

AQUACULTURE STRATEGY FOR THE MALTESE ISLANDS

TOWARDS SUSTAINABILITY 2014-2025

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MINISTRY FOR SUSTAINABLE DEVELOPMENT
ENVIRONMENT AND CLIMATE CHANGE

FOREWORD BY HON. LEO BRINCAT

MINISTER FOR SUSTAINABLE DEVELOPMENT,
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When aquaculture was introduced in the Maltese Islands almost three decades ago it brought with it a number of challenges. Here was a new sector that required its own set of regulations, a sector that was unlike most new enterprises since it operated mainly at sea. With the introduction of environmental regulations new developments were subjected to environmental studies to identify the most suitable locations with least environmental damage. Evaluations to assess the likely impacts on other coastal and marine uses were also made to inform the decision making process. All operating farms have now also become subject to environmental monitoring. Today the industry itself has accepted the fact that in safeguarding environmental quality will ultimately result in positive impacts on the farm produce itself.

This process was not smooth. The experience gained in working with the operators to ensure that environmental obligations are adhered to, responding to public concerns whenever ad hoc reports were raised and pursuing effective regulation has been a learning curve that paved the way for Malta to develop into a key player in southern Europe.

As with all activities if we are to aim for sustainability in this sector then the focus

should always be on how it is being managed, from the regulatory aspect as well as from the operational side. Improvement management is expected to lead to improved product quality without environmental damage and conflicts with other coastal and maritime users. In striving towards this goal and supporting growth in the sector the Government is enabling the transition for aquaculture to become a valuable contributor towards the pursuit of greening our national economy.

In seeking to improve environmental monitoring and developing carrying capacities of Aquaculture Zones, this Strategy will contribute to define the limits of sustainability of our marine waters and help Malta in its effort towards meeting the national objective of achieving Good Environmental Status under the Marine Strategy Framework Directive. The strategic direction provided here is expected to illustrate in practice that economic growth and the achievement of environmental objectives can take place in parallel.

In this manner, with innovation in mind and with competitiveness and human resource development on the agenda, with full co-operation from the industry operators, I augur that Malta can become the role model for European sustainable aquaculture development.

FOREWORD BY HON. RODERICK GALDES

PARLIAMENTARY SECRETARY FOR AGRICULTURE,
FISHERIES AND ANIMAL RIGHTS



This National Aquaculture Strategy for Malta is a key milestone for Government and for the sector. For the first time we have laid out a long term path towards clarity for growth and investment in aquaculture. Investment requires clarity in terms of how the sector can develop, what opportunities for growth exist and how these can be achieved through operational parameters.

The first signal that we wanted to give to illustrate support for the sector is the recognition that aquaculture is a valid economic sector with a growth potential. By reaching the production target of 5,000 tons in addition to the tuna penning production until 2020, it is expected that the industry will have up to 1,185 full time equivalent direct and indirect jobs with a Gross Value Added of €70 million to the Maltese economy.

In pursuit to further innovation and competitiveness for the sector the Government plans to develop the sector by encouraging species diversification with increased research and development. This will include the construction of a commercial scale marine hatchery that will meet the needs of the Maltese industry, and the identification of designated marine search areas.

In parallel, the Strategy is aimed at strengthening the administrative and regulatory framework with leadership consolidated within the Fisheries and Aquaculture Department. In line with the European Union's Strategic Guidelines for Sustainable Development of EU Aquaculture, this strategy provides the framework for improved integration in decision making related to maritime spatial planning and environmental management.

This strategy is laying the foundations for improved action by all concerned, from Government's side to enhance its enabling role as well as its regulatory functions as well for operators who have a blueprint up to 2025 of what is expected from them if Malta is to become an integral player in sustainable aquaculture in Europe and the Mediterranean.

It is my intention to ensure that the National Aquaculture Strategy for Malta unfolds into visible and tangible results through implementation. I am certain that as all key stakeholders were involved in its formulation, they will actively engage in delivering the expected outcomes for a sustainable and productive aquaculture industry for the Maltese Islands.

CONTENTS

Aquaculture: A Strategy for Malta	6
Aquaculture: Aquaculture as an important maritime sector for Malta	7
Steering growth towards sustainability	8
Enhanced regulatory clarity	9
Appropriate locations for Aquaculture Zones	11
New potential for growth - search areas	12
Sustainability through improved environmental management	13
Competitiveness through innovation.....	14
ANNEX 1 Implementation Timeline.....	15

AQUACULTURE: A STRATEGY FOR MALTA

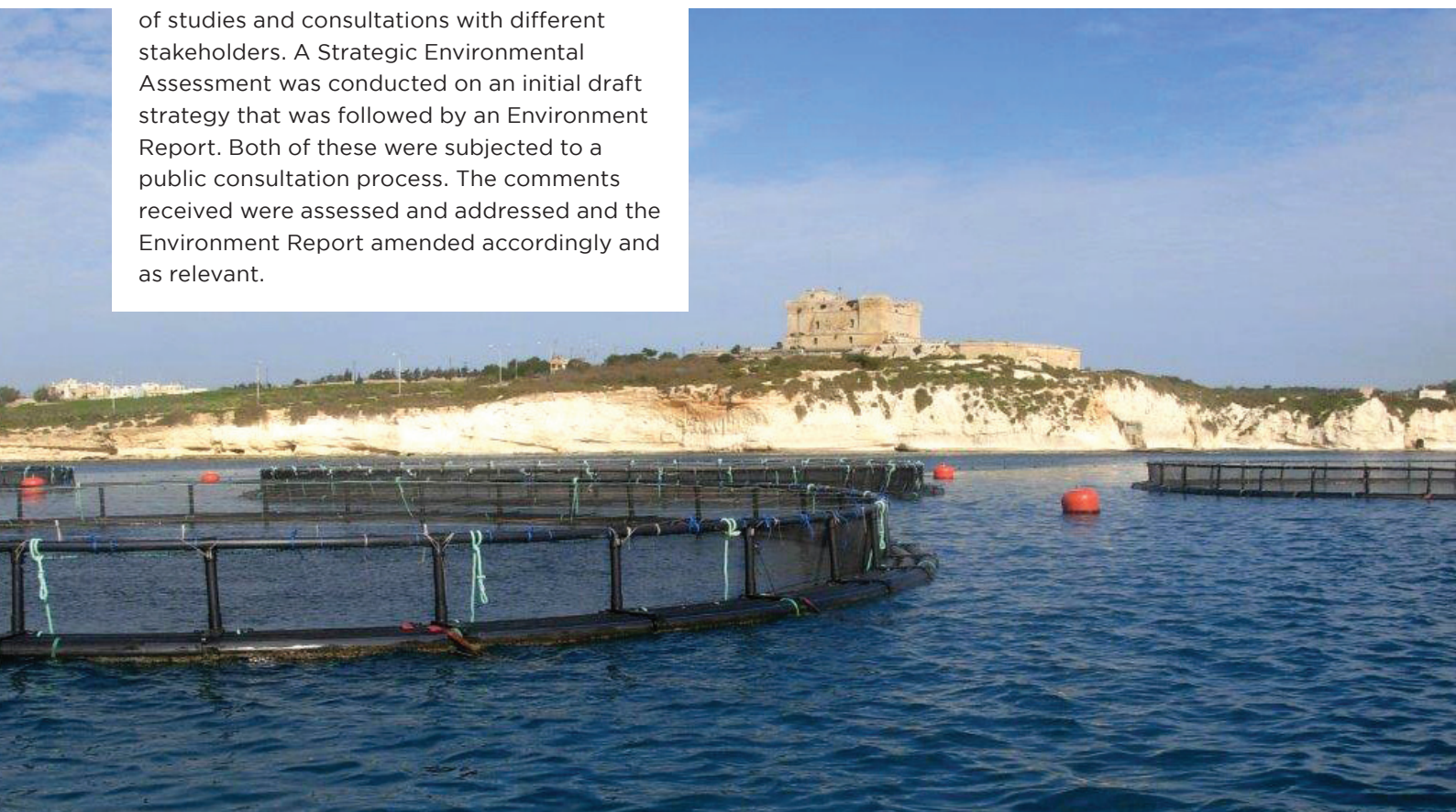
This document presents Government's strategic direction for the future of the aquaculture industry in Malta. It has been drawn up following a thorough consultation process and is intended to provide more clarity for investment, outline national objectives and define priorities and regulatory requirements. This strategy builds on the strengths of the experience gained so far in this relatively young sector since its introduction in the late 1980s. The underlying principle is that of improving competitiveness whilst promoting sustainable practices.

The initial stages for the preparation of this first National Aquaculture Strategy for Malta involved an in-depth study carried out by Stirling Aquaculture of Scotland on behalf of the Government of Malta. This comprehensive exercise was funded through the European Fisheries Fund (EFF), Fisheries Operational Programme 2007 - 2013 and involved a series of studies and consultations with different stakeholders. A Strategic Environmental Assessment was conducted on an initial draft strategy that was followed by an Environment Report. Both of these were subjected to a public consultation process. The comments received were assessed and addressed and the Environment Report amended accordingly and as relevant.

The strategy focuses on seven important areas:

- Aquaculture as an important maritime sector
- Steering growth towards sustainability
- Clarity in regulation
- Appropriate locations for Aquaculture Zones
- New Potential for growth – search areas
- Sustainability through Improved environmental management
- Competitiveness through innovation

The National Aquaculture Strategy laid out in this document sets out a framework for the period 2014-2025. The time line for its implementation is outlined in Annex I. An interim review is envisaged after not less than 5 years from its adoption so as to account for new technical, regulatory as well as economic developments in the sector, as necessary and relevant.



AQUACULTURE AS AN IMPORTANT MARITIME SECTOR FOR MALTA

The Maltese aquaculture industry is entirely dependent on marine resources and has two sectors:

- tuna penning, which relies on captured wild fish and is referred to as “capture based species” (CBS), and
- the farming of “closed cycle species” (CCS) such as sea bream, sea bass and meagre, that are cultured from eggs produced in hatcheries.

The physical characteristics of the Maltese Islands, together with the intense competition from various sectors for coastal space and national objectives to achieve and maintain good environmental status, continue to present a significant challenge for aquaculture. These same challenges have led to the parallel development of operational processes and regulatory procedures which have evolved since the introduction of the sector in the late 1980s. The experience gained has placed aquaculture on Malta’s economic map.

Promotion of aquaculture as a key maritime sector

Government will:

- Ensure that aquaculture is taken into account in all major policy formulation processes;
- Constantly monitor the performance of the sector at regional and international level;
- Play an active role in the development and implementation of International and European Union plans and policies on aquaculture;
- Keep abreast with and actively promoting technological and research development in aquaculture;
- Provide an enabling environment for local businesses to remain competitive.



STEERING GROWTH TOWARDS SUSTAINABILITY

Aquaculture presents specific challenges and in the past, conflicts arose primarily with the more traditional coastal and maritime sectors such as tourism and shipping. A major conflict is that associated with the environmental impact of aquaculture activities. It is recognised that for the industry to perform and grow sustainably, the key challenge for the future is that of improving operational management in such a way as to enhance efficiency, reduce environmental impacts and promote competitiveness. In this respect this strategy recognises four main pillars of development:

- improved regulation;
- improved operation;
- improved environmental monitoring, and
- enhanced innovation.

Notwithstanding these challenges, as highlighted in the 2012 preparatory study¹, the aquaculture industry has considerable socio-economic value and potential. It is seen to contribute in several ways. Specifically it:

- enhances the overall diversification of the economy, especially in primary food production;
- contributes to employment generation;
- is a valuable provider of fish for the local retail and foodservice sectors;
- provides valuable export earnings; and
- contributes positively towards the EU trade deficit for fisheries products.

This strategy envisages a scenario of further growth with the sector expected to provide up to 1,185 full-time equivalent direct and indirect jobs whilst having the potential to provide a gross value added (GVA) of over €70 million to the Maltese economy by 2020.

Aquaculture development and growth

Government's policy is based on the following targeted scenario:

- production target for closed cycle species of 5,000 tons yearly;
- maintain current levels of capture based species (dependent on blue fin tuna quotas);
- development of a hatchery;
- ensure a stronger emphasis on research.



¹ An Aquaculture Strategy for Malta: Preparatory study and recommendations prepared for the Ministry of Resource and Rural Affairs, Government of Malta Final draft report, March 2012. Stirling Aquaculture.

ENHANCED REGULATORY CLARITY

As an economic activity aquaculture has a horizontal dimension in terms of policy impact. For instance it not only takes up scarce land and maritime space but also consumes environmental resources. Consequently, aquaculture as a sector is governed by different regulations.

Since the introduction of aquaculture locally the regulatory framework has evolved and adapted at a reactionary pace that may not have been at the same speed as the development of the industry. As a result the greatest attention and visibility was given to spatial demands and environmental implications with very little attention to the role and performance of the sector as a food production activity. Whilst fisheries and veterinary regulations were still in force and implemented, the general policy direction for the sector was primarily steered and influenced by environmental and planning policies.

A holistic approach to regulation demands clarity in responsibilities so as to facilitate efficiency in processes and procedures. This will directly influence the uptake of investment and the readiness for the industry to compete successfully in the international market whilst doing this within the context of sustainable development.

Aquaculture is also an operation whose regulation needs to be continuously monitored particularly to ensure that operations, including existing ones, are fulfilling national objectives as well as existing permitting conditions. A number of farms have obtained a sea-use planning permit on condition that operations are relocated in the Southeast Aquaculture

Zone. However their physical relocation has been stalled due to pending court litigation.

To mainstream procedures and encourage investment, the process for designating Aquaculture Zones and applications for new Aquaculture Zones will be made by the Fisheries and Aquaculture Department which will be responsible to regulate the use of these sites.

Strengthening the aquaculture administrative framework

Government will:

- regulate the management of all Aquaculture Zones;
- enhance the administrative and regulatory capacity of the Fisheries and Aquaculture Department to reflect the added impetus for the sector;
- review, through the Ministry responsible for aquaculture, the licensing procedure for aquaculture development so as to ensure transparency and sustainability with a view to introduce a periodic operational permitting procedure to instill improved environmental performance;
- review the regulatory mechanism for the use of Government assets used by the aquaculture industry to reflect the commercial value of the industry and the natural resources used at sea;
- ensure proper co-ordination between the various regulators to establish effective implementation of the national aquaculture strategy.



Figure 1: Operational sites to be designated as Aquaculture Zones



APPROPRIATE LOCATIONS FOR AQUACULTURE ZONES

At present in Malta there are six (6) aquaculture farms operating from nine (9) sites. Four farms produce only captured based species (CBSs) or tuna, one farm produces only closed cycle species (CCSs) and one farm produces both CBSs and CCSs. There is one farm producing only closed cycle species that started operations prior to the establishment of the planning system, in the late 1980s. The rest of the farms have been permitted through a rigorous development planning process which assessed potential impacts with other land and maritime uses to reduce conflicts and required the undertaking of an Environmental Impact Assessment (EIA). Such farms are also subject to regular environmental monitoring. The eventual establishment of an Aquaculture Zone in the South East of Malta saw the transformation of the operations management model from that of individual farms to one involving the potential of grouping a number of different operators. The existing cage sites are in approved maritime spaces that cater for the minimisation of user conflicts and thereby acknowledged as sites suitable for aquaculture development.

Location of Aquaculture Zones

Government strategy is that:

- all aquaculture operations should take place in designated Aquaculture Zones;
- all existing sites for capture based species and closed cycle species, including the nurseries, are to be designated as Aquaculture Zones, subject to adherence with the carrying capacity limits established through regulatory and environmental monitoring measures;
- Aquaculture Zones shall respect the limits imposed through environmental methodologies that recognise the link between biomass and impacts;
- area management agreements shall be established between different operators sharing a common Aquaculture Zone.

NEW POTENTIAL FOR GROWTH – SEARCH AREAS

Experience has indicated that whilst the size limitations of the Maltese Islands do not favour land-based fattening installations, the existence of a relatively larger maritime space favours offshore marine installations. The sensitivity and capacity of the Maltese coast to aquaculture production is evidenced in the direct impact on both the natural environment and other recorded coastal uses, primarily from developments close to the shore. When designating new zones, conflicts with existing strategic marine uses should be avoided whilst the fish farms themselves should not cause any adverse environmental impacts particularly on benthic habitats.

Aquaculture development needs to take place sustainably, with specific dedicated sites or zones being identified for the purpose. This strategy proposes search areas that can be investigated further for the possible setting up of new Aquaculture Zones that may become required. It is underlined that the necessary studies and procedures as required by law for the designation of these new Aquaculture Zones have to be undertaken. Such new zones should also cater for operations dedicated to research and development. Aquaculture operations may require land-based operations to cater for ancillary activities that may range from maintenance activities, such as net repairing, to more industrial operations such as those associated with food processing.

Sustainable growth of aquaculture that limits user conflict on land and at sea

Government strategy is that:

- aquaculture facilities intended for fattening of species will only be allowed at sea-based installations;
- further expansion will be considered in Aquaculture Zones where the environmental carrying capacity allows
- future farms for capture based species will need to be sited at water depths of 50 metres or more within areas identified as Aquaculture Zones;
- land-based ancillary installations requiring a coastal location will be directed towards designated fishing ports;
- food-processing and administrative operations will be directed towards areas zoned for similar activities;
- marine-based research installations should preferably be located off-shore: research installations closer to shore will be directed towards designated Aquaculture Zones.

SUSTAINABILITY THROUGH IMPROVED ENVIRONMENTAL MANAGEMENT

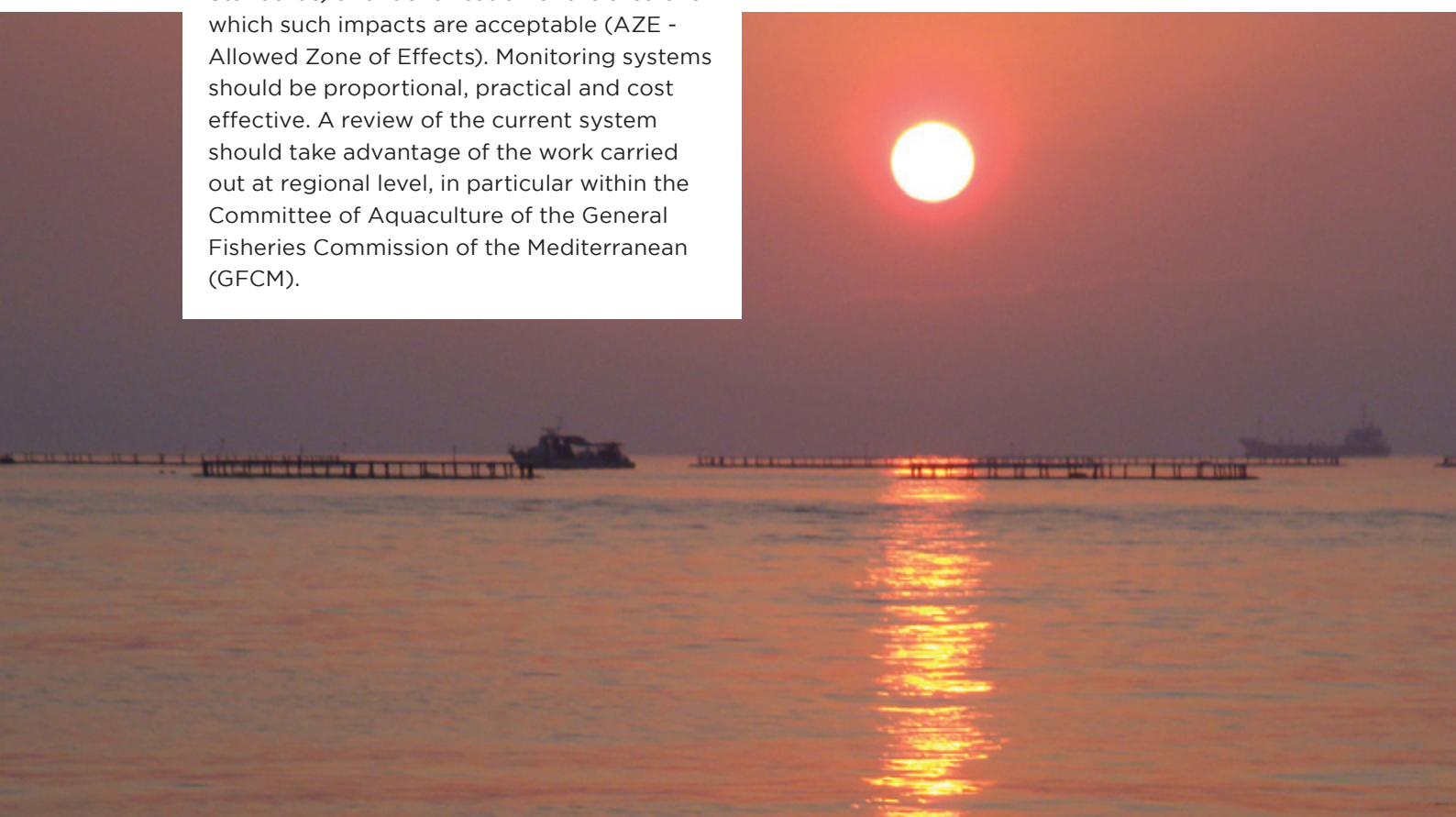
Improving aquaculture farm operations will lead to increased efficiency and profitability of those farms that adhere to the principles of best practice and comply with the conditions of their operating consents, thus ensuring no nuisance is caused to other coastal users. It would also engender a positive public image for the operators. Further development in the industry needs to work within the limits of the environmental carrying capacity of the coastal zone and marine areas. This will ensure that the industry is operating effectively yet within the scope of national objectives for achieving and maintaining Good Environmental Status and Good Ecological Status of coastal and marine waters.

Improved environmental monitoring will result in specified limits to what constitutes adverse impact (EQS - Environmental Quality Standards) and identification of the area over which such impacts are acceptable (AZE - Allowed Zone of Effects). Monitoring systems should be proportional, practical and cost effective. A review of the current system should take advantage of the work carried out at regional level, in particular within the Committee of Aquaculture of the General Fisheries Commission of the Mediterranean (GFCM).

Aquaculture operations to maintain the good quality of the coastal environment

Government will ensure this through:

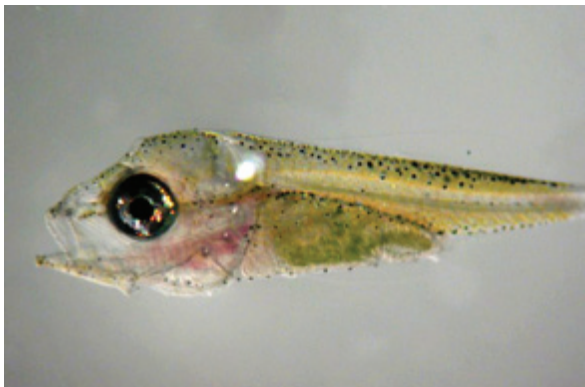
- the development of an Industry Code of Good Practice;
- streamlining the existing environment monitoring system and ensuring that it recognises the link between biomass and impacts;
- strengthening the monitoring and enforcement regime for permits and licences;
- introducing the concept of fallowing particularly for sheltered areas;
- improving the regulation of relevant farm operations including the disposal of tuna offal.



COMPETITIVENESS THROUGH INNOVATION

Research and development, human resource development, fish product diversification and improving the image of aquaculture are all priorities that should not be overlooked for aquaculture progress in Malta. The role of the Government will be to provide an enabling environment towards this pursuit to improve the sector's competitiveness at a national and regional level.

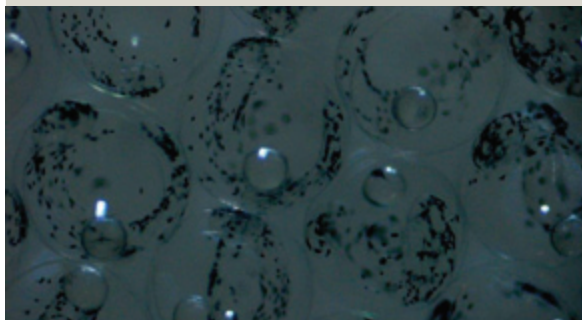
The main emphasis for research and development will be the development of alternative species with the aim of diversifying the species produced by Malta's aquaculture industry. Amberjack production will be the main priority for development due to Malta's advantages in the knowledge of breeding techniques of this species. Research on other species will also be carried out, focussing mainly on Mediterranean species with a look towards the development of non-finish aquaculture with the final aim of developing environment friendly or integrated aquaculture systems. The development and testing of alternative tuna feeds that reduce reliance on baitfish could also improve the sustainability and competitiveness of the capture based species component.



Promoting innovation in the aquaculture industry in Malta

Government will promote innovation by:

- ensuring that relevant EU-funding schemes are geared to supporting companies to improve product marketing and certification;
- developing formal vocational training programmes for Maltese aquaculture;
- establishing an effective mechanism with relevant stakeholders that ensures regular reviews of research priorities and funding;
- encouraging research in species diversification, technological improvement, offshore technology and reduction of environmental impacts;
- ensuring, possible through a private public partnership mechanism, the development of a commercial scale land-based marine hatchery to be also used for applied research and development;
- supporting collaborative mechanisms between the Malta Aquaculture Research Centre and the University of Malta and other institutions in the Mediterranean or in Europe.



ANNEX 1 IMPLEMENTATION TIMELINE

Table 1: Indicative roadmap of actions for the penned tuna sector

	2014	2015	2016	2017	2018	2019
Regulatory Issues		*Updating National Aquaculture Policy *Improving Governance	*Identifying and Applying for New Aquaculture Sites/ Zones		*Standardisation of Concession Conditions *Preparation of Area Management Agreements	
Operational Issues		*Baitfish Feeding Practices	*Production of Codes of Good Practice *Enforcement of Operating Conditions incl. Site Marking	*Production of Codes of Good Practice *Market Development	*Improving the Image of Aquaculture *Improved Fish Disease Diagnostic Capabilities	*Review of Tuna Offal Disposal *Vocational Training Forum
Environmental Issues		*Independent Review of Environmental Monitoring Programme	*Develop Environment Quality Standards and Allowed Zone of Effects Criteria			
Innovation Issues			*Review of Research Priorities and Funding	*Alternative Tuna Feeds		

Table I continued

	2020	2021	2022	2023	2024	2025
Regulatory Issues	*Preparation of Disease Contingency Plan	*Identifying and Applying for New Aquaculture Sites/ Zones				
Operational Issues		*Market Development				
Environmental Issues						
Innovation Issues	*Review of Research Priorities and Funding					*Review of Research Priorities and Funding

Table II: Indicative roadmap of actions for the closed cycle species sector

	2014	2015	2016	2017	2018	2019
Regulatory Issues		*Updating National Aquaculture Policy *Improving Governance	*Identifying and Applying for New Aquaculture Sites/ Zones		*Standardisation of Concession Conditions *Preparation of Area Management Agreements	*Preparation of Area Management Agreements
Operational Issues		*Hatchery Development	*Hatchery development	*Hatchery Development *Production of Codes of Good Practice *Enforcement of Operating Conditions incl. Site Marking	*Hatchery Development *Improving the Image of Aquaculture *Market Development *Improved Disease Diagnostic Facility *Vocational Training Forum	*Hatchery Development *Vocational Training Forum
Environmental Issues		*Independent Review of Environmental Monitoring Programme	*Develop Environment Quality Standards and Allowed Zone of Effects Criteria			
Innovation Issues		*Amberjack Research *Tuna Research *Hatchery/R&D Centre PPP Model and Business Plan	*Amberjack Research *Tuna Research *Hatchery/R&D Centre PPP Model and Business Plan *Review of Research Priorities and Funding	*Amberjack Research *Tuna Research *Hatchery/R&D Centre PPP Model and Business Plan *Review of Research Priorities and Funding	*Amberjack Research *Tuna Research *Hatchery/R&D Centre PPP Model and Business Plan *Review of Research Priorities and Funding	*Amberjack Research *Tuna Research *Hatchery/R&D Centre PPP Model and Business Plan *Review of Research Priorities and Funding

Table II continued

	2020	2021	2022	2023	2024	2025
Regulatory Issues	*Preparation of a Disease Contingency Plan	*Identifying and Applying for New Aquaculture Sites/ Zones	*Market Development	*Market Development		*Identifying and Applying for New Aquaculture Sites/ Zones
Operational Issues	*Market Development	*Market Development	*Market Development	*Market Development		
Environmental Issues						
Innovation Issues	*Review of Research Priorities and Funding					*Review of Research Priorities and Funding

