Strategic Goal 6:

Ecologically Diverse, Healthy and Productive Marine Waters, Capable of Supporting Sustainable Growth

The Mediterranean is a hotspot for marine biodiversity and also provides innumerable services, including fisheries and aquaculture, shipping, leisure and recreation, and provision of potable water through desalination. The strategy seeks to achieve balanced management of these varied uses, to ensure that anthropogenic activities in the marine environment can continue to be carried out without negative repercussions on the natural capital and ecosystem services provided by our seas.

SUSTAINABLE DEVELOPMENT GOALS ADDRESSED:

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76.3%

of citizens are highly concerned about marine pollution

76.3% of citizens are highly concerned about marine issues, specifically pollution of our waters[20], likely reflecting the importance of the sea for national leisure and recreation. As an island state with a marine area much larger than the land area, our marine environment is of high national importance, and it is in the best interest of everyone that our seas are duly safeguarded. Apart from its environmental importance, the ecosystem services provided by the marine environment are a significant contributor to Malta's economy, due to sectors it supports such as tourism, shipping, fisheries and energy and water production. Furthermore, maritime culture is fundamental to the Maltese identity. Activities in the marine environment are to respect its environmental limits so as not to jeopardise its contribution towards society and the economy. Otherwise, general degradation of our waters and coast, and the marine ecosystems they support, will occur, thus rendering the sea non-productive.

Management of the marine environment is governed by various strategic policies and regulations, including both environmental and sectoral policies. At the national level, the Marine Policy Framework Regulations (S.L. 549.62), which transpose the Marine Strategy Framework Directive, provide an overarching policy which requires the achievement of Good Environmental Status (GES) in Malta's marine waters through an ecosystem-based approach in the management of human activities. Other important policy and regulatory frameworks include those arising from the Water Framework Directive, the Urban Waste Water Directive and Nature Directives. These, together with sectoral policies, such as those related to transport, fisheries and oil exploration, contribute to the management and sustainable use of the marine environment. A cohesive approach to maritime issues is advocated by the EU Integrated Maritime Policy. It seeks to increase coordination between different policy areas on the basis of key pillars, such as Maritime Spatial Planning and blue growth. Furthermore, in view of the need for shared marine resources to be used sustainably by all involved, regional policies, such as the Barcelona Convention, also have a strong role to play especially by bringing together countries that share marine waters to cooperate and work together towards a common aim of protecting and improving the status of the marine environment.

Where we are

Malta's marine waters host a wide array of species and habitats. Among the most important habitats found in Maltese waters are seagrass meadows, sandbanks, caves and reefs, which are listed in Annex I to the Habitats Directive. Key species include seabirds, cetaceans and marine turtles which are listed in Annex I of the Birds Directive and Annex II of the Habitats Directive as relevant. In accordance with these Directive, these habitats are safeguarded through the designation of Marine Protected Areas, forming part of the Natura 2000 network. Beyond the Marine Protected Areas, management of marine ecosystems is undertaken within the framework of strategies or programmes developed as part of marine-related policies.

Assessments carried out to date indicate that Maltese marine waters have an overall good status, although certain risks have been identified. These include pollution risks within localised areas, such as harbour areas, unsustainable use of resources and the introduction of non-indigenous species. It is worth noting that such assessments need to be based on robust knowledge and data, which are continuously being improved. Pending knowledge improvement, the main pressures on Malta's marine waters that represent the main challenges towards achievement of environmental objectives are described hereunder.

While acknowledging that the Maltese fleet only contributes to around 0.3% (0.26% in 2020) of all catches from EU states in the Mediterranean and Black Sea region[21], unsustainable fisheries is one of the pressures on marine biodiversity, exerting

20 Environment in Malta: Today and the Future (2019)

21 Eurostat – Catches by fishing area

Little Neptune grass

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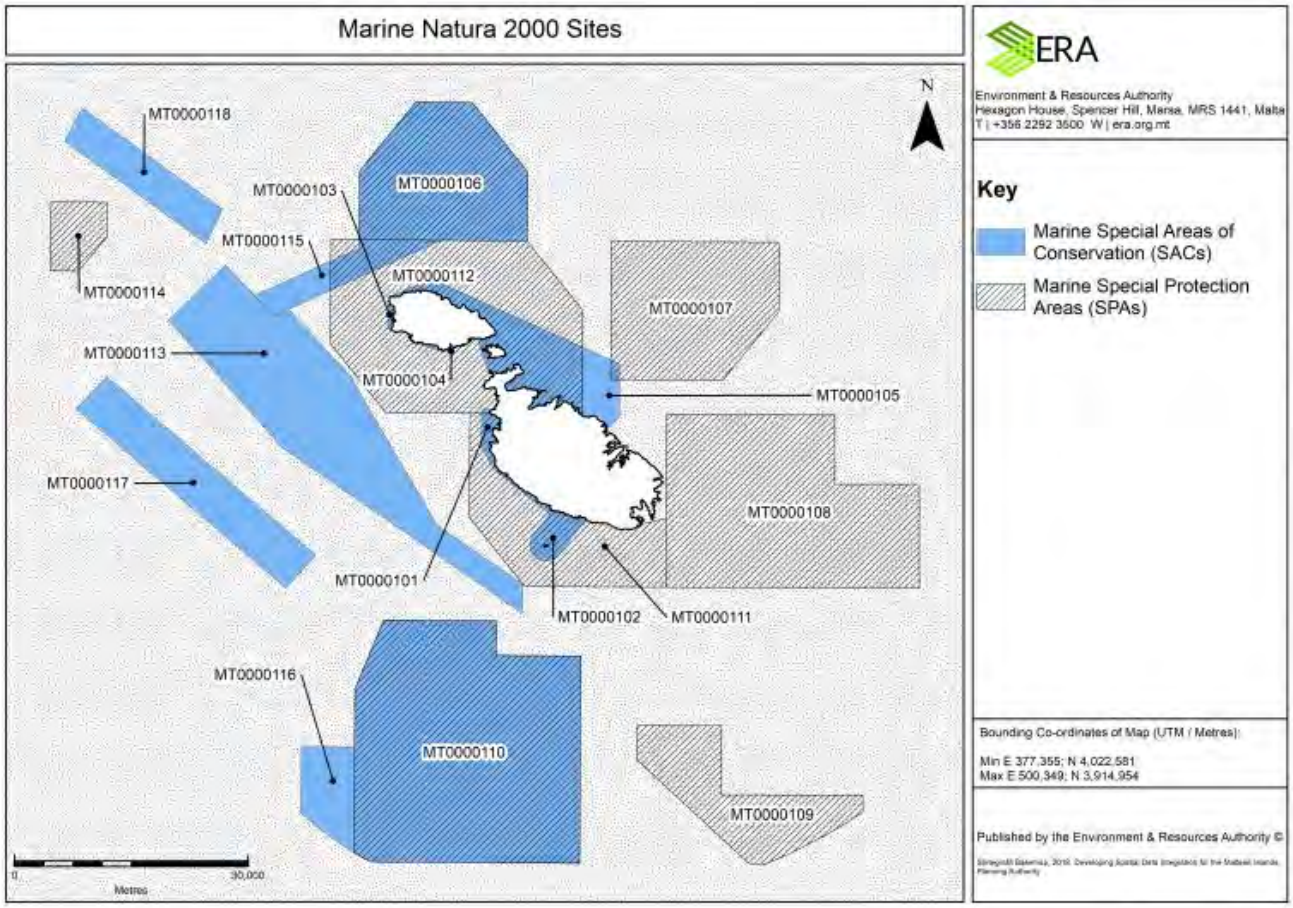
pressure on entire ecosystems as a result of the cumulative impact of the various fishing activities, including secondary impacts such as bycatch and discarded fishing gear. Another threat that our waters experience is the establishment of non-indigenous species introduced, primarily through corridors and the shipping industry. Such species may displace indigenous species if not controlled appropriately.

The level of pollution, which can result from point or diffuse sources, is an important determinant of water quality. Point land-based sources include urban wastewater outfalls, industrial discharges and landfills; while diffuse sources include storm water runoff, agriculture and maritime transport. Mercury is the most problematic pollutant locally, with concentrations in biota exceeding the limits established by EU legislation. This pollutant may gradually accumulate in organisms, some of which are consumed by humans. However, the naturally occurring background levels of mercury in the Mediterranean and any anthropogenic sources are still largely unknown and therefore require further exploration. Other potentially problematic pollutants include anthracene, fluoranthene and benzo(a)pyrene, which largely originate from industrial activities, including those related to maritime transport.

An emerging pressure on the marine environment is that of marine litter, including cigarette butts, plastics and microplastics. Marine litter can be present either floating on the sea surface, within the water column, or on the seabed. Such litter can harm marine life through ingestion or entanglement and can also physically damage marine habitats. Marine litter can also have significant economic impacts, such as by rendering stretches of beaches unattractive for swimming. While data on the extent of marine litter in Malta's waters is improving, it is still limited, and evidence suggests that it is a considerable challenge.



What we've achieved

As of 2021, over 35% (4138 km^2) of Malta's Fisheries Management Zone have been designated as protected areas under the EU Natura 2000 network, through the successful completion of various EU-funded projects. These areas have been designated due to the presence of species and/or habitats of international conservation importance, including cetaceans, seabirds, turtles, coral reefs, seagrass meadows and marine caves. This is being followed up with the development of various conservation objectives and measures as part of an effective management regime for these areas, to ensure that the conservation status of their habitats and species is safeguarded, without negative repercussions on economic sectors. Multiple projects and studies have been carried out to collect data and increase our knowledge on such important species and habitats.

Management plans under the Common Fisheries Policy have been developed for specific fisheries occurring within the Fisheries Management Zone, including the lampara purse seine fishery and the bottom otter trawling fishery, taking into account biological, economic and social objectives. These management plans were developed with the objectives of ensuring the sustainability or aiding in the recovery of the respective fish stocks, while also ensuring financial stability for fishers and safeguarding artisanal fishing activity. The strengthening of the fisheries and aquaculture legal frameworks, coupled with international cooperation, good management and the support of the local fleet of fishermen, has resulted in the recovery of certain fish stocks which were formerly considered endangered. Additionally, monitoring of our bathing waters continues to be carried out. Malta does very well in this regard, achieving excellent quality criteria as stipulated by the EU Bathing Water Quality Directive in 96.6% of all samples in 2020.

The above-mentioned and other marine management aspects are integrated as part of the implementation of the MSFD. Collaboration across sectors is being ensured through the establishment of an Inter-Ministerial Committee to this end. Malta has also adopted a programme of measures which outlines how GES in our marine waters can be achieved. It includes a clear set of targets to direct efforts for the

improvement of various marine parameters, including those related to commercially exploited fish and shellfish, eutrophication and pollution, marine litter and underwater noise.

The Maritime Spatial Planning (MSP) Directive has been transposed into Maltese legislation through the Maritime Spatial Planning Regulations (S.L. 552.27), which state that the Strategic Plan for Environment and Development (SPED), and any replacement spatial strategy, shall constitute the Maritime Spatial Plan for Malta.

These achievements are being supported by more achievements in other sectors. As an example, with respect to marine litter, the long-term 'Saving Our Blue' campaign seeks to further educate and encourage the public to stop littering, reduce waste generation, and opt for alternative products to single-use items. This has been supplemented by regulating the entry to the market and distribution of certain Single-Use Plastic Products which contribute to marine litter, as discussed under Strategic Goal 4. Furthermore, a number of initiatives have sought to address the presence of marine litter originating from the presence of abandoned, lost or otherwise discarded fishing gear (ALDFG) in the marine environment, including by providing a platform for reporting instances of ALDFG to be subsequently retrieved. In the context of chemical pollution, Malta has aligned itself with international efforts in this regard, including in terms of the EU Zero Pollution Action Plan, as part of the EU Green Deal, and the EU Mercury Regulation and Minamata Convention on Mercury, also in synergy with other international instruments. Amongst other achievements, this has led to the phasing out of the importation of certain mercury-containing products.

Where we want to go

This goal seeks to achieve the following overarching environmental aims:

- Coastal and marine waters will be in a good environmental and ecological status
- Marine ecosystems will be fully functional in terms of healthy food webs that ensure the long-term abundance of marine biodiversity.

The principal pressures and threats that affect marine waters will be addressed, including those arising from pollution, over-exploitation of resources, invasive alien species and anthropogenic activities. Degraded ecosystems will be restored or rehabilitated, and the marine environment and its uses will be managed in a balanced manner through concerted efforts by all stakeholders to ensure the sustainable use of the marine and coastal resources in the long term. This will strengthen the marine environment's contribution in mitigating climate change and adapting to its impacts. The transitioning of Malta's blue economy to one that is resource-efficient, resilient and sustainable will be required to continue sustaining the various maritime economic sectors while safeguarding the future health and productivity of the same resources and the ecosystems in which they exist. The contribution of the marine environment to our wellbeing will be duly recognised and incremental behavioural change will be sought to ensure its responsible enjoyment. A holistic approach towards the governance of the marine environment will enable the above to be achieved, through the stronger implementation of existing policies and the creation of appropriate frameworks and mechanisms, while ensuring that the required resources are mobilised towards such actions and supported by a strong knowledge base through research and sound data.

How we're going to get there

STRATEGIC OBJECTIVE 6.1 – PRESSURES AND THREATS AFFECTING COASTAL AND MARINE WATERS WILL BE REDUCED

Key Players: CSD, DFA, EHD, ERA, MAFA, MCAST, MCST, MEEE, PA, PWD, TM, UM, WSC

One of the main pressures on the marine environment is pollution. Many marine contaminants originate from discharges and effluents from activities on land, such as sewage treatment, shipyards, and various industrial processes and facilities. These may result in changes in the physico-chemical characteristics of the water column, possibly leading to habitat degradation and biodiversity loss. Further greening of these industries will be facilitated through appropriate incentives and investment, increasing the uptake of environmental management systems and environmental audits, as well as the associated development of green jobs. Similarly, a review will be carried out to identify any incentives that may be harmful and recommendations for reforms will be made as applicable.

Reduced contamination will also be achieved through an improved regulatory framework and increased compliance assurance, supported by the required capacity. The robustness of the environmental permitting system will continue to improve to cover all sectors related to potential sources of pollution in the marine environment and will be kept up to date in relation to emerging contaminants such as pharmaceuticals. The regulation of such potentially polluting activities will be supplemented with additional good practices that enable contaminant levels to not exceed harmful levels. It will be ensured that the relevant policy and regulatory frameworks are aligned with and contribute to international targets and actions, such as those established in the EU Zero Pollution Action Plan. This will be complemented by a drive towards the use of safer and alternative chemicals by the industrial and agricultural sectors. In instances where the sources of specific pollutants are still unclear, adequate research mechanisms will be enabled to ensure that these knowledge gaps are addressed to obtain a more comprehensive understanding of contaminant sources and subsequently take the required steps to control their levels.

Pollution can result from acute pollution events, such as spills of oil and hazardous noxious substances (HNS). Although such events are unlikely to occur, they should be given due importance since they could have devastating environmental impacts while also affecting critical socio-economic activities, such as desalination and coastal tourism. Existing pollution response mechanisms and contingency plans will continue to be reviewed and updated as required, while continuing to enhance Malta's capabilities to respond to such pollution events.

It will be ensured that any adverse effects on human health originating from the marine environment are avoided. These may result from the presence of contaminants in fish and other seafood for human consumption, harmful algal blooms and the presence of potentially harmful microbial pathogens. These occurrences may also have various negative environmental and socio-economic impacts. Sustained comprehensive monitoring programmes will be set up and implemented to detect high contamination levels early on and to inform efforts to address the situation accordingly. Efforts to green the relevant sectors and industries, such as sewage treatment, will continue to be increased and facilitated. Furthermore, regulation of fertiliser used in agriculture will be enhanced, alongside reducing offal and increasing feed efficiency in offshore aquaculture facilities.

The presence of litter and microlitter in the marine environment has increased drastically in past years. This harms the environment while also causing adverse economic, health and aesthetic impacts. Litter items commonly found on the seabed include various plastic items, discarded fishing gear and tyres. At the fundamental level, whenever possible the generation of litter will be prevented at source and reduced, including by prohibiting certain plastic product from being placed on the market, and increasing the options for reuse and recycling by shifting towards a circular economy. These aspects are discussed in more detail under Strategic Goal 4. Research and monitoring will continue to establish the local sources of marine litter, especially microlitter, to inform actions to be taken to reduce its leakage into the marine environment. Initiatives for the reporting and retrieval of abandoned, lost or otherwise discarded fishing gear (ALDFG) will continue to be carried out and improved as necessary.

The fisheries sector constitutes a significant pressure on the marine environment as overexploitation can damage the long-term sustainability of marine resources. There is a need to maintain and restore fish stocks to ensure they are not exploited beyond their maximum sustainable yields, for the benefit of our livelihoods, marine ecosystems and the fishing industry alike. In addition to the direct impacts on targeted stocks, unintentional pressures also arise on other species through bycatch and/or damage to habitats. Noting the transboundary nature of fish stocks, and Malta's comparatively limited fishing effort, international and regional efforts and cooperation will be sought to continue to ensure that populations of migratory species are exploited sustainably. At the local level, management plans for specific fisheries occurring in Maltese waters will continue to be revised as required to consider ecological aspects and ensure holistic management

SUP removal during an ERA clean up at White Tower bay

of the related fishing activities. Overexploitation will be limited by pushing towards ensuring a high level of compliance with established fishing technical measures, such as minimum landing sizes and vessel restrictions, as well as other relevant innovative practices in fishery management processes and implementation of technical measures. The legal and policy framework related to fishing will be strengthened to ensure that fishing activities are managed sustainably, while ensuring the required capacity is in place to conduct effective controls. This will be complemented by targeted management measures in relation to extraction of species within MPAs to create reservoirs of biodiversity, thus also resulting in the replenishment of populations outside these zones. Furthermore, a harmonised approach towards implementation of fishery management regimes and environmental conservation measures will be sought. Efforts will also be directed towards understanding any market conditions which are driving unsustainable exploitation of fish and other seafood stocks. Some of the pressure on wild seafood stocks can also be relieved by diverting the existing demand to farmed fish and other seafood. Within this context, it will also be ensured that aquaculture facilities operate in an environmentally sustainable manner. The possibility of carrying out specific environmentally friendly aquaculture practices or operations will be evaluated to promote the maximisation and utilisation of available national marine resources.

The threat of invasive alien species is also important, since certain species will readily displace native biodiversity. Measures will be taken to reduce the introduction of new invasive alien species, while mitigating the impacts of established species. The potential of the fisheries sector to control such species will be harnessed, including in terms of data collection. One of the causes of the introduction of alien species is increasing sea temperatures due to climate change. Furthermore, climate change may have other negative impacts on the marine environment, such as impacts on native biodiversity, changes in coastal hydrodynamics and deep-water circulation and sea acidification. In line with Strategic Goal 3, assessments of current and projected impacts of climate change will be undertaken to identify associated vulnerabilities and the greatest risks to habitats, species and ecosystems, to inform decisions and the prioritisation of long-term action, along with identifying the opportunities for the marine environment to contribute to climate change adaptation in line with Strategic Objective 6.3. Specifically in this regard, coastal vulnerability will be assessed to factor in issues such as coastal erosion and fluvial flooding, to support adaptation of coast to climate change.

Another pressure which merits attention are anthropogenic interventions and activities that may result in hydrological changes or impacts on the sea floor integrity, in turn adversely effecting

marine ecosystems. Such activities are wide-ranging, including, amongst others, oil and gas exploration, dredging, deposition of material, and infrastructural interventions. It will be ensured that comprehensive screening and assessment processes, together with permitting and licensing procedures, continue to evolve to minimise any potentially detrimental effects on the environment. The synergy between environmental planning and other regulatory processes will also continue to be strengthened in this regard. These actions will also occur within the context of the management mechanisms mentioned under Strategic Objective 6.2.

Other relevant measures which are complementary and will also contribute to the achievement of this Strategic Objective are listed under Strategic Objective 6.5.

STRATEGIC OBJECTIVE 6.2 – THE NATURAL MARINE ENVIRONMENT WILL BE MANAGED TO SUPPORT THE CONSERVATION OF MARINE AND COASTAL RESOURCES IN THE LONG TERM

Key Players: ERA, MTIP, PA

In response to the pressures that are identified as having an adverse effect on the marine environment, management is required to synergise efforts and ensure the sustainable use of coastal and marine resources for current and future generations. This will ensure that key marine habitats and species have a favourable conservation status, which means that the extent of key marine habitats and the population of key marine species are stable in the long term. It is vital that this management is underpinned by a solid understanding of the interactions and interlinkages between and within marine and coastal ecosystems and activities.

Efforts will be channelled towards a better understanding of the requirements of key marine habitats and species in order to implement targeted management regimes that enhance the ecological functions of marine ecosystems as a whole, including marine protected areas. To this effect, marine strategies will continue to be cyclically developed to define what needs to be done for the achievement of GES in Malta's marine waters. These measures will continue to serve as the environmental dimension of the wider maritime policy. Efforts will focus on harmonisation across relevant policies, as well as sharing of data across stakeholders, to enable concerted holistic management of the marine environment across sectors. Effectively managed Marine Protected Areas (MPAs) will be critical to support the above-mentioned efforts and to conserve biodiversity, sustain ecosystem

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services, and provide nature-based solutions to climate change, while also creating opportunities for diversification of employment and an increase in green jobs. Management of such areas will be through an ecosystem-based approach with respect to the anthropogenic activities occurring within them. Management measures for MPAs will be established, including appropriate delineation of zones defining the activities that are permissible within each of these zones. Further to this, coordinated implementation will be secured early on, with stakeholders having protected areas management responsibilities assuming a stewardship role in caring for our seas on behalf of future generations. These efforts will continue building on existing management initiatives, with the latter also serving as pilot projects. The effectiveness of the management of MPAs will be regularly assessed to check how well an MPA is managed, how well it is protecting its values and how well it is achieving the objectives for which it was created, in turn enabling its management to evolve and adapt in a timely manner.

Additionally, Maritime Spatial Planning (MSP) is an essential process through which different activities are allocated specific spatial and temporal distributions in marine waters to enable a more rational use of marine space and the interactions among its uses, while balancing demands for growth to achieve ecological, economic and social objectives. The ongoing MSP process will contribute to protecting the environment by creating synergies and reducing conflicts and the cumulative impact of maritime activities to ensure sustainability. In order to ensure synergy between spatial and environmental policy, environmental assessments in the marine environment will support the formulation of MSP. Work will be done to adopt an Ecosystem-based Approach to ensure that cumulative pressures are compatible with GES and sustainable use of resources. Similarly, Integrated Coastal Zone Management (ICZM) will seek to promote sustainable management of the coastal zone and the long-term balance of environmental, economic, and social objectives, while remaining within natural limits, as also reflected under Strategic Objective 5.5.

STRATEGIC OBJECTIVE 6.3 – DEGRADED MARINE ECOSYSTEMS WILL BE RESTORED OR REHABILITATED TO INCREASE THE ECOSYSTEM SERVICES THEY PROVIDE AND THEIR CONTRIBUTION TO CLIMATE CHANGE MITIGATION AND ADAPTATION

Key Players: ERA, MEEE

Marine ecosystems play a crucial role in supporting wellbeing, from our food supply and coastal protection to climate regulation. Nevertheless, marine ecosystems are changing and degrading, resulting in impaired provision of ecosystem services. Although restoration or rehabilitation of the marine environment is very costly, allowing natural recovery is often a very slow process. Since this recovery is not likely to occur in a reasonable time scale, identification of specific recovery inhibitors and overcoming these by certain interventions allows this lengthy process to be shortened. Such identification and intervention are the essence of ecological restoration that would build resilience for ecosystems to cope with changing environmental conditions and more frequent extreme weather events, while improving both productivity and integrity.

Natural recovery will be preferred over active restoration interventions when this is expected to occur in a reasonable time scale. However, when this is not possible, restoration and rehabilitation interventions will be considered and implemented as essential elements of management strategies. The areas requiring restoration or rehabilitation will be identified and prioritised, and targets will be set accordingly. These efforts will also take into consideration the need to restore populations of impoverished species, such as those which have been exploited commercially. While the management of MPAs, as discussed under Strategic Objective 6.2, will contribute considerably to the restoration or rehabilitation of degraded ecosystems, such actions will go beyond these areas.

An improved understanding of the exchanges of energy and nutrients through marine food webs will be ensured since these exchanges reflect the functioning of marine ecosystems and hence underpin restoration or rehabilitation actions. Anthropogenic activities can cause changes to the structure and dynamics of the food webs, thus affecting ecosystems as a whole. Modelling tools will

be developed to be able to model the most important marine ecosystems and shed light on important ecosystem processes such as ecosystem productivity and predator-prey relationships. Such modelling will contribute towards informing pertinent decisions which affect marine ecosystems, such as those related to fisheries management.

While the marine environment is significantly affected by climate change, it is also of key importance for mitigating atmospheric greenhouse gas levels, and to enhance resilience towards the impacts of climate change. The protection of marine ecosystems and restoration of degraded ones constitute key nature-based solutions to climate change. Efforts will be made to increase our understanding of the ecosystem services provided by marine habitats to inform policies and decisions for their protection and restoration, and to prevent their deterioration.

STRATEGIC OBJECTIVE 6.4 – MALTA'S BLUE ECONOMY WILL CONTINUE TO TRANSITION TO A MORE RESOURCE-EFFICIENT, RESILIENT AND SUSTAINABLE ONE FOR THE WELLBEING OF CURRENT AND FUTURE GENERATIONS

Key Players: CSD, DFA, ERA, EWA, GRDA, MCAST, MCST, MEEE, MFE, MFT, MFWS, MTA, MTIP, PA, UM

The blue economy is an evolving development paradigm towards a more sustainable and inclusive economic path over marine resources. Blue economy is highly relevant locally because of the potential to expand our economic frontiers beyond the land territory.

At a strategic level, modelling can be undertaken to seek efficiencies in the blue economy to make the best contribution to the economy without harming the environment, thereby increasing resilience through a sustainable blue economy, drawing from interactions between different maritime economies and marine environmental limits that actually sustain economic activity. Consideration will be given to the development of a sustainable blue growth index that adequately captures environmental, social and economic indicators which can also be used to contribute to modelling tools to inform decision-making affecting the marine and maritime realm. The valuation of marine ecosystems and their services

will also be carried out to contribute towards the environmental components of such tools. This will also enable sectors that provide a high potential for sustainable job diversification and growth, such as aquaculture, tourism, biotechnology and energy production to be further greened and developed, coupled with the re-skilling of the workforce to ensure that sustainability and quality of life are put at the forefront. The involvement and participation of all stakeholders, both public and private, will be ensured to realise the full potential of a sustainable blue economy. Knowledge transfer between academia and maritime business sectors will be encouraged to address any challenges. Furthermore, understanding and addressing regional challenges, such as Gozo's double insularity, will be sought in recognition of environmental limits. In this respect, Gozo's feasibility in serving as a hub and a showcase of sustainability initiatives and projects that contribute to the blue economy will be explored.

The three main areas contributing to blue economy are goods, services and energy. Sectors contributing to national blue economy include, amongst others, fisheries, aquaculture, marine and coastal tourism, maritime transport and shipping logistics. Goods derived from the marine environment include those from fisheries and aquaculture, with marine biotechnology proving to be a vast and dynamic field that has the potential to contribute considerably in this regard. Improved sustainability of fisheries and aquaculture sectors is discussed under Strategic Objective 6.1 above. The potential for new research and innovation in the field of marine biotechnology will be harnessed in a sustainable way, including in terms of finding solutions to environmental challenges as also reflected in Malta's Economic Vision 2021-2031. A strong relationship with the private sector will be essential to be able to successfully transfer these innovative ideas to the market. Skill demands will also be catered for accordingly.

One of the largest contributors to Malta's blue services economy is tourism. This is even more pronounced for the islands of Gozo and Comino. Tourists are mainly attracted to the coastal and marine environment for recreational purposes, including for swimming and diving. Malta's waters are consistently classified as being of excellent quality for swimming. There are however multiple opportunities for improving the country's touristic product and greening the coastal and marine-based tourism industry. Growth of this blue economic sector will be managed in a manner that ensures that the ecosystems that underpin tourism opportunities are sustained in the long term. Investment will be shaped to capitalise on the conservation of the marine environment by means of a deliberate approach which follows sound maritime spatial planning, well-designed and funded marine managed areas and

which enables new tools that help local communities and national government make the best long-term decisions possible.

With a specific focus on the coastal and marine areas around Comino, it will be ensured with priority that the islet's opportunities and limitations, including its landscapes, seascapes and nature, will be taken into consideration to enable growth in a resource-efficient and environmentally sustainable manner. While blue economic growth will be strengthened, including through the redirection and creation of jobs, this will respect the limitations of the islet's capacity; its potential as a pristine, remote and unspoilt location; with environmental protection at the forefront. Appropriate synergies that ensure a joined-up approach will also be sought

Another service of the blue economy, which also exerts pressure on the marine environment is maritime transport and logistics, both in terms of its commercial and recreational activity. In recognition of this service's instrumental role for our island due to its strategic location along main trade routes, it will be ensured that this service continues to develop and maintains its competitiveness, while contributing to long-term sustainability of the marine environment and its resources. Ways to strengthen policy frameworks to address impacts arising from recreational activity will be explored and implemented as necessary.

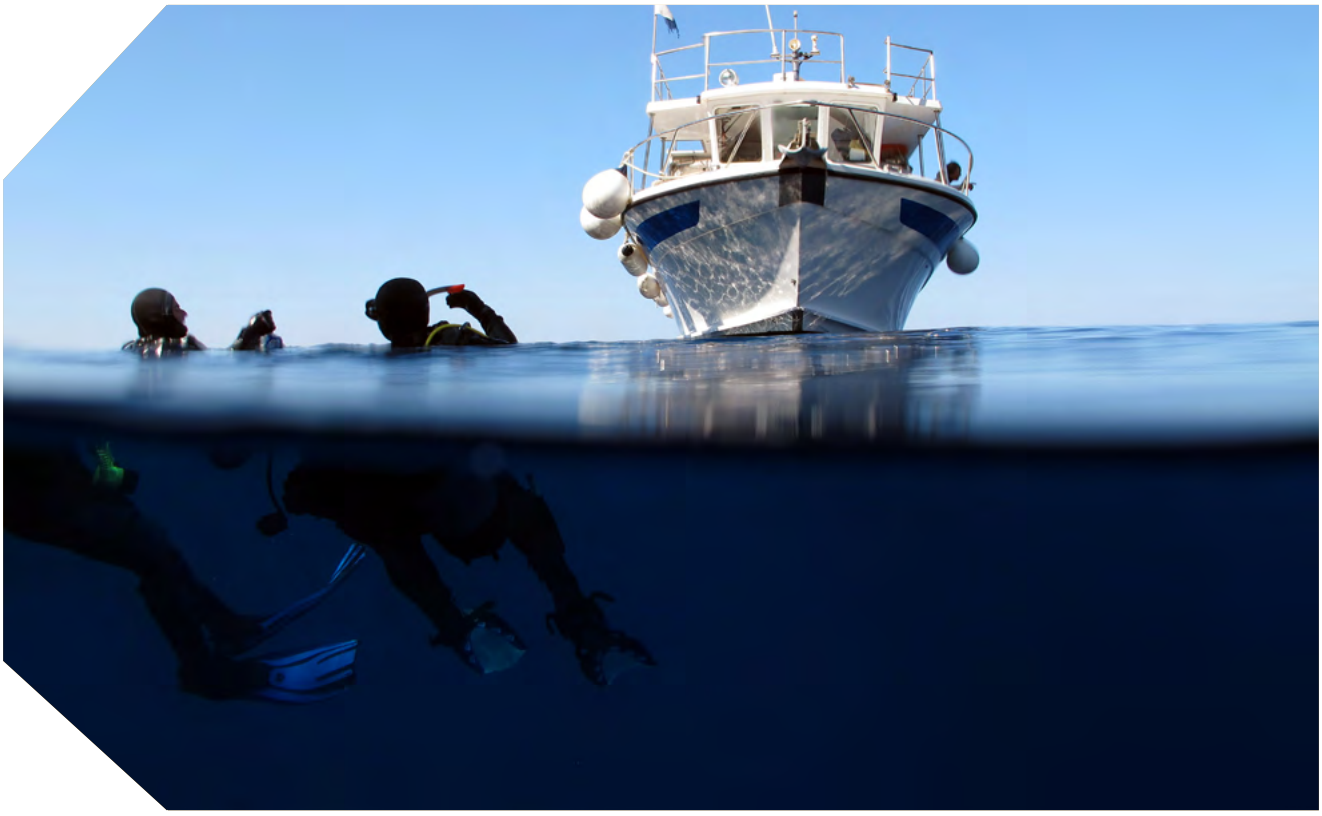
The energy component of the blue economy includes aspects related to oil and gas exploration, as well as renewable energies. There are various opportunities for growth in terms of offshore sources of clean energy in line with Malta's Low Carbon Development Strategy, which considers harnessing possible offshore floating technologies, namely offshore floating wind turbines and solar PVs, to achieve energy and climate targets, while generating economic growth and jobs. Similarly, potential growth lies within hydrocarbon exploration. It will be ensured that these activities respect environmental considerations and long-term sustainability and will follow any relevant assessments and permitting procedures as mentioned in Strategic Objective 6.1 and supported by the tools in Strategic Objective 6.2.

STRATEGIC OBJECTIVE 6.5 – BEHAVIOURS THAT PROMOTE RESPONSIBLE USE OF THE MARINE ENVIRONMENT WILL BE INCREASED

Key Players: DFA, ERA, Fishing Cooperatives, MCAST, MEEE, MEYR, MFWS, NGOs, UM

A culture where individuals and communities take more responsibility for the care of the marine environment will be fostered. The links between a healthy marine environment and human wellbeing, including mental and physical health and thriving economic activity, will be further studied and assessed. This will be complemented with efforts to increase knowledge about these interlinkages amongst the relevant stakeholders who will in turn integrate this knowledge into decision-making. These actions will contribute to a higher appreciation of the marine environment as a whole and the enabling of a behavioural shift among stakeholders towards the conservation of the marine environment. It will be ensured that the marine environment is given due importance as part of environmental education programmes and curricula.

A change in behaviour will also be sought from specific users of the marine environment, to address issues as they arise. Targeted efforts will be directed towards different groups and subgroups as necessary to ensure effective results. In an effort to strongly impact how stakeholders respond, attention will be given to the way information is framed, the methods through which it is transmitted, and other contextual attributes. With reference to commercial fishing, fishermen will be enabled and encouraged to be stewards of the marine environment, by providing opportunities for their active involvement in citizen science and reporting. Changes in existing practices related to bycatch, discarded fishing gear and illegal activities will be enhanced through interventions which address beliefs and norms that give rise to these behaviours. This will be supported by a drive towards use of sustainable alternative fishing gear, coupled with efforts to significantly reduce the presence of abandoned, lost or otherwise discarded fishing gear (ALDFG) in the marine environment. The use of more selective fishing techniques will be enabled to reduce instances of accidental bycatch. Options for re-designing such gear and adjusting fishing practices will be identified to reduce the incidence of discarded or lost fishing gear. Ways will also be sought to encourage consumers to make informed choices regarding consumption of sustainably-sourced seafood, such as through



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specifically labelling sustainable seafood in retail establishments as well as in restaurants.

Disturbance in the marine environment has a negative impact on certain species, which is further exacerbated during the peak tourist season due to the intensification of activities such as recreational boating and diving. Certain species, such as sea urchins, molluscs and crustaceans are vulnerable to direct exploitation for collection or consumption purposes. In this regard, a shift towards a higher appreciation of the marine environment will be enabled to promote sustainable behaviours and activities. Besides ensuring that such activities are duly regulated and compliance is assured, there will be considerable efforts through behavioural campaigns to improve attitudes, education and awareness, ultimately resulting in a transformative change.

Cetaceans, marine turtles and seabirds are particularly vulnerable to threats posed by marine litter, especially plastics. Sustained campaigns aimed at instigating behavioural changes to continue reducing marine litter in terms of generation and correct disposal will continue to be implemented. The organisation of marine clean-ups by NGOs and private entities will continue to be encouraged and facilitated.

STRATEGIC OBJECTIVE 6.6 – THE KNOWLEDGE BASE WILL BE STRENGTHENED AND SYNERGIES MAXIMISED TO FURTHER ENABLE EFFICIENT AND SUSTAINABLE DECISION MAKING FOR THE MARINE ENVIRONMENT

Key Players: ERA, LCA, MCAST, MCST, MTIP, NGOs, UM

Integrated decision-making and coordination of efforts of relevance to the marine environment will continue to be enabled and strengthened, coupled with the required institutional capacity development. Action will not only be undertaken at the national level, but also at the regional level in view of the shared nature of the marine environment and its resources, such as in terms of fish stocks as discussed under Strategic Objective 6.1. Continuous dialogue and coordination between stakeholders will be facilitated in order to discuss the trade-offs and opportunities to reach the required goals, while ensuring that activities may continue to occur within agreed limits. This means that not only the relevant competent authorities will be involved, but also businesses, local communities, NGOs and research entities.

Availability and access to robust and sound data is essential to enable efficient and sustainable decision-

making for the marine environment. Nevertheless, various knowledge gaps remain in our understanding of the marine environment and the pressures and threats it faces, which may hinder efforts aimed towards the conservation of marine biodiversity and supporting sustainable blue growth. Through adequate frameworks and increased and sustained data collection, supported by an increase in the availability and accessibility of funds and resources, research and innovation within maritime sectors will be sought to address knowledge gaps and seek economic growth within environmental limits. New innovative strategies and management structures will be developed in order to manage and use data and information, whereby all stakeholders will have access to local marine data, information and technologies, and therefore the capacity to inform decisions. This requires the integration of various components and sustained technical and financial support. High quality data will then be used to develop marine policy and inform decision-making in a science-based and integrated approach. This will be complemented with the establishment of platforms that enable knowledge, research and innovation findings on the marine environment to be taken up by businesses and economic sectors to address marine challenges and increasing the sustainability of blue economy sectors.

STRATEGIC OBJECTIVE 6.7 – A HORIZON-SCANNING FRAMEWORK WILL BE ESTABLISHED TO ASSESS ACTIVITIES KNOWN TO INFLUENCE THE MARINE ENVIRONMENT FOR EMERGING ISSUES

Key Players: ERA

Activities which may result in degradation of the marine environment which are typically not of concern will be kept under watch by establishing an ongoing horizon scanning surveillance framework for such activities. This is particularly relevant in the context of emerging pollutants, that are not commonly monitored but have the potential to enter the environment and cause adverse effects, which might include products such as pharmaceuticals as reflected under Strategic Objective 6.1. Regular reports on the findings of this horizon scanning surveillance framework will be published. This will allow for the adoption of an adaptive type of management regime which also takes into consideration future risks, involving the monitoring and management of emerging issues. This framework will contribute towards environmental strategic foresight that anticipates future trends, risks, emerging issues, and their potential implications and opportunities to strategically plan for changes, which will in turn inform national policy as discussed under Strategic Goal 8.

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