Comments on the draft Aquaculture Strategy and the SEA Environmental Report

Environment Protection Directorate, MEPA

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1. Introduction

1.1 The preparation of the Aquaculture Strategy is important to address the challenges of the aquaculture industry in Malta in a holistic manner. EPD considers that the Strategy should:

- address the environmental issues associated with the existing fish farms in the first instance;
- ensure that any growth of the industry respects the environmental carrying capacity of the affected marine environment; and
- avoid potential conflicts with other coastal/marine uses and impacts on the coastal landscape, seascape and cultural heritage.

1.2 EPD provided comments on the SEA Scoping Report in July 2012. Most of our comments have been taken in account in the revised Scoping Report and/or the SEA Environmental Report. EPD notes the findings of the SEA Report and agrees with most of its conclusions and recommendations which we consider should be reflected in the revised Aquaculture Strategy. In particular, the revised Strategy should clearly outline the mitigation measures and environmental quality standards required to improve the day-to-day operation of fish farms, including specific permit conditions, standards parameters for monitoring, regular farm checks, preparation of a CoGAP and implementation of Environmental Management Plans, in line with the conclusions of the SEA Environmental Report.

1.3 EPD's comments on the SEA Environmental Report are provided below. These comments should be read in conjunction with EPD's previous comments on the draft Aquaculture Strategy which we provided in 2012.

2. General Comments

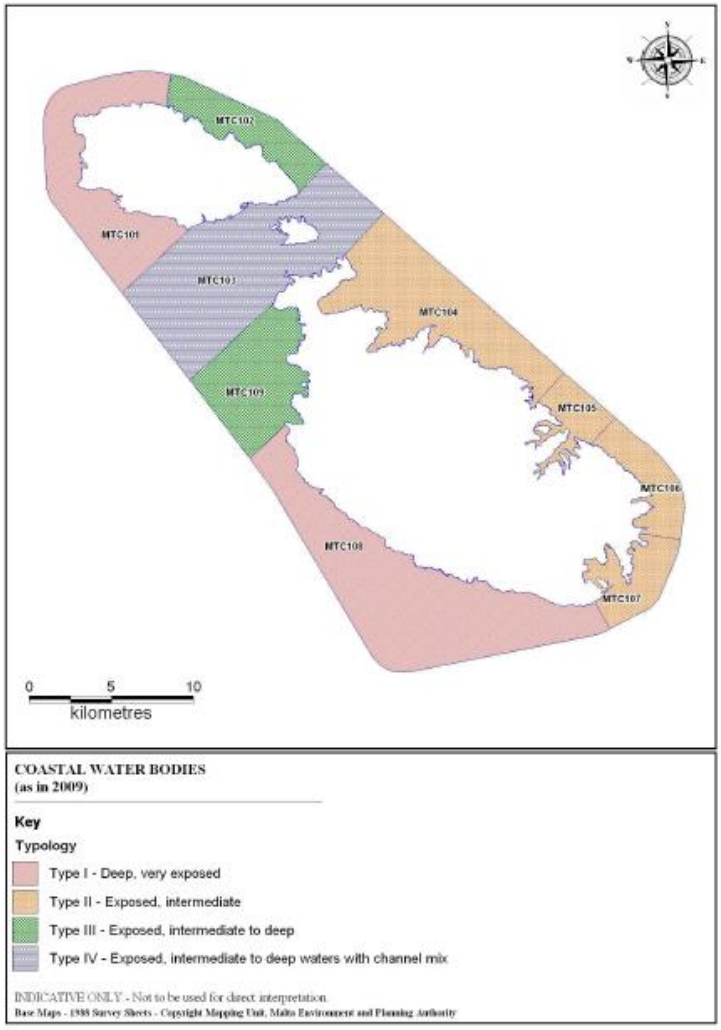
2.1 Figure 2.1 in the SEA Environmental Report shows the existing and proposed aquaculture sites. These aquaculture sites are located relatively close to the accessible part of the coast and therefore, the draft Strategy is likely to affect a significant size of the population in view of the intensity of activities being carried out along such coast, both at sea and on land. Conflicts with other coastal/marine uses (e.g. recreation and tourism) along this stretch of the coast are likely to be significant. The accessible coast and the immediate marine waters, including benthic habitats, are also sensitive to the interventions proposed in the strategy.

2.2 The draft Strategy states that tuna farms should be located more than 1 nautical mile away from the shore and in waters with a depth of more than 50m. However, the SEA Environmental Report does not provide a map showing the

relationship between the aquaculture sites, the distribution of marine habitats, the 1 nautical mile limit and the 50m bathymetry contour. An analysis of the separate maps provided in the SEA Report suggests that some of the proposed sites for tuna farms may be located closer to shore and/or in waters shallower than 50m. This issue should be addressed.

2.3 The 1 nautical mile limit should be measured from the 'Baseline' as defined by provisions of the Water Policy Framework Regulations of 2004 (L.N. 194 of 2004)[1] rather than from the shore. Malta's obligations under the Water Framework Directive (WFD) extend up to 1 nautical mile from the 'Baseline' (see Figure 1), which is further offshore than the 1 nautical mile limit proposed in the draft Strategy. Activities which are likely to have an adverse effect on coastal water bodies designated under the WFD are subject to more stringent controls to limit their impacts on such water bodies (e.g. water pollution and damage to marine habitats). In this regard, it is worth noting that the monitoring surveys carried out in particular fish farm sites and reported in the SEA Environmental Report show that fish farming activities located closer to the shore have had a significant impact on the marine environment.

Figure 1: Coastal water bodies



[1] L.N. 194 of 2004 transpose the Water Framework Directive into national legislation

2.4 Various sites proposed in the north of Malta are located entirely or partly within a marine Natura 2000 site. EPD's comments at scoping stage highlighted that if these sites are considered further, the draft Aquaculture Strategy will require an Appropriate Assessment. Other proposed sites along the eastern coast of Malta are also located in or close to areas supporting sensitive marine habitats (e.g. *Posidonia* meadows). The findings of the SEA Environmental Report show that existing fish farms have had a significant adverse impact on the marine benthos. The sources of these impacts include organic contaminants left over from fish feed and fish excreta which give rise to enhanced nutrients levels in the area, increase sedimentation rates of organic particulates and reduce water transparency. Marine habitats under the cages are the most significantly impacted and such impacts extend to some hundreds of meters away from the cages. The SEA Report also highlights that a comparative study carried out on the effects of aquaculture activities in the general area of Mistra and Il-Gżejjer also showed further degradation on *Posidonia* meadows over time. These findings raise concerns regarding existing and proposed sites which are located within or close to sensitive marine habitats. These impacts are likely to be most significant in sheltered and shallow waters. This will also increase risks of conflicts with other coastal and marine uses (e.g. tourism and recreation) and impacts on the coastal landscape and seascape. EPD considers that sites within or close to sensitive marine habitats should not be considered any further.

2.5 Some of the impacts associated with aquaculture development could be mitigated through improved farm management, better quality standards, enforcement of permit/licence conditions and preparation of Environmental Management Plans. Nevertheless, other impacts are primarily related to poor siting (i.e. incompatibility between the nature and scale of the current use and the physical and environmental characteristics of the site location) and need to be addressed through proper site selection process and relocation of existing inappropriate sites. Therefore, the selection of suitable sites for aquaculture remains important both in the case of tuna farms and Closed Cycle Species (CCS). In particular, the continued use of bait fish in tuna farms, risks of excess feeding practices and fish excretion highlight the need to move such activities further offshore in deeper waters in order to reduce environmental impacts and conflicts with other uses. This would reduce odour problems and possibly reduce impacts on the seabed due to clearing of accumulated waste either by decomposition or currents. It is noted that due to such conditions, the seabed would have greater possibility to recover. Restriction of feeding of baitfish to tuna cages during onshore wind conditions in the summer months, unless alternative feed is found, would also contribute to reducing odour problems although this proposal may be difficult to monitor and enforce. Moreover, the SEA Environmental Report states that if the vacated tuna sites are used for CCS, the negative impacts on the benthos, particularly in sheltered waters, are likely to remain. Therefore, EPD considers that tuna farms should be moved to specifically designated Aquaculture Zones offshore and in deep water (> 50m). Furthermore, vacated tuna sites close to the shore should not be automatically considered for CCS. EPD agrees that CCS should be located in a specifically designated Aquaculture Zone, in locations where the risks of damage to marine habitats, conflicts with other coastal and marine uses and impacts on the landscape and seascape are low.

2.6 In terms of the proposed capacities, the SEA Environmental Report concludes that Scenario 3 (i.e. retention of all existing sites, development of all potential sites, tuna farms moved further offshore and high production capacity) would

have the most significant negative effect on the environment and therefore, should not be considered further. However, Scenarios 1 and 2, which consider a combination of fewer sites and lower capacities, are also expected to have negative environmental impacts at particular sites. Therefore, additional options and alternatives should be considered in the revised Aquaculture Strategy and the SEA Report should be revise/updated accordingly. In this regard, EPD agrees with the SEA Environmental Report that the Strategy should identify a preferred growth option, that production targets are established (whilst taking into account, from the outset, the relevant environmental constraints and environmental carrying capacities) and that marine areas for production are allocated accordingly. The revised Strategy should give preference to existing and planned aquaculture zones, rather than having individual farms scattered along the coast. In particular, EPD notes that the existing South Aquaculture Zone together with the planned North Aquaculture Zone will have sufficient capacity for Capture-Based Species (CBS) which includes tuna farming. Therefore, once the North Aquaculture Zone is approved, there should be no need for additional sea space for tuna farms. Approved Aquaculture Zones, or parts thereof, should be considered actively for CCS and the relocation of existing farms from inappropriate sites needs to be given priority. Additional capacity for CCS should only be considered if the existing approved Zones are demonstrated to be inadequate either due to insufficient capacity, physical constraints or the area's environmental carrying capacity.

2.7 If necessary, additional capacity for CCS should be provided within a designated aquaculture zone which should be identified through a thorough site selection exercise rather than having individual sites scattered around the coast. This means that vacated tuna farm sites and new sites located in shallow waters and/or close to the shore should not be considered prematurely for CCS in order to ensure that such activities do not have significant impacts on the marine environment and do not conflict with other coastal/marine uses. The draft Strategy should focus on finding a suitable search area for CCS taking into account compatibility with other uses, impact on the landscape/seascape, the conclusions of the SEA Environmental Report and the findings of the monitoring studies at existing fish farms. This process should also have regard to the criteria set out in paragraph 233 of the SEA Report. A detailed site selection exercise and assessment of site-specific conditions will be required within the identified search area in order to determine its environmental carrying capacity which will determine the maximum number of cages which may be accommodated, appropriate production capacities within cages and the minimum distances between cages in order to avoid unacceptable cumulative and synergistic impacts. Sensitive marine habitats and coastal seascapes should be avoided upfront, and suitable buffer zones should be established from such habitats where no fish farming activities should take place. This is in line with the findings of the monitoring surveys which showed that the extent of such impact was reported at some distance away from the cages.

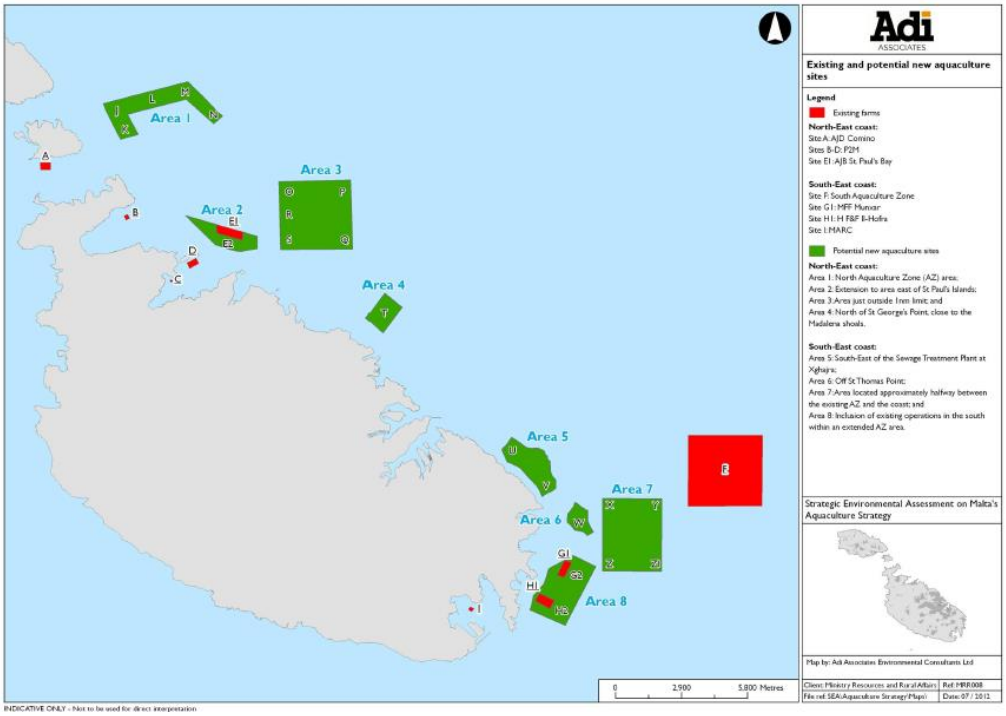
2.8 Current data/information on the marine and benthic environment is limited and this needs to be addressed or (where not reasonably feasible) acknowledged in the SEA Environmental Report such that the information gaps can be duly factored into the relevant decision-making processes. New information on the seabed characteristics is expected to be available later on this year as a result of MEPA's EU project on the Development of Environmental Monitoring Strategy and Environmental Monitoring Baseline Surveys. This project is expected to aid the mapping of the seabed, including its physical and geomorphological characteristics and its benthic habitats. Moreover, a paper on

the Biomaerl Project published by the University of Malta shows that the distribution of the maerl bed extends beyond that shown in Figure 4.7, further towards the north-eastern coast of Malta and Gozo.

2.9 It was also noted that the projected rafting zones, as shown in Figure 6.2, are different from those provided by BirdLife Malta (BirdLife Malta, 2004, *Important Bird Areas of European Union Importance in Malta*). This information should be used to update the environmental baseline in the SEA Environmental Report and the identification of more suitable options and search areas in the revised Aquaculture Strategy.

2.10 EPD agrees with the conclusions in the SEA Environmental Report that search areas 2, 3, 4 and 5 should not be considered further for fish farms in view of the sensitivity of the marine environment. In addition, EPD also considers that Areas 6 and 8 are not suitable for aquaculture activities in view of their close proximity to the shore and sensitive marine habitats. Figure 2 shows the location of these sites.

Figure 2: Existing and proposed aquaculture sites



Source: Adi Associates (2012) Strategic Environmental Assessment on Malta's Aquaculture Strategy: Environmental Report version 1.

2.11 EPD considers that the revised Strategy should also have regard to the required land-based facilities and their environmental impacts, including odour problems from storage of feed and maintenance of equipment directly on the coast particularly in the light of issues encountered vis-à-vis such facilities and related uses at Xrobb l-Ghagin and It-Trunciera tal-Mistra.

2.12 We consider that reference should also be made to the recent discussions with MEPA regarding the accommodation of the land-based hatchery at San Lucjan.

3. Detailed Comments

ER Section	*EPD Comments*
Maps	○ Area 1 should be replaced by the preferred location for the North Aquaculture Zone as agreed in principle with MEPA. ○ The bird rafting zones should reflect the ones provided by BirdLife Malta ○ Figure 6.3 should also super-impose the existing/proposed aquaculture sites, 50m bathymetry contour and the 1 nautical mile limit.
Chapter 3, para. 35	The Environmental Report states that no comments were received on the Scoping Report. Kindly note that EPD provided comments on the Scoping Report in July 2012.
Chapter 4, para. 42	This paragraph should also refer to the National Environmental Policy, 2012.
Chapter 4, para. 62	The National Biodiversity Strategy and Action Plan (2012 – 2020) has been approved in 2012.
Chapter 4, Protected areas and species	Bluefin tuna is listed in the updated version of Legal Notice 311 of 2006, specifically under Schedule VIII (Animal and Plant species of national interest whose taking in the wild and exploitation may be subject to management measures) and therefore, should be reflected in the SEA Environmental Report.
Chapter 4, marine biodiversity	No information is provided on the bait fish used in tuna farms (e.g. quantities used and whether these are cultured species or caught from the wild).
Chapter 4, para. 75	This paragraph refers to coral beds which have recently been recorded (see Figure 4.7). It is unclear whether this is referring to the extent of mearl bed mapped in the paper published by the University of Malta (see comment above).
Chapter 4, para.76	This section does not discuss other benthic habitats as implied by its title.
Chapter 4, Landscape	The section in the SEA Report on the landscape baseline does not highlight the different qualities of the landscape and seascape of Malta's northern and eastern coast and does not give examples of the visual impact of existing fish farms close to shore.
Chapter 4, Material Assets and Population	The scoping report highlighted that the Environmental Report will also assess the impacts of the draft Strategy on commercial fishing, waste management infrastructure, coastal and marine based tourism/attractions, and sea uses. This section of the Environmental Report does not address these issues.
Table 5.1 and Table 9.1, SEA Indicators related to water	Indicator: Maintenance of ecological status in accordance with the Water Framework Directive (WFD). When reporting on this indicator, the ecological status under the WFD is usually defined at the scale of a water body. Ecological status is determined by a number of biological quality elements, the status of which could be influenced by several pressures acting on any water body simultaneously. Therefore, it is important to establish the links between

	aquaculture and its effects on the status of the affected water bodies. Moreover, with respect to nutrient contamination and water quality monitoring, the maintenance of chemical status as defined by the WFD also needs to be ensured.
Table 9.1, Biodiversity, Flora and Fauna	It is unclear how the indicator on Illegal & Unreported and Unregulated (IUU) Fishing infringements is relevant to the implementation of the Strategy, noting that the Strategy deals with the site's operationality and carrying capacity from a national perspective. Moreover, this is not relevant to CCS species.
Table 9.1, Water	The use of a migratory species such as *Caretta caretta* is questionable, noting that in view of the migratory nature of this species it would be very difficult to be able to link to the source of the materials ingested to aquaculture.
Table 9.1, Climatic Factors and Climate Change	It is unclear why only CCS is considered in the indicator, since tuna farms are/will be located in the same waters.