050	The EU is committed to reducing greenhouse gas emissions to 80-95% below 1990 levels by 2050 in the context of necessary reductions by developed countries as a group. In the Energy Roadmap 2050 the Commission explores the challenges posed by delivering the EU's decarbonisation objective while at the same time ensuring security of energy supply and competitiveness. The Energy Roadmap 2050 is the basis for developing a long-term European framework together with all stakeholders[7].	The Strategic direction of the RDP should reflect the spirit of the Energy Roadmap 2050.
EU Sustainable Development Strategy, 2006	The first EU SDS was launched at the Gothenburg Summit in June 2001. The strategy proposed objectives and policy measures to address key unsustainable trends and also the requirement for every new major policy to be submitted to an Impact Assessment. The SDS was revised and a renewed strategy was adopted in June 2006. Seven key priority challenges were established for a period until 2010:	Sustainable consumption and conservation and management of natural resources are particularly relevant for the RDP.

[7] Directly from website http://ec.europa.eu

Plan, Programme, Legislation	Description	Implications for the CAP Strategic Plan
	• Climate change and clean energy; • Sustainable transport; • Sustainable consumption & production; • Conservation and management of natural resources; • Public Health; • Social inclusion, demography and migration; and • Global poverty and sustainable development challenges The policy was reviewed again in July 2009.	
EU Biodiversity Strategy for 2030	As identified through the 2015 Mid-term evaluation of the EU Biodiversity Strategy, the 2018 IPBES (Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services) Regional Assessment for Europe and Central Asia and the 2019 IPBES Global Assessment, and as reported also by the European Habitats Forum, the objective to halt biodiversity loss by 2020 was not reached. The following shortcomings were reported as reasons for not reaching the objective: (i) insufficient implementation of existing nature, water and marine legislation; (ii) lack of ownership and lack of mainstreaming with other sectors and policies - agriculture, fisheries and forestry – main drivers of biodiversity loss, not sufficiently addressed; and (iii) lack of resources (finance gap) and continuation of harmful subsidies. The 2030 EU Biodiversity Strategy identifies several mechanisms to bring about transformative change with an aim to combat these shortcomings. It seeks to unlock funding for biodiversity and set in motion a strengthened governance framework. Interreg Europe (2020) highlights a strategy for improved governance through: (i) fostering multi-stakeholder involvement and partnership, garnering cooperation; (ii) empowerment through capacity-building and crucially ensuring the allocation of resources; (iii) strategic horizontal integration across sectoral plans and programmes; (iv)	The CAP Strategic Plan will be assessed to ensure that it will contribute to Biodiversity Strategy objectives with a view to identify effective integration given the importance of this sector in this regard.

Plan, Programme, Legislation	Description	Implications for the CAP Strategic Plan
	setting up an effective monitoring system and ensuring the gathering of good quality data; and (v) use of fiscal instruments. The 2030 Biodiversity Strategy actions include: • Establishing a larger EU-wide network of protected areas on land and at sea; • Launching an EU nature restoration plan; • Introducing measures to enable the necessary transformative change, setting up a strengthened governance framework: to ensure better implementation and track progress; improve knowledge, financing and investments; and better respecting nature in public and business decision-making; and • Introducing measures to tackle the global biodiversity change.	
Commission proposal for EU legislation to address invasive alien species and protect biodiversity	The Commission has proposed a Regulation on the prevention and management of the introduction and spread of invasive alien species. The proposal is for three types of interventions. These are: prevention, early warning and rapid response, and management.	The spirit of this proposal will be considered in the SEA during assessment of the CAP Strategic Plan.
The Habitats Directive (92/43/EEC)	The Habitats Directive is one of two main nature conservation Directives (the other being the Birds Directive). It centres around two pillars, one being the Natura 2000 network (designating Special Conservation Areas), the largest network of protected areas in the world, and the other the protection of species of conservation interest. In the event that a proposed plan/programme or project could negatively affect the integrity of a Natura 2000 site or listed species therein, the Habitats Directive requires an Appropriate Assessment. Rather than being a decision-informing	The CAP Strategic Plan should seek to ensure that it does not affect the integrity of a Natura 2000 site or relevant species. Any risk of this will be identified through the SEA.

Plan, Programme, Legislation	Description	Implications for the CAP Strategic Plan
	instrument, such as EIA and SEA, Appropriate Assessment is a decision-maker in that should significant negative impacts be identified, the associated plan/programme or project will not be allowed to move forward in accordance with the requirements of this Directive.	
The Birds Directive (2009/147/EC)	The oldest piece of nature protection legislation in the EU, this Directive seeks to provide protection to all of Europe's natural species. The Directive was set up in response to a growing decline in many of Europe's bird species resulting from pollution, loss and degradation of habitat and unsustainable use. Recognising these threats, the Directive provides emphasis on conservation of habitats for both resident and migratory birds and allows for the designation of Special Protection Areas (SPAs), that, together with the Special Conservation Areas assigned under the Habitats Directive forms the Natura 2000 network. This Directive also bans activities that have a negative impact on birds, including those resulting in taking of birds.	The CAP Strategic Plan should seek to ensure that it does not affect the integrity of SPAs.
The Waste Framework Directive (2006/12/EC).	The Waste Framework Directive (previously 75/442/EEC) is the foundation legislation for sustainable waste management. The Framework Directive places obligations on plan making authorities to have regard to certain objectives, such as encouraging the prevention or reduction of waste. A key objective is the minimisation of waste and where possible the encouragement of materials recycling and energy recovery. The Directive sets out to ensure that waste is recovered or disposed of without endangering human health and without using processes or methods which could harm the environment. It requires a system for the co-ordinated management of waste within the community; it defines waste and introduces the principles of the waste hierarchy, proximity principle and regional self sufficiency. The competent authority is required to draw up a waste management plan to set out anticipated quantities of different waste streams, how these streams will be managed and identify sites for waste management.	The Strategic direction adopted in the CAP Strategic Plan in relation to Waste Management should be in the spirit of the Waste Framework Directive. This will be assessed through the SEA.

Plan, Programme, Legislation	Description	Implications for the CAP Strategic Plan
	The Directive is transposed to Malta through • **L.N. 337 of 2001** - Environment Protection Act (Act No. XX of 2001) Waste Management (Permit and Control) Regulations, 2001; • **L.N. 230 of 2007** - Environment Protection Act (CAP. 435) Commencement Notice of the Waste Management (Activity Registration) Regulations, 2007 / brings into force L.N. 106 of 2007; and • **L.N. 106 of 2007** - Environment Protection Act (CAP. 345) –Waste Management (Activity Registration) Regulations, 2007.	
The Water Framework Directive (2000/60/EC)	The Water Framework Directive seeks to establish a structured framework for action in the field of water policy. It aims to establish a framework for the protection of inland surface waters, transitional waters, coastal waters and groundwater that: - Prevents further deterioration and protects and enhances the status of aquatic ecosystems and, with regard to their water needs, terrestrial ecosystems and wetlands directly depending on the aquatic ecosystems; - Promotes sustainable water use based on a long-term protection of available water resources; - Aims at enhanced protection and improvement of the aquatic environment, inter alia, through specific measures for the progressive reduction of discharges, emissions and losses of priority substances and the cessation or phasing-out of discharges, emissions and losses of the priority hazardous substances; - Ensures the progressive reduction of pollution of groundwater and prevents its further pollution, and - Contributes to mitigating the effects of floods and droughts and will have a significant role to play in protecting and managing water resources.	In accordance with this Directive, Malta is required to ensure that designated surface waters achieve good ecological and chemical status and that this status is to be maintained. The CAP Strategic Plan must have regard to this requirement. This will be assessed through the SEA.

Plan, Programme, Legislation	Description	Implications for the CAP Strategic Plan
Bathing Water Quality Directive (76/160/EEC)	This Directive provides a framework for the monitoring, assessment, and management of the quality of bathing water and defines minimum quality criteria that Member States must adhere to.	The CAP Strategic Plan should be mindful of the need to abide by these standards. This will be assessed through the SEA, if applicable.
Marine Strategy Framework Directive (2008/56/EC)	This Directive is the first all-encompassing piece of European legislation aimed at protection of the marine environment. The main aim is to achieve Good Environmental Status (GES) in European waters by 2020 through the adoption of an ecosystem-based approach to the management of all human activities that impact the marine environment. The regulation includes implementation of a number of key steps to achieve the overriding aim including an initial assessment of the current environmental status of marine waters as well as the environmental pressures and impacts on the marine environment. The initial assessment must include an economic and social analysis of the use and degradation of the marine environment. The determination of GES must then be carried out based on a number of qualitative descriptors. Environmental targets and associated indicators must then be set in order to guide progress towards the achievement of GES.	The CAP Strategic Plan must operate within the spirit of this Directive, although it does not directly apply to the implementation of the CAP Strategic Plan.
Nitrates Directive (91/676/EC)	The Nitrates Directive aims to protect water quality by preventing nitrates from agricultural sources polluting ground and surface waters and by promoting the use of good farming practices. The Nitrates Directive forms an integral part of the Water Framework Directive and is one of the key instruments in the protection of waters against agricultural pressures. Implementation of the Directive involves identification of polluted waters or water bodies at risk of pollution, designation of Nitrate Vulnerable Zones, establishment of Good Agricultural practices on a voluntary basis, establishment of action programmes to be implemented by farmers on a compulsory basis, and national monitoring and reporting requirements.	The CAP Strategic Plan will operate within the requirements of this Directive.
European Communication Green Infrastructure (GI) – Enhancing Europe's Natural Capital COM/2013/0249	This Communication highlights the many benefits of GI solutions and the importance of integrating green infrastructure solutions in spatial planning. It notes that Cohesion Policy has identified GI as an investment priority for the next programming period.	The SEA will assess whether GI is being promoted through the CAP Strategic Plan.

Plan, Programme, Legislation	Description	Implications for the CAP Strategic Plan
SEA Directive (2001/42/EC)	The SEA Directive requires that certain plans and programmes are subject to an environmental assessment prior to their implementation.	The CAP Strategic Plan is undergoing an SEA in accordance with the Directive.
Environmental Noise Directive (2002/49/EC)	The Environmental Noise Directive (the END) aims to *define a common approach intended to avoid, prevent or reduce on a prioritised basis the harmful effects, including annoyance, due to the exposure of environmental noise.* In addition, it aims to provide a framework for the development of EU measures to reduce noise from major noise emitters including road and rail vehicles and infrastructure, aircraft, outdoor and industrial equipment and mobile machinery.	The CAP Strategic Plan and SEA will consider this Directive during their development.
Proposal for a regulation of the European Parliament and of the Council establishing rules on support for strategic plans to be drawn up by Member States under the Common agricultural policy (CAP strategic plans) and financed by the European Agricultural Guarantee Fund (EAGF) and by the European Agricultural Fund for rural Development (EAFRD) and repealing Regulation (EU) 1305/2013 of the European Parliament and of the Council	The development of CAP strategic plans introduces a new model representing a fundamental shift in the CAP involving a move from compliance towards results and performance. This new planning process will cover all the CAP measures, previously covered by different regulations and policies. The new CAP regulations are expected to come into force from January 2023.	The CAP Strategic Plan is being developed in line with this Regulation.
3. Most Relevant National Environmental, Planning & Sectoral Documents		
Malta's Rural Development Programme 2014-2020	Malta's RDP emphasised actions relating to restoring, preserving and enhancing ecosystems, resource efficiency and climate and improving the competitiveness of the farm sector. Malta's RDP funded operations under all six Rural Development priorities. These are:	The RDP for 2014-2020 builds upon the vision and objectives from the previous programming period as well as lessons learned including in terms of environmental impact. The CAP Strategic Plan should take into account lessons learnt from this Programme including from outcomes of any environmental evaluations undertaken.

Plan, Programme, Legislation	Description	Implications for the CAP Strategic Plan
	• Priority 1: Knowledge transfer and innovation in agriculture, forestry and rural areas; • Priority 2: Farm visibility, competitiveness and sustainable forest management; • Priority 3: Food chain organisation, including processing and marketing of agricultural products, animal welfare and risk management; • Priority 4: Restoring, preserving and enhancing ecosystems in agriculture and forestry; • Priority 5: Resource efficiency and shift to low carbon and climate resilience economy in agriculture, food and forestry sectors; and • Priority 6: Social inclusion, poverty reduction and economic development in rural areas. The four largest investments in RDP measures were: - Measure 4 Investments in physical assets; - Measure 16 Cooperation; - Measure 6 Farm / business development; and - Measure 13 Payments to areas facing natural or other constraints.	

Plan, Programme, Legislation	Description	Implications for the CAP Strategic Plan
The Maltese Code of Good Agricultural Practice, 2003	The Maltese CoGAP was developed in order to improve sustainability of the sector as well as assist in meeting legal obligations, including, for instance, in relation to the Nitrates Directive. The Code provides recommendations in a number of areas including animal husbandry, manure handling, fertilisation practice, irrigation practice, and plant protection. The first two sections describe codes that are obligatory for the farmers under the Nitrates Directive or other directives, respectively. The third section describes codes that are obligatory to farmers receiving agri-environment payments or compensatory payments as a result of the natural disadvantages faced by the Maltese agricultural sector. The fourth section describes voluntary codes.	As per the two previous programming periods, it is expected that the CAP Strategic Plan will continue to support implementation of codes.
Malta's Nitrates Action Programme, 2011	In accordance with its obligations under the Nitrates Directive, this is the second such programme development for Malta. The entire islands have been designated as a Nitrate Vulnerable Zone. Nitrate levels in inland surface waters and groundwater in the Maltese Islands generally exceed the 50mg/l limit. First monitoring results did not show significant inputs in the coastal environment.	Programme implementation is expected to continue through the CAP Strategic Plan.
Cross compliance with Statutory Environmental Management Requirements. Environmental Guidance for Agriculture, 2005	Cross- compliance requirements emerged following the CAP reform under Council Regulation 1782/2003. This document sets out the Statutory Management Requirements (SMR) for farmers receiving direct payments. SMRs cover the protection of the environment, animal welfare and public, animal and plant health.	Application of this guidance will be followed, as relevant, during implementation of the CAP Strategic Plan.
Malta's National Renewable Energy Action Plan 2015-2020	This action plan identifies Malta's expected final energy consumption between to 2020 and sets out national targets for the share of energy from renewable sources consumed in transport, electricity and heating and cooling in 2020 within the context of the national energy policy as required by the RES Directive.	The CAP Strategic Plan should refer to this document in setting targets and objectives.
Malta's 2030 Draft National Energy and Climate Plan (NECP)	The NECP provides a strategic planning framework to guide Malta's contribution to achieving the EU Energy Union's 2030 objectives and targets. The Plan's key objectives and targets are:	The CAP Strategic Plan should refer to this document in setting targets and objectives.

Plan, Programme, Legislation	Description	Implications for the CAP Strategic Plan
	• Decarbonisation: - 19% GHG emissions reduction target under the Effort Sharing Regulation; - 10-13% share of renewable energy in gross final energy consumption in 2030; • Energy efficiency: - Energy intensity of 0.08 toe/€ in 2030; • Energy security: - Generation adequacy based on the N-1 principle; - Continued diversification of energy sources; • Internal energy market: - Ensure competitive electricity prices for households, commercial and industrial sectors; • Research & Innovation and competitiveness: - Develop a specific strategy for R&I for energy and water by the end of 2019.	
National Energy Efficiency Action Plan (2008-2016)	The aim of this Action Plan is to promote energy efficiency under Malta's EU obligations. The Action Plan is divided into three phases, comprising three years each: o Phase I: 2008-2010; o Phase II: 2011-2013; and o Phase III: 2014-2016. In each of these phases, the Action Plan aims to achieve savings of 3% of the average energy consumption of the base period (September 2001-September 2006) as a result of improved energy efficiency resulting in a gradual reduction of total consumption by 9% until 2016. Measures include reduction of water demand, improved efficiency in buildings and in water production.	Relevant CAP Strategic Plan should complement and support measures set out in this Action Plan.
National Strategy for Policy and Abatement Measures	This strategy, drawn up by the Climate Change Committee presents 87 recommendations with an aim to mitigate and embark upon adaptation	The RDP should aim to complement the recommendations developed in this strategy as relevant.

Plan, Programme, Legislation	Description	Implications for the CAP Strategic Plan
Relating to the Reduction of Greenhouse Gas Emissions, 2009	measures to minimise impacts from climate change, particularly those arising from greenhouse gas emissions.	
The National Energy Policy for the Maltese Islands, 2012	Malta's National Energy Policy focuses on the following overall objectives: • Energy efficiency; • Reducing reliance on imported fuels; • Security of supply; • Reducing Emissions from the energy sector; • Delivering energy economically, efficiently and effectively; and • Ensuring the energy sector can deliver.	Any measures related to the energy sector described in the CAP Strategic Plan should be in line with the direction set out in the National Energy Policy. This will be evaluated through the SEA.
Malta's National Reform Programme, 2020	Malta's National Reform Programme for 2020 focuses on Government policy initiatives in response to the COVID-19 pandemic.	The CAP Strategic Plan should be in line with the NRP's strategic direction.
Single-use Plastic Products Strategy for Malta (2020-2030)	This Strategy aims to reduce the amount of single-use plastic products that are consumed, and to increase the amount of single-use plastic products that are collected to be recycled so as to protect the environment and human health from plastic pollution.	The CAP Strategic Plan should be in line with relevant Strategy measures.
Waste Management Plan for the Maltese Islands 2014-2020	This Plan aims to move the Maltese Islands current waste management practices up the waste management hierarchy and sets out a number of targets as well as measures to reach those targets.	The CAP Strategic Plan must ensure that any proposed measures are in line with the spirit of the plan. Waste management will be addressed through the SEA.
Second Water Catchment Management Plan, 2016-2021	Malta's Water Catchment Management Plan (WCMP) addresses all waters and its objectives focus on water resource management and conservation. The Plan is part of the implementation of the Water Framework Directive and takes an integrated approach and provides a single framework for the management of different water categories (surface and groundwater), integration of water policy across sectors, and promotes stakeholder and public participation dialogue. The formulation of the Third Water Catchment Management Plan is currently underway, it will cover the period 2022-2027	The CAP Strategic Plan must ensure an integrated approach with regards, in particular to the programme of measures and monitoring programme of the WCMP as relevant. The SEA considers impacts of the CAP Strategic Plan in relation to the requirements under the Water Framework Directive and the WCMP including impacts on water quality, and water-related ecology as relevant.
Storm Water Master Plan, partly financed under the	This plan addresses the economic losses, social damage and environmental consequences caused by floods. It proposes alternative engineering options	The CAP Strategic Plan should be aware of the implications of the plan including the findings of its associated SEA.

Plan, Programme, Legislation	Description	Implications for the CAP Strategic Plan
Technical Assistance of the EU Structure and Cohesion Funds (2007-2013)	for storm water management and reuse, maintenance programmes and implementation measures. The key principles considered in the plan are sustainable development, the proximity principle and self-sufficiency, the precautionary principle and pollution prevention.	
National Tourism Policy 2015-2020	Malta's Tourism Policy sets out a vision to 2030 and aims to take an integrated approach by including economic, environmental and social goals. It identifies niche markets and discusses the tourism product.	The CAP Strategic Plan should steer within the same strategic direction as relevant.
Food and Nutrition Policy and Action Plan for Malta 2015-2020	The Policy and Action Plan identifies that public health objectives of achieving food safety and quality should also become objectives in the agriculture and fisheries sectors. The Department of Agriculture, as mentioned in the Action Plan, emphasises the protection of the health of the producer and the consumer as well as safeguarding the rural environment. It also states that future agricultural programmes should include nutrition objectives and need to consider the changing food and nutritional demands to ensure that the synergies between agriculture and nutrition are successful. This requires closer collaboration between nutrition/health and agriculture sectors. The Action Plan recognises the opportunities available through EU funding calling for investment in young people in farming, assistance in land procurement, improved training and education opportunities, and encouraging production of wholesome food products. Priority Action Area 6 is 'To engage with agriculture and fisheries on the promotion of, accessibility and affordability of preferably fresh fish, fruit and vegetables.'	The CAP Strategic Plan should integrate environmental health considerations as relevant. Impacts on human health are considered in the SEA.
Malta's Sustainable Development Vision for 2050	The sustainability principles outlined in this vision are: - Circular consumption and production patterns - Transition towards a low-carbon emission economy - Sustainable mobility - Transition towards a digital economy - Creation of more high-skilled and high value-added jobs	Sustainable development principles must be integrated as part of the CAP Strategic Plan. These will be assessed through the SEA.

Plan, Programme, Legislation	Description	Implications for the CAP Strategic Plan
	- Increased investments in research and innovation - Transition towards low-Carbon energy - Sustainable buildings and urban development - Protection, conserving and enhancing natural capital - Combating poverty and social exclusion - Fair and inclusive labour market - High quality education and training - Good health and wellbeing - Building safe and integrated communities	
National Cultural Policy 2021	The Policy's mission states: *Inspired by cultural rights, Malta's National Cultural Policy 2021 integrates culture in national development with a global outlook that contrbutes towards sustainable development.* Policy objectives seek to protect and conserve cultural heritage including the cultural landscape. .	The CAP SP will seek to ensure that the cultural policy objectives are respected.
Strategic Plan for the Environment and Development (SPED), 2014	The Environment and Development Planning Act (2010) requires the preparation of a Strategic Plan for the Environment and Development (SPED). The SPED replaces the current Structure Plan, providing a strategic spatial planning framework up to 2020. The SPED is based on an integrated planning system that aims to (i) ensure the sustainable management of land and sea resources together with the protection of the environment; and (ii) guides the development and use of land and sea space. A key SPED objective is 'To facilitate sustainable rural development and the diversification of activities within the Rural Area to sustain agriculture and safeguard its distinctiveness'.	The CAP Strategic Plan must consider the relevant spatial planning objectives. These will be considered in the Environmental Report.
National Climate Change Adaptation Strategy (NCCAS), 2012	The National Climate Change Adaptation Strategy presents a series of actions aimed at various sectors that requires integration of such measures as part of the strategic planning in areas such as fisheries, agriculture, water management, etc.	The CAP Strategic Plan Strategic Plan should have regard to the relevant actions and policy direction of the NCCAS.
National Strategy for Policy and Abatement Measures Relating to the Reduction of	This strategy is based on a number of pillars including securing civil society and citizen participation, establishing an institutional framework for climate change and building the appropriate human capital, integrating the	The CAP Strategic Plan should be mindful of the objectives within the National Strategy for Policy and Abatement Measures relating to the Reduction of GHG emissions.

Plan, Programme, Legislation	Description	Implications for the CAP Strategic Plan
Greenhouse Gas Emissions, 2009	economics of climate change in policy design and the identification of abatement measures. Abatement measures in the following sectors: energy, waste and agriculture, water, and transport.	
Malta's National Air Pollution Control Programme, 2019	This programme was prepared in accordance with Article 6 of the National Emission Ceilings Directive with an aim to limit the annual anthropogenic emissions of five pollutants, namely, nitrogen oxides (NO_x), non-methane volatile organic compounds (NMVOC), sulphur dioxide (SO_2), ammonia (NH_3), and fine particulate matter ($PM_{2.5}$) emissions. As identified in the programme, agricultural activity is the main source of ammonia emissions in the Maltese Islands.	Relevant direction and requirements listed in this programme should be considered also in the CAP Strategic Plan.
National Air Quality Plan, 2010	This document provides policy guidance to reduce daily average PM_{10} concentrations in ambient air in the Maltese Islands. Proposed measures target the major sources of $PM_{10,}$, including the construction industry, power generation and traffic (the major contributor to the exceedance of PM_{10} concentrations in ambient air). ERA and Transport Malta are currently updating this Plan, which includes measures mostly targeting pollution from road transport.	This Programme should be taken into consideration during the development of the CAP Strategic Plan and the SEA.
National Noise Action Plan, 2013	The National Noise Action Plan was drafted to satisfy minimum requirements in accordance with the END Directive. It outlines a long-term strategy aimed at preventing and reducing environmental noise where necessary and in particular where exposure levels can result in harmful effects on human health and preserving environmental noise quality where it is good. It also sets out objectives for monitoring and management of environmental noise in the Maltese Islands. Updates are intended and consultation was held in this regard in 2019.	This Programme should be taken into consideration during the development of the CAP Strategic Plan and the SEA.
National Environment Policy, 2012	The final NEP was launched in February 2012 and covers all end sectors and natural resources, including air, waste, water, land, soil, climate, biodiversity, coastal and marine area, noise chemicals and mineral resources. The policy covers the period from 2012 to 2020.	This policy outlines the need to manage the coastal and marine areas in an environmentally-sustainable and integrated manner. The development of the SEA objectives consider the NEP objectives ensuring that the assessment is directly related to the national objectives in relation to the environment
National Strategy for the	This strategy identifies key challenges for safeguarding the environment.	The CAP SP will seek to contribute to addressing the key

Plan, Programme, Legislation	Description	Implications for the CAP Strategic Plan
Environment, 2050	The need to strengthen environmental stewardship in agriculture is mentioned specifically as a key challenge related to sustainable use of land resources.	challenges in particular that related directly to agriculture.
National Biodiversity Strategy & Action Plan (NBSAP) (2012-2020)	The NBSAP provides a vision that reflects the priorities for efficient use of resources and halting biodiversity loss in line with EU requirements and the Global Biodiversity Strategic Plan under the Convention on Biological Diversity. The NBSAP to 2030 is underway, it aims to build on the previous NBSAP.	The CAP Strategic Plan and the accompanying SEA must consider the potential impacts clearly outlined in the NBSAP and ensure strategic measures to prevent and/or minimise as far as possible any negative effects.
National Strategy for Preventing and Mitigating the Impact of Invasive Alien Species (IAS) in the Maltese Islands, 2018	This Strategy was developed to achieve the national target to prevent the introduction and establishment of new invasive non-native species, whilst eradicating or controlling those already established.	The CAP Strategic Plan needs to be in line with this National Strategy.
National Report on the Strategic Action Plan for the Conservation of Maltese Coastal and Marine Biodiversity, 2002	This Report identifies priority actions in the field of marine and coastal biodiversity. These actions include the preparation of species and habitat action plans, declaration of marine and coastal protected areas, data compilation, monitoring proposals, upgrading research equipment, and effective enforcement.	The CAP Strategic Plan should be cognisant of the requirements in the field of biodiversity and ensure integrated measures as relevant. These will be assessed through the SEA.
Draft National Strategy for the Cultural Heritage (2012-2016)	The draft National Strategy for Cultural Heritage 2012 addresses 22 inter-related objectives, that are grouped into four main areas: • Broadening citizen participation: cultural heritage and the local community; • Improving governance in the cultural heritage sector: Investment in the administration setup of the local cultural heritage; • Care and use of the cultural heritage resource: preservation and conservation; • Sustainable use of heritage resources: sustainable use of cultural heritage.	The CAP Strategic Plan must consider this draft strategy and integrate measures where relevant.
4. National Legislation		
Constitution of Malta	The Constitution of Malta (Section 9) declares that the State shall safeguard the landscape and the historical and artistic patrimony of the Nation. These are the only aspects of the environment referred to in the	Landscape and historical heritage must be recognised as important assets in the CAP Strategic Plan where relevant.

Plan, Programme, Legislation	Description	Implications for the CAP Strategic Plan
	Constitution, underlining the importance of the landscape and historical heritage.	
Environment Protection Act, 2016	This Act seeks to protect the environment and make provision for the establishment of an authority with powers to that effect. It names the Environment and Resources Authority (ERA) as the Competent Authority. The Act requires everyone together with the government to protect the environment and to assist in the taking of preventative and remedial measures to protect the environment and manage natural resources in a sustainable manner. Various duties that fall to the government are established including: 4(a) to manage the environment in a sustainable manner by integrating and giving due consideration to environmental concerns in decisions and policies on land use, socioeconomic, educational and other matters; 4(b) to take such preventive and remedial measures as may be necessary to address and abate the problem of pollution and any other form of environmental degradation in Malta and beyond, in accordance with the polluter pays principle and the precautionary principle; 4(e) to apply scientific and technical knowledge and resources in determining matters that affect the environment; 4(f) to ensure the sustainable management of wastes, to promote the reduction of waste and the proper use, reuse and recovery of matter; 4(g) to safeguard biological diversity; 4(h) to combat all forms of pollution and environmental degradation; 4(i) to consider the environment as the common heritage and common concern of humankind; and 4(j) to provide incentives leading to a higher level of environmental protection.	Projects resulting from the CAP Strategic Plan must conform to the requirements of this Act.
Development Planning Act, 2016	The Planning Authority (PA) was established under the mandate of this Act and it is the national agency responsible for land use planning in Malta.	The SEA will highlight any measures whose implementation may require consultation and/or permission will be required from the PA.

Plan, Programme, Legislation	Description	Implications for the CAP Strategic Plan
Marine Pollution (Prevention and Control) Act	This Act should be the main legal source under Maltese law to address marine pollution but despite being amended three times, it has never come into force. The role of the Transport Authority in this respect is without prejudice to the provisions of the Environment Protection Act, which enables the Minister for the Environment, to issue regulations on marine pollution, with ERA acting as the competent authority. No regulations on marine pollution control from sea-based sources have ever been issued under the Environment Protection Act.	Not relevant yet as it has not come into force.
Malta Resources Authority Act, 2000	The Malta Resources Authority Act establishes the powers of the Malta Resources Authority whose regulatory functions centre around water, energy, and mineral resources. In relation to water specifically the Authority shall under provision 4(2)(b): *(i) secure and regulate the acquisition, production, storage, distribution or other disposal of water for domestic, commercial, industrial or other purposes;* *(ii) secure and regulate the conservation, augmentation and operation of water resources and the sources of water supply;* *(iii) secure and regulate the treatment, storage, disposal, use or re-use, as appropriate, of sewage, waste water, sludge and storm water run-off;* *(iv) secure and regulate the provision of adequate systems of public sewers and to ascertain their cleanliness, safety and efficiency;* *(v) ensure the safe discharge, reception, treatment and disposal of trade effluent;* *(vi) encourage and regulate the re-use of treated effluent;* *(vii) ensure the proper and fit disposal of waste water sewage;* *(viii) maximise the use of storm water run-off;*	The National Water Policy and Energy Policy are under administration of the Malta Resources Authority.
Authority for Transport in Malta Act, 2009	This Act provides for the establishment of the Authority for Transport in Malta, which assumes the functions previously exercised by the Malta Maritime Authority, the Malta Transport Authority and the Director and Directorate of Civil Aviation and for the exercise by or on behalf of that Authority of functions relating to roads, to transport by air, rail, road or sea, within ports and inland waters, and relating to merchant shipping.	The Authority for Transport in Malta is a stakeholder that should be consulted in the development of the CAP Strategic Plan and the SEA.

Plan, Programme, Legislation	Description	Implications for the CAP Strategic Plan
Animal Welfare Act, 2001	Malta's legislation on Animal Welfare issues	The CAP Strategic Plan will consider the requirements under this Act both during its development as well as implementation.

Appendix 2: Response to Consultation Comments on Scoping Report

Appendix 2: Response to Public Consultation

Strategy and Implementation Division within the Ministry for the Economy, European Funds and Lands

STRATEGIC ENVIRONMENTAL ASSESSMENT ON THE CAP STRATEGIC PLAN FOR MALTA FOR THE PROGRAMMING PERIOD 2023-2027

RESPONSE TO PUBLIC CONSULTATION COMMENTS ON THE STRATEGIC ENVIRONMENTAL ASSESSMENT

Version 1: September 2022

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RESPECT THE ENVIRONMENT – KEEP IT DIGITAL

Quality Assurance

Strategic Environmental Assessment on Malta's CAP Strategic Plan 2023-2027
Environmental Report
September 2022

Report for: **The Strategy and Implementation Division within the Ministry for the Economy, European Funds and Lands**

Revision Schedule

Rev	Date	Details	Written by:	Checked by:	Approved by:
00	Sept 22	Submission to Client	**Rachel Xuereb**	**Yury Zammit** Consultant	**Adrian Mallia** Managing Director

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CONTENTS

INTRODUCTION

1. This document presents the replies to comments received on the Environmental Report (ER) prepared as part of the Strategic Environmental Assessment (SEA) for the Common Agriculture Policy (CAP) Strategic Plan.

2. The consultation process on the ER was held between 29th July 2022 and 26th August 2022. Comments were received from the following:

   - Environment & Resources Authority;
   - Environmental Health Directorate; and
   - Birdlife Malta.

3. The tables below provide a description of the comments made by the stakeholders and the response and how the comments were addressed in the updated Environment Report.

RESPONSE TO COMMENTS MADE BY THE ENVIRONMENT AND RESOURCES AUTHORITY

Table 1: Response to Comments made by Environment and Resources Authority (ERA)

ER Section	*ERA Comments*	*Adi Associates' Responses*
1. Introduction		
	ERA welcomes the opportunity to comment on the SEA Environmental Report of the CAP Strategic Plan, which the Authority received by email on 29th 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 Plan are mitigated at an early stage.	Noted.
2. ***General comments***		
	2.1 Particular proposals in the Plan support physical development, additional infrastructure and similar interventions, such as waste management, the use of renewable energy sources and upgrading of rural roads and road infrastructure. Whilst other initiatives do not promote development directly, they may still result in specific projects, such as afforestation. The potential impacts of these measures on biodiversity, land and the landscape are unknown at this stage since the details of most of the emerging projects (e.g. scale, extent and location) are currently not available, however, depending on the types of works envisaged, these interventions could end up having both localised and cumulative impacts on the rural environment.	The Environment Report takes note of the potential impacts of development arising from projects funded under the CAP SP.
	2.2 ERA considers that the choice of location for such proposals is crucial to avoid significant environmental impacts. Therefore, the Environment Report (ER) should clearly recommend that preference should be given to proposed development,	The Environment Report (Chapter 8) has been updated to include this recommendation.

ER Section	ERA Comments	Adi Associates' Responses
	infrastructure and similar interventions which are least harmful to the environment, which are primarily accommodated in existing suitable committed sites, away from important environmental areas, such as valleys, ridge-edges, cliffs, escarpments, natural habitats and sites, natural coast, etc. Moreover, it is important to ensure that the siting of development and similar interventions on site avoid impacts on site features like rubble walls, trees, etc.	
	2.3 ERA is of the opinion that the CAP Strategic Plan should support projects that seek to: (i) make efficient use of existing legitimate buildings, structures and infrastructure, so as to avoid new development pressures scattered in the countryside; (ii) restore already degraded land, natural habitats and landscapes where reasonably possible as well as prevent adverse environmental impacts that may arise from indirect and consequential implications of development, such as impacts associated with widening of rural roads, infrastructure, rural tourism, etc., and (iii)improve specific aspects of the environment, including the protection and conservation of the natural/rural environment, including site topography, natural physical features, valleys and watercourses, cliffs/escarpments, old rubble walls, traditional terraced fields, mature trees (e.g. carobs), areas of garrigue(xaghri), maquis or mosaic landscapes (made up of a mix of patches of arable land and	The Environment Report (Chapter 8) has been updated to include this recommendation.

ER Section	ERA Comments	Adi Associates' Responses
	patches of garrigue/maquis, and/or characterised by non-trivial rock outcrops, etc.). If implemented correctly, depending on the type of interventions envisaged and other site-specific issues, such measures could also have a beneficial impact on protected sites (SACs and SPAs).	
	2.4 Moreover, it is noted that certain proposals are linked to other plans/policies to which ERA has already provided comments through the SEA process, such as the Solar Farms Policy 2017 (as updated). It is therefore important that ERA's environmental input into such processes be duly taken into consideration in future proposals supported by this Plan.	Noted.
	2.5 ERA concurs with the conclusion of the ER that particular measures in the Plan, such as waste management, upgrading of rural roads, etc., would need to be assessed further at project selection stage, when more details become available, in view of their potential environmental impacts. The ER already acknowledges that particular projects may require an Environmental Impact Assessment (EIA). The ER should also equally acknowledge that any future projects supported by this Plan, that could have significant adverse impacts on Special Areas of Conservation (SACs) and Special Protected Areas (SPAs) will also require an Appropriate Assessment (AA) study.	Noted. Requirement for AA also included in footnote 60.
3. Chapter 7 - Assessment of Environmental Effects and Proposed Mitigation		
	3.1 ERA's detailed comments on Chapter 7 in relation to the assessment of environmental effects are being included in Appendix 1. Where relevant, the ER is to be revised/updated accordingly.	Noted. See response to Appendix 1 below.
	3.2 ERA is of the opinion that the impact assessment study on	It is noted that the criteria already cover

ER Section	ERA Comments	Adi Associates' Responses
	biodiversity, flora and fauna should also take into consideration: (i) invasive alien species; (ii) intensification of agricultural activities to the detriment of natural habitats and species; and (iii) water usage/abstraction from areas supporting riparian habitats and species. Table 7.2 in the ER needs to be amended accordingly.	invasive alien species to a certain extent. On items (ii) and (iii) these are considered as impacts. Table 7.2 has been updated as relevant.
	3.3 It is noted that various measures proposed in the CAP Strategic Plan under Specific Objectives 4, 5 and 7 have not been addressed in the impact assessment study of the ER (see detailed comments in Appendix 1). The potential environmental impacts of these measures should be assessed in the ER and suitable mitigation measures should be identified accordingly.	Comment addressed below under Appendix 1.
	3.4 The ER highlights various mitigation measures to prevent or minimise adverse environmental impacts. Generally, ERA concurs with the proposed mitigation measures in the ER, as such measures address some of ERA's main concerns regarding the prevention of particular impacts identified in the SEA study. Therefore, it is recommended that the Plan should only support projects that respect these measures. Projects without suitable environmental safeguards should not be considered, so that environmentally damaging interventions are avoided at plan-stage as much as possible.	Noted.
4. Alternatives		
	4.1 ERA notes the conclusion of the ER that Scenario 3 (i.e. the draft CAP SP as proposed) has the most significant positive impacts, assuming the complete take up of funds available for the implementation of measures such as IPM, organic farming, the eco-schemes and biodiversity conservation amongst others.	Noted.

ER Section	ERA Comments	Adi Associates' Responses
5. Recommendations		
	5.1 ERA acknowledges the recommendations highlighted in Chapter 8 of the Environmental Report for the CAP Strategic Plan, particularly: (i) the proposed hierarchy of mitigation measures; (ii) measures to reduce GHG emissions to address climate change; (iii) measures addressing actions in Natura 2000 sites; and (iv) the selection of projects during implementation. The ERA recommendation highlighting that proposals/initiatives which address a number of environmental concerns should be given priority, is welcomed. 5.2 Proposals for afforestation projects are also welcomed as long as these are within suitable site contexts.	Noted.
6. Other Comments		
	6.1 Other comments on Chapter 4, regarding the environmental baseline, are provided in Appendix 2.	See response to Appendix 2 ERA comments below.

Appendix 1

ERA comments on Chapter 7 – Assessment of Environmental Effects and Proposed Mitigation

Objectives and measures as highlighted in the ER	Impact assessment as highlighted in the ER	Mitigation measures as proposed in the ER	ERA comments	Adi Associates' Response
Specific Objective 1: To support viable farm income and resilience of the agricultural sector across the Union in order to enhance long-term food security and agricultural diversity as well as to ensure the economic sustainability of agricultural production in the Union. *Relevant measures in the ER:* - Land-based farms (at a higher level of support than provided through the RDP 2014-2020 due to evidence that there has been further decline in this sector) - Direct payments to small farms;	High demand on fossil fuels for energy.	Investing in renewable energy.	Renewable energy in rural locations should be directed towards existing committed large-scale developments (e.g. livestock farms) away from sensitive areas such as remote rural locations, natural sites and landscapes. The development of such facilities on undeveloped land and small sites should be avoided.	SO1 refers to *support viable farm income and resilience of the agricultural sector across the Union in order to enhance long-term food security and agricultural diversity as well as to ensure the economic sustainability of agricultural production in the Union* and not the installation renewable energy infrastructure.
	Installation of three Urban Waste Water Treatment Plants and eventual associated distribution infrastructure to promote use of 'new water'.	Site-specific advice how to improve water management and waste management to be delivered for projects funded through the CAP.	The ER needs to assess the potential environmental impacts of implementing such infrastructure. ERA recommends that such facilities should preferably be accommodated on suitable already-committed sites.	SO1 refers to *support viable farm income and resilience of the agricultural sector across the Union in order to enhance long-term food security and agricultural diversity as well as to ensure the economic sustainability of agricultural production in the Union* and not the installation of 2 urban wastewater treatments plants.
Specific Objective 2: To enhance market orientation and increase farm competitiveness	Potential negative impacts from interventions related to infrastructure.	Carry out project-level screening and impact	Proposals under this objective involve the provision of new or upgraded infrastructure such as renewable energy, roads, water and	Mitigation measures added under SO 2 in Table 7.2

both in the short and long term, including greater focus on research, technology and digitalisation. *Relevant measures in the ER:* - Off-farm investments relating to infrastructure; - Investment in agricultural holdings to support farms modernisation and restructuring; - Investment in renewable energy resources; - Improved waste management; and - Upgrading of rural roads.		assessments for proposals that involve infrastructure development or development in the rural environment.	waste management and treated wastewater. ERA recommends that such infrastructure should not result in the take-up of additional undeveloped land unnecessarily and should avoid natural areas (such as valleys, watercourses, ridge-edges, garrigue, maquis, protected areas, etc.) and important landscapes in order to avoid major environmental impacts. With regards to the measure '*Investment in agricultural holdings to support farms modernisation and restructuring'*, ERA considers that upgrades for legitimate small-scale activities are not of major concern as long as development takes place within the farm curtilage as much as possible to avoid significant lateral expansions onto adjacent rural land. Large-scale facilities should preferably be accommodated on suitable already committed sites.	
	The measure related to the development/upgrading of rural roads will likely to have the following impacts: • loss of habitat and fragmentation; • loss of soil; and • dust generation (localised impact).	Proposals for rural roads require consultation with the relevant authorities. . Funds are to be allocated to rural roads that are already existing and that require maintenance to prevent soil sealing.	It is unclear how the impact assessment classified the proposed measure '*development/upgrading of rural roads'* as positive, when the ER itself highlights that such measure could result in potential loss of habitat and fragmentation. Table 7.2 in the ER needs to be amended accordingly. With respect to the upgrading of rural roads, road works that are limited to the existing footprint of existing roads and do not significantly alter the nature of the land surface are generally considered to be the	Table 7.2 has been amended to include a negative impact on biodiversity from rural roads. Table 7.2 has been amended to include this mitigation measures with respect to rural roads.

		Moreover, clearing of vegetation along verges of country roads shall no longer be carried out. Materials used for rural roads are to be sympathetic with the rural environment. Avoiding black tarmac. Beneficiaries should also be required to develop and implement soil management plan.	least environmentally damaging. Proposed works should not result in the construction of new/widening of rural roads, hard surfacing, damage to the land surface and its features (including wayside flora/habitats, the rural terrain itself, etc.), damage to/destruction of rural features such as mature trees, old rubble walls, natural rock outcrops, natural habitats, etc. The ER also highlights that '*if interventions are limited to upgrading, the impact could be insignificant as long as appropriate measures are in place to eliminate, reduce or contain potential impacts such as a result of run-off, spill-over effects or accidental spills that could result in impacts to biodiversity in the area.*' This approach should be the preferred way forward.	
	Interventions related to waste management infrastructure could result in indirect impacts of surface water and possibly groundwater during construction, depending on the magnitude and site.	Waste management infrastructure to target practices that are harmful to the aquatic environment (e.g. disposal of slurry in sewerage network).	Waste management infrastructure will require provision of large-scale facilities, which may result in land take-up and impacts on the landscape, rural environment and biodiversity. These potential environmental impacts should be addressed in the impact assessment section in the ER. It is recommended that any large-scale facilities related to waste management are to be directed towards already developed sites and similarly committed land.	Table 7.2 has been amended to include the impacts and mitigation measures with respect to waste management infrastructure.
	There may be changes to the landscape of rural	Renewable energy investment and	Renewable energy in rural locations should be directed towards existing committed	Table 7.2 has been amended to include the mitigation measures

	areas as a result of installation of PV panels.	siting of solar farms, where relevant, must follow policy and guidance, namely the Solar Farm Policy 2017 and the Rural Policy and Design Guidance 2020. Assessment of potential impacts on landscape and culture may be required.	large-scale developments (e.g. livestock farms) away from sensitive areas such as remote rural locations, natural sites and landscapes. The development of such facilities on undeveloped land and small sites should be avoided.	with respect to renewable energy infrastructure.
Specific Objective 4: To contribute to climate change mitigation and adaptation including by reducing greenhouse gas emissions and enhancing carbon sequestration, as well as to promote sustainable energy. *Relevant measures in the ER:* - Investment aids for farm and business development and diversification; - Interventions covering agri-environment-climate measures (funded under Pillar 2) and eco-schemes (actions that may	Implementation of eco-schemes and agri-environment climate measures seek to have positive impacts on: • biodiversity, through tree planting; • soil quality through the reduction in the use of PPP; • GHG emissions through improved technologies; and • the rural landscape.	Promote uptake of eco-schemes, training and investment in cleaner technologies and ensure that implementation is coordinated where relevant, to ensure consistency.	The ER identifies that all of the measures proposed under this objective will contribute to positive impacts on all of the environmental criteria. The extent of the impact on biodiversity, agricultural products, water quality, air quality, climate change and soil quality will depend on the degree of implementation and uptake of eco-schemes. In this regard, the CAP should seek to promote uptake of these measures. Particular measures mentioned in the CAP SP under Specific Objective 4 do not seem to have been assessed in the impact assessment study. These include: - *Update current infrastructure to encourage water efficiency;* - *Expansion of provision of treated wastewater;*	It is noted that renewable energy has been removed from the updated CAP SP. The remaining measures have been updated in the Environment Report, Table 7.2.

include carbon-building soil management practices, tree planting and permanent cropping).			- *Use of animal and agricultural waste and residues for energy production or to be used for fertilizer and soil conditioning; and* - *Renewable energy generation and enhanced energy efficiency on farms.* ERA's comments in relation to these measures are as follows: (i) The ER needs to study the possible environmental impacts of updating current water infrastructure and in relation to the provision of treated wastewater; (ii) Whilst utilisation of animal and agricultural waste and residues for energy production is noted, this is likely to involve provision of large-scale facilities. The ER should highlight that environmental impacts could be mitigated by accommodating such facilities on suitable already committed sites; and (iii) Renewable energy in rural locations should be directed towards existing committed large-scale developments (e.g. livestock farms) away from sensitive areas such as remote rural locations, natural sites and landscapes. The development of such facilities on undeveloped land and small sites should be avoided.	

Specific Objective 5: To foster sustainable development and efficient management of natural resources such as water, soil and air, including by reducing chemical dependency. *Relevant measures in the ER:* - At national scale, investments in water infrastructure for treated urban wastewater are to continue distribution to the main agricultural areas of the Maltese Islands; - Smaller scale investment will include enhanced water capture facilities on farms, restoration and renovation of water management features in the landscape; - Maintenance of traditional field boundaries for soil protection.	Investment in water capture facilities on farms, restoration and renovation of water management features in the landscape; planting of trees and shrubs; maintenance to rubble walls for soil protection; training in water protection and enhancement techniques, etc., are expected to have positive impacts on: • Biodiversity; • Water quality; • Air quality; • Climate change adaptation; • Soil quality; • Landscape and cultural heritage.	Promote uptake of eco-schemes and ensure that interventions respect the rural/cultural landscape.	Proposed interventions under this objective include investment in water capture facilities on farms, restoration and renovation of water management features in the landscape; planting of trees and shrubs; maintenance to rubble walls for soil protection; training in water protection and enhancement techniques. The ER identifies that all of these measures will contribute to positive impacts on all of the environmental criteria. For most of the measures, the extent of the impact on biodiversity, agricultural products, water quality, air quality, climate change and soil quality will depend on the degree of implementation and uptake of eco-schemes. In this regard, it must be ensured that relevant environmental safeguards and standards are respected both during the design and implementation of such measures. Works in valleys and other water features (such as springs) that are still in a relatively pristine state or which would be adversely affected by such site reengineering should be avoided in the first instance. In practice, site interventions involving dams, interventions on watercourses and their banks, dredging of watercourses, etc. tend to be relatively intensive interventions and could impact the biodiversity, geomorphological heritage and landscape value of valley systems. Natural habitats and	Mitigation measures added under SO5 in Table 7.2

			features should be effectively conserved and restored to their pristine state for their ecological natural and landscape value. It is recommended that any proposed works in valleys and watercourses are to be discussed with ERA at an early stage with the intention of avoiding and mitigating adverse environmental impacts on the site and its surroundings. With regards to the maintenance of traditional field boundaries, it is important that any proposed interventions shall respect the rural characteristics of the local area by using traditional methods and materials. Rubble walls are to retain their original height to ensure compatibility with the surrounding context. Retaining walls along field terraces should not be raised higher than the upper soil level. New/reconstructed/re-developed rubble walls should respect the natural topography and the height of traditional rubble walls in the surrounding context, without obstructing rural views. It seems that various other measures proposed in the CAP SP under Specific Objective 5 have not been addressed in the impact assessment study. These include: - *Adequate treatment of farm waste to reduce groundwater pollution;* - *Rural infrastructure;* - *Management of habitats and Natura*	

			2000; and - *Afforestation, water management, reduction of flood risks and improvement of soil conservation, reclamation and restoration of marginal or derelict land.* ERA's comments in relation to these measures as follows: (i) The ER should assess the potential environmental impacts of the above-mentioned measures and identify suitable mitigation measures; (ii) Measures addressing actions in Natura 2000 sites should be discussed with ERA at an early stage. The CAP Strategic Plan should seek to ensure that proposed measures do not affect the integrity of Natura 2000 sites or relevant species and habitats and avoids conflicts with the environmental priorities of other environmental plans and policies; (iii) Proposals for afforestation projects are welcomed, as long as these are located within suitable site contexts; and (iv) Reclamation and restoration of land should only be considered on legitimate agricultural land as these could end up damaging ecosystems, natural habitats and the rural	

			landscape, for instance deposition of inert material and soil onto natural sites (e.g. garrigue) under the pretext of reclaiming or restoring of marginal or derelict land.	
Specific Objective 6: To contribute to halting and reversing biodiversity loss, enhance ecosystem services and preserve habitats and landscapes. *Relevant measures in the ER:* - Conservation and sustainable use of genetic resources;	Potential negative impacts with respect to biodiversity could arise if honeybees become too numerous or if not enough flowers are available, whereby they risk outcompeting wild bee/pollinator populations. Secondary impact on the plant community possible, if wild populations are affected.	Selection criteria should ensure that siting of apiculture operations does not result in large operations near wild flower / natural areas. Consultation with ERA is required.	ERA notes and agrees that proposals related to apiculture operation would require early discussions with ERA, in order to ensure suitable siting and other potential environmental impacts. Interventions related to land-based management commitments could have beneficial impacts on the environment, including on biodiversity and ecosystems. Sub-measures of this objective include maintenance of trees, implementation of soil management and conservation plan, organic conversion and maintenance, etc. Such proposals should be given priority.	Noted. No update to the ER required.
Specific Objective 7: To attract and sustain young farmers and new farmers and facilitate sustainable business development in rural areas. *Relevant measures in the ER:* - Assistance in business start-ups for young farmers in Malta including the setting up of a business plan, management marketing and financial skills	Potential negative effects from development on natural land, from funding through EAFRD for interventions such as the construction of structures. Potential impact on water resources, GHG emissions/air quality, soil, landscape from young farmers entering the sector.	Impact to be assessed at project level. Ensure that young farmers entering the sector operate in accordance with all regulations, code of conduct and environmental standards so to	The CAP Strategic Plan should seek to avoid additional development pressures in the rural area under the pretext of agriculture. Such practice over the past decades have resulted in adverse impact on the natural environment and the rural landscape, both in terms of the immediate site context and in terms of cumulative degradation of the wider rural area. In this regard, the ER should clearly highlight that development of these structures should be linked with genuine and legitimate agricultural activity. There should also be a presumption against the conversion and	The text in relation to SO7 in Table 7.2 of the Environment Report has been updated accordingly.

development and other training and technical advisory support as required.		avoid significant negative impacts.	change of use of such structures for other uses, as well as new/extended development which is only weakly related to agricultural activity. Examples include: - nominal agritourism development (which have minimal agricultural relevance or which actually displace pre-existing agricultural use); - developments that are supposedly ancillary to existing agricultural uses but are ultimately disproportionate or out of sync vis-a-vis the actual agricultural use (e.g. residential or commercial structures/uses, parking areas, etc).. It seems that various other measures proposed in the CAP SP under Specific Objective 7 have not been addressed in the impact assessment study. These include: - *Stimulate new business activities in rural areas (e.g. farm diversification, food tourism, local food labelling, cultural heritage);* - *Opportunities for developing niche markets and diversification of some sectors such as tourism into rural-oriented and environmental business;* - *Strategy for land consolidation-potential for re-parcelling land;* - *Provide opportunities to support new rural business ventures that can complement and add value to rural incomes and help to promote rural quality of life among part-time*	
	Certain interventions may result in impacts on the landscape whereas others may not have significant effects.	Impacts to be screened/assessed at project level.		

			farmers and other rural households; and - *Facilitate land consolidation and easier farm transfer between generations through ongoing legislative changes and monitor their impacts.* ERA's comments in relation to these measures as follows: (i) The ER should assess the potential environmental impacts of the above-mentioned measures and identify suitable mitigation measures accordingly; (ii) With regards to '*Stimulate new business activities in rural areas'*, (e.g. environmental labelling) it is recommended that the proposed measures in the Plan are directed towards increasing further the valorisation of Malta's touristic product, without promoting additional development pressures in the rural environment. (iii) The CAP SP should regard rural tourism accommodation as any other physical development in the countryside. Rural recreation and tourism tend to increase demand for the take-up of rural land for ancillary facilities such as buildings, access routes, widened roads, new or	

			formalised car parks, etc. Other individually trivial interventions such as street furniture, CCTV camera poles, signage and panels, infrastructural services etc., may also be problematic, particularly if excessive in quantity (cumulative impact) or poorly designed/located. (iv) The Plan's proposals to facilitate land consolidation, that involves restructuring of the land is welcomed, as long as within suitable site contexts. It must be ensured that such physical interventions do not result in adverse environmental impacts, such as topographical re-engineering, demolition of old rubble walls, destruction of non-arable elements and rural features such as natural outcrops, clumps of trees, diversion or channelisation of watercourses, etc..	

Appendix 2

ERA comments on Chapter 4 – Environmental Baseline

Chapter 4 Section	*ERA Comments*	*Adi Associates' Responses*
Biodiversity	ERA suggests the following revisions: Par 4.8 - *'Malta's natural environment can be characterized under three subcategories including terrestrial, freshwater and marine habitats. ~~includes habitats such as cliffs, valleys, garrigue, and sand dunes.~~'* *Forest and natural vegetation'* to be amended to *'Forest and natural areas'* in accordance with the SOER (2018).	Paragraph 4.8 updated.
	Par 4.9 to be revised as follows: *'The local terrestrial vegetational assemblages are composed by three groups: (i) major communities that are part of the succession towards climax communities; (ii) minor communities that are either specialised to occupy particular habitats, or occupy habitats that are rare, or are relics from a previous ecological regime, and; (iii) vegetational assemblages of disturbed habitats, which owe their existence to anthropogenic activities. The main vegetational assemblages are maquis, garrigue and steppe, whilst minor ones include patches of woodland, coastal wetlands and saline marshlands, freshwater and rupestral communities and sand dunes. Marine habitats on the other hand include seagrass meadows, algal communities, reefs, caves and sediments.'*	Paragraph 4.9 updated.
	Par 4.10 - Since joining the European Union in 2004, Malta carried out three assessments in line with the Habitats Directive Article 17. Relevant reports on implementation measures were published in 2007, 2013 and 2019. (https://cdr.eionet.europa.eu/mt/eu/art17)	Paragraph 4.10 updated.
	Par 4.18 – Given that terrestrial SACs include both national and international SACs, the area of terrestrial SACs should read 44.95km^2 (14.2%). Areas of Ecological Importance (AEI) and Sites of Scientific Importance (SSI) are to be	Paragraph 4.18 updated.

Chapter 4 Section	*ERA Comments*	*Adi Associates' Responses*
	considered separately. The values are to be updated to reflect the following: - AEI – 24 sites; - AEI & SSI – 42 sites; and - SSI – 10 sites. Moreover, the number of sites may not be particularly meaningful, as it includes a mix of extensive areas and small sites. Also, the types of site (e.g. cliff. Marshland, etc) may be very different. More meaningful indicators include land coverage/area, classification by type, etc.	
	To replace Figure 4.5 and 4.6 with a more recent version as per https://www.eea.europa.eu/data-and-maps/data/nationally-designated-areas-national-cdda-17 and https://www.eea.europa.eu/data-and-maps/data/nationally-designated-areas-national-cdda-17 respectively.	Figures updated.
	Par 4.21 – Reference to '*Cory's Shearwater*' should be replaced by Scopoli's shearwater.	Paragraph 4.21 updated.
	Par 4.26 – With regards to other important areas that are not protected, to also consider green areas and natural or rural/green enclaves in urban areas or in urban public open spaces as.	Paragraph 4.26 already includes green spaces in urban areas.
	Par 4.27 – With respect to the Habitats Directive, Malta has 26 Annex II species (this excludes occasional, extinct and species on which there is a scientific reserve). Of these, 9 are endemic.	Paragraph 4.27 updated.
	Par 4.28 – To identify the source of information.	Source added.
Light pollution	It is recommended that Par 4.33 also takes into account disturbance to fauna (e.g. bats and birds) from urban lighting, in particular lighting in the vicinity of breeding areas for seabirds.	Paragraph 4.33 updated.

Chapter 4 Section	*ERA Comments*	*Adi Associates' Responses*
Water	ERA would like to clarify that 'ephemeral' (in par 4.44) refers to watercourses only, excluding permanent freshwater pools or the transitional waters (apart from il-Ballut ta M'Xlokk).	Footnote added to clarify para 4.44.
	The characterisation of coastal waters (in par 4.64) should be worded as per the official classification of the 2nd River Basin Management Plan (RBMP).	Para 4.64 updated.
	ERA suggests the following amendments to par 4.66: *Coastal water quality is monitored in line with various Directives including the Water Framework Directive, Marine Strategy Framework Directive, Nitrates Directive, Bathing Water Directive and the UN Barcelona Convention ~~by the Health Inspectorate Services within the Environmental Health Directorate (EHD). Water quality is regulated through the Bathing Water Directive, the UN Barcelona Convention and the Water Framework Directive~~*.	Paragraph 4.66 updated.
Noise pollution	ERA supports reference that the Noise Action Plan (NAP) should be taken into consideration during the development of the CAP Strategic Plan. ERA would like to clarify that the NAP takes into account noise sources that fall within the scope of the Directive and which relate to noise from traffic, industry of a large scale and aviation.	Noted.
Air quality monitoring	Information on real time monitoring in par 4.76 is outdated. This is to be updated accordingly.	Paragraph 4.76 updated.
Green Infrastructure	Par 4.140 should put more emphasis on the natural environment, rural landscape and biodiversity. With regards to biodiversity, this paragraph is to include that 'the EU's Biodiversity Strategy for 2030 is a comprehensive, ambitious and long-term plan to protect nature and reverse the degradation of ecosystems. The strategy aims to put Europe's biodiversity on a path to recovery by 2030 for the benefit of people, climate and the planet as per	Paragraph 4.140 updated.

Chapter 4 Section	*ERA Comments*	*Adi Associates' Responses*
	https://environment.ec.europa.eu/strategy/biodiversity-strategy-2030_en. Also, it should be clarified that bringing nature to agricultural land is not limited to organic farming and soil protection.	

RESPONSE TO COMMENTS MADE BY THE ENVIRONMENTAL HEALTH DIRECTORATE

Table 2: Response to comments from the Environmental Health Directorate

EHD Comments	***Adi Associates' Responses***
1. With regards to point 4.66, kindly note that the Environmental Health Directorate, checks bathing water quality of the official bathing sites as per the Bathing Water Directive and not all coastal water.	Paragraph 4.66 updated.
2. Coastal water is to be consider as one of our main water bodies.	ER updated to reflect comment.
3. With regards to Table 5.1: SEA environmental objectives & indicators for assessing impacts: Issue: Climatic factors and climate change: the EHD does not have any data on this topic.	Table 5.1 updated to reflect comment.
4. With regards to Table 5.1: SEA environmental objectives & indicators for assessing impacts: Issue: Material assets: As EHD we only check potable water as per the Drinking Water Directive.	Table 5.1 updated to reflect comment.
5. One of the mitigation measures mentioned in the Specify Objectives states that "spot checks and inspections should be carried out on a regulate basis to address any non conformances". The EHD suggests that a monitoring programme is established to make sure that food safety is maintained. In the cases that these programmes are carried out by third parties, the EHD is to be informed with any products for human consumption that are not safe.	Table 7.2 updated to reflect comment.
6. Another mitigation measures mentioned in the Specify Objectives is "the need to manage the waste, and potential odour". Disposal of waste and waste management is to be in accordance with Local Regulations and as directed by the Competent Authorities.	Table 7.2 updated to reflect comment.
7. In Specific Objective 5: To foster sustainable development and efficient management of natural resources such as water, soil and air, including by reducing chemical dependency; it is important that any water storage does not become stagnant which might cause harbourage of pests.	Table 7.2 updated to reflect comment.

RESPONSE TO COMMENTS MADE BY BIRDLIFE MALTA

Table 3: Response to comments from Birdlife Malta

BLM Comments	***Adi Associates' Responses***
BirdLife Malta has reviewed the Environmental report on the mentioned SEA which is present online. Please find our feedback below. First and foremost, it is important to state that although the report does mention such an important indicator as a Farmland Bird Index (FBI) when summarising environmental baseline data (Table 4.1), it does not refer to it in the section dealing with the SEA environmental objectives & indicators for assessing impacts (Table 5.1). Although the report states that the FBI for Malta is not available, it is not correct: in 2008 BirdLife Malta was subcontracted by the Ministry for Agriculture to establish a baseline for FBI for Malta; later in 2013, BirdLife Malta updated the FBI (please find both reports accompanying these comments). Furthermore, in recent years the Wild Birds Regulation Unit has commissioned the production of Breeding Bird Atlases in 2018 and in 2024, from which FBIs can be extracted as suitable indicators. It is presumed that the SEA process should lead to providing recommendations with regards to data gaps closure if the data is insufficient (which is the case for the FBI). In the scoping report, it is stated: "The SEA will assess the monitoring arrangements proposed for the CAP Strategic Plan and may recommend incorporation of new indicators based on the relevant environmental issues, objectives, and indicators for the programming document." Using the FBI is an absolute must in terms of assessment of environmental impacts arising from the activities under the CAP SP as well as to have a more comprehensive monitoring of the SP implementation, therefore the SEA should include into the list of recommendations the need to update the FBI for Malta as an integrated part of the SEA monitoring process.	Para 4.29 updated.
We also noticed that the table summarising the conservation status and trends for the different species assessments between 2013 and 2018 as per species group	Paragraph updated.

BLM Comments	***Adi Associates' Responses***
(Table 4.3) does not contain the avifauna species in it which is considered as a considerable gap, including in light of a FBI.	
Furthermore, we believe that the proposed Monitoring Plan (Table 9.1) could benefit from adding the following monitoring parameters: ➔ SEA theme: Biodiversity, Flora and Fauna - the state of farmland birds (Farmland Bird Index); ➔ SEA theme: Landscape - number of projects resulting in a negative impact on landscape; the percentage of land uptake and land-use change in comparison to baseline data; ➔ SEA theme: Soil - indicators of soil contamination, including by pesticides, as well as the rate of soil loss comparing to the baseline data	Table 9.1 updated.
We would also like to draw your attention to the incorrect species identification when it comes to Scopoli's shearwater which is referred to as Cory's shearwater on pp.24-25.	ER updated to reflect comment.

Appendix 3: Statement on how SEA Recommendations were taken on Board in the CAP SP

Report on how SEA Recommendations have been integrated into the CAP SP

Title/reference	Category of recommendation	Date	CAP objectives	Description
Reducing greenhouse gas emissions and addressing climate change	SEA Specific Recommendations	06/09/2022	SO4 - Contribute to climate change mitigation and adaptation, including by reducing greenhouse gas emission and enhancing carbon sequestration, as well as promote sustainable energy	SEA Recommendation: In terms of emissions, Malta's agricultural sector has high emissions of greenhouse gasses (GHG), mainly coming from livestock. Measures to decrease emissions from enteric fermentation and manure should be encouraged. In terms of the agriculture sector's energy consumption this is relatively high and continues to increase. Climate change mitigation and adaptation should be encouraged through supporting the reintroduction of local breeds and crop varieties that are more resilient in drier conditions, promoting afforestation, and energy efficiency. Response: With regards to energy consumption, Malta has one of the lowest shares of energy consumption across the EU, at 0.9%, which is below the EU average of 3.3%. Despite this, EE will be targeted through the on-farm and off-farm investment interventions since these may finance the purchase of modern machinery and equipment that is more efficient in the use of energy and resources. Therefore, EE is expected to be targeted through the CAP SP. With respect to climate change adaptation and mitigation, the CAP SP includes support schemes that will incentivise farmers to be more ambitious in their environmental and climate-related commitments (through eco schemes under direct payments and area-based management commitments such as organic farming, maintenance of trees and supporting mechanical control of weeds instead of using herbicides under rural development). Afforestation and planting of trees shall be supported through on-farm and off-farm non-productive investments intervention. With regards to high emissions from livestock and measures to decrease emissions from enteric fermentation, from our understanding MT's contribution to methane and enteric fermentation from agriculture is minimal when compared to other sectors (i.e. such as

				the transport sector), since no grazing takes place in Malta as all cattle, pigs, sheep and goats are housed, and strict legislation on the handling of manures is already established. In this regard, while emissions per head are obviously high due to limited land space, their impact on the overall emissions is low. Malta will be working towards a complete disconnection of farm waste from the sewage network through concrete measures that are aimed at achieving full compliance with the Urban Wastewater Treatment Directive by end of 2026. This will be achieved through the development of three slurry treatment facilities, two in Malta and one in Gozo, that will process farm slurry separating it into a solid fraction and a liquid fraction. The solid fraction will undergo compaction following any necessary treatment to be used as a soil enhancer or processed into other products, whereas the liquid fraction will be treated in line with Directive 91/27/EEC concerning urban wastewater treatment or Regulation (EU) 2020/741 on minimum requirements for water reuse. Pending the setting up of these treatment farm waste will be diverted to the dewatering facility set up at the South Urban Wastewater Treatment Plant. The solid fraction resulting from the dewatering process will be processed in a Processing and Granulation Centre that is planned to start operating by December 2022. Such processing will ensure storage and management of the solid fraction in compliance with the Nitrates Action Programme Regulations (Subsidiary Legislation 549.66). These projects will not only target water related issues but also emission related ones, given that the process ensures the correct handling of slurry and manures. With regards to renewable energy, support is not being foreseen through the CAP Strategic Plan. Malta's potential for further RE deployment is affected by physical and spatial limitations, technological advancement, and resource potential, with resource availability and cost of land being predominant barriers. As noted in Malta's Low Carbon Development Strategy the main expected increase in RE from 2021 to 2030 relates to PVs and solar water heaters which are expected to reach maximum capacity by 2030 due to local roof space limitations. Limitations related to economies of scale and energy storage capacity also hinder the increase in RES uptake while posing restrictions in relation to offshore energy generation. Government has over the years incentivised the use RE

				across households, industry and public buildings and spaces. Various nationally funded schemes are in place to support such investments by households and private operators. As outlined in the Court of Auditors Report , there is limited added value in EU grants for RES as project owners could implement their projects without grants, also in view of the advantageous feed-in tariff. Nevertheless, in line with the NECP 2030, Malta's Smart Specialisation Strategy 2021-2027, the National Strategy for Research and Innovation in Energy and Water (2021-2030), and Malta's Low Carbon Development Strategy the objectives identified in the European Green Deal and the REPower EU Initiative, ERDF resources will explore pilot RES initiatives with a view to pave the way for a new generation of RE.
Reducing greenhouse gas emissions and addressing climate change	SEA Specific Recommendations	06/09/2022	SO4 - Contribute to climate change mitigation and adaptation, including by reducing greenhouse gas emission and enhancing carbon sequestration, as well as promote sustainable energy	<u>SEA Recommendation</u>: As identified in Table 7.2, there are four main approaches to reducing livestock greenhouse gas emissions: husbandry (animal breeding, feed supplements), management systems (stocking rates, biological control), numbers of livestock, and manure management. Reducing the number of unproductive animals on a farm can potentially improve profitability and reduce GHG emissions. Strategies such as extended lactation in dairying reduce herd energy demand which thus potentially also reduces methane emissions. Ensuring that the livestock sector maximizes its efforts cost-effectively, to reduce GHG emissions, can result in potentially significant mitigation of emissions from this sector. Farmers can be requested to identify measures that they will implement to help reduce GHG emissions. <u>Response</u>: Measures addressing manure management are foreseen under the CAP SP as part of the off-farm infrastructure intervention through the implementation of projects aimed at targeting farm waste, converting it to a resource which can be used as fertilizer, which is also in line with the principles of the Circular Economy. With regards to livestock, an animal welfare measure is being foreseen as part of the CAP SP which will incentivise broiler farms to undergo stocking density improvements. On-farm investments that

				reduce GHG emissions, including waste management systems and the purchase of modern machinery that is more energy efficient, can also be supported through the on-farm productive investments intervention.
	SEA Specific Recommendations	06/09/2022	SO5 - Foster sustainable development and efficient management of natural resources such as water, soil and air, including by reducing chemical dependency	SEA Recommendation: Climate change is likely to affect soil erosion, water quantity and water quality increasing risk of droughts and extreme heat with the agricultural sector being particularly vulnerable to these impacts. The proposed targeted investments in more eco-friendly and adaptive systems, as well as less water-intensive farming, should be monitored for take up to ensure such systems are implemented over the life span of the CAP SP. Response: The on-farm and off-farm non-productive investment interventions will support the construction and maintenance of rubble walls, reservoirs, afforestation and planting of trees, all of which can help mitigate soil erosion brought about by torrential rainfall events whose frequency is expected to increase due to climate change.
Enhancing biodiversity	SEA Specific Recommendations	06/09/2022	SO6 - Contribute to halting and reversing biodiversity loss, enhance ecosystem services and preserve habitats and landscapes	SEA Recommendation: The conservation of biodiversity and preservation of habitats and landscape have been identified as potential positive impacts from the CAP SP. The CAP SP's role in implementing these impacts should be fully exploited. Measures addressing actions in Natura 2000 areas should be encouraged. Response: Measures addressing Natura 2000 are foreseen under off-farm non-productive investments and afforestation through measures supporting conservation of existing woodland and support for new tree planting that will contribute to improved habitat and biodiversity, which should be line with existing or newly designated management plans such as the biodiversity strategy and Natura 2000 management plans. Habitat restoration

				can also be supported. Other investments foreseen include on-farm non-productive investments through the restoration of rural on-farm landscape features such as rubble and terrace walls, and habitat conservation actions, amongst others. As regards biodiversity, the eco-scheme related to the implementation of an IPMP and the area-based payment related to mechanical weeding instead of using herbicides, both promote a reduction in use of plant protection products. The CAP SP will also support conversion to and maintenance of organic farming practices that use lower inputs compared to conventional farming. An eco-scheme specifically targeting biodiversity on holdings will also be supported.
Enhancing biodiversity	SEA Specific Recommendations	06/09/2022	SO6 - Contribute to halting and reversing biodiversity loss, enhance ecosystem services and preserve habitats and landscapes	<u>SEA recommendations:</u> In addition to having a positive impact on biodiversity, the encouragement of integrated pest management practices also contribute to the EU Green Deal target on reducing the risk and use of pesticides by supporting lower use and the use of less hazardous pesticides. <u>Response</u>: This is being targeted in the CAP SP through the eco scheme that supports Integrated Pest Management Plan on land parcels, as well as through measures supporting the conversion and maintenance of organic produce, amongst others.
Selection of projects during implementation	SEA Specific Recommendations	06/09/2022		<u>SEA Recommendations</u>: Selection of projects during implementation One of the key recommendations 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 to ensure that project proponents actively pursue environmental requirements. Additionally, and in accordance with the feedback received from the Environment & Resources Authority, preference should be given to proposed development, infrastructure and similar interventions which are least harmful to the environment, which are primarily accommodated in existing suitable committed sites, away from important environmental areas, such as valleys, ridge-edges, cliffs, escarpments, natural habitats and sites, natural coast, etc. Moreover, it is important to ensure that the siting of development and similar interventions on site avoid impacts on site features like rubble walls, trees, etc. Furthermore the CAP Strategic Plan should support projects that seek to: • make efficient use of existing legitimate buildings, structures and infrastructure, so as to avoid new development pressures scattered in the countryside; • restore already degraded land, natural habitats and landscapes where reasonably possible as well as prevent adverse environmental impacts that may arise from indirect and consequential implications of development, such as impacts associated with widening of rural roads, infrastructure, rural tourism, etc; and • improve specific aspects of the environment, including the protection and conservation of the natural/rural environment, including site topography, natural physical features, valleys and watercourses, cliffs/escarpments, old rubble walls, traditional terraced fields, mature trees (e.g. carobs), areas of garrigue(xaghri), maquis or mosaic landscapes (made up of a mix of patches of arable land and patches of garrigue/maquis, and/or characterised by non-trivial rock outcrops, etc.). If implemented correctly, depending on the type of interventions envisaged and other site-specific issues, such measures could also have a beneficial impact on protected sites (SACs and SPAs). <u>Response</u>:

				These recommendations are reflected in Section 5 of each RD Intervention on the CAP SP outlining the principles of selection. MT will continue encouraging and facilitating investments contributing to Environmental requirements in line with the CAP SP ambitions. Whilst ranking criteria will be established through the MC consultation procedure in line with Art. 79 and Art. 124 of the CAP SP Regulation, such actions contributing directly to weaknesses and opportunities identified in the SWOT analysis should be promoted, and shall be weighted accordingly during the selection process.

Appendix 4: Adoption Statement

ADOPTION STATEMENT IN CONNECTION WITH ARTICLE 9 OF THE SEA DIRECTIVE

A Strategic Environmental Assessment (SEA) in relation to Malta's Common Agricultural Policy (CAP) Strategic Plan (SP) 2023-2027 was carried out in accordance with the SEA Regulations (Legal Notice 497 of 2010), which transpose the European Directive 2001/42/EC on the assessment of the effects of certain plans and programmes on the environment.

The CAP SP 2023-2027 is coordinated by the Strategy and Implementation Division within the Ministry for the Economy, European Funds and Lands (MEFL). The Ministry sub-contracted the SEA to independent consultants.

The recommendations emerging from the SEA Environment Report are summarised is Chapter 8 of the Environment Report. In their broad sense the recommendations have been taken on board during the revision of the CAP SP following the completion of the SEA.

The public's comments to the Environment Report are found in Appendix 2 of the Environment Report. The response to the comments is given in the same Appendix. Three entities: the Environment & Resources Authority, the Environmental Health Directorate and birdlife Malta responded to the public consultation process on the Environment Report.

The monitoring programme is found in Chapter 9 of the Environment Report. The competent authority is committed to implement this monitoring programme.