

EBA Position Statement Marine Aquaculture

Executive Summary

The European Boating Association¹ (EBA) seeks to ensure that proper account is taken of recreational boating² activity and concerns when planning *marine aquaculture* developments.

In the EBA's view, four key issues are critical in relation to aquaculture, navigational safety and recreational boating interests:

- The impact of aquaculture on navigational safety
- The location of aquaculture developments
- The end life of structures associated with aquaculture
- Consultation with the recreational boating sector

The EBA believes that the impact that marine aquaculture developments have on recreational boating can be minimised provided that when planning the scale and location of a development, the intensity of recreational boating use, general boating areas, navigational hazards, collision and entanglement risk and marking and lighting are considered.

Background

As the aquaculture industry has grown and evolved it has become clear that aquaculture and recreational boat users can co-exist provided that appropriate actions are taken and areas of high risk avoided.

The EBA recognises the importance of marine aquaculture for the rural economy and that the aquaculture industry can improve local infrastructure such as slipways, quays and jetties to the benefit of recreational sailors. Aquaculture developers should, however, consider the potential to impact on socio-economic activities such as recreational boating, which also support coastal economies.

Types of Aquaculture

There are currently three types of aquaculture facilities which may be developed in European Waters, each with its own particularities. These do not include traditional intertidal infrastructure such as racks, pole cultivation (Bouchot method) or crab tiling, which can pose a risk to inshore recreational small craft.

Fin fish aquaculture

Fin fish aquaculture involves the use of cages in the sea. Provided these are adequately marked and do not block access to anchorages or routes taken on passage, there should not be a problem with this type of aquaculture. Interaction between recreational boaters and fin fish farmers has resulted in an appreciation by both sides of the requirements of the other.

Shellfish cultivation

Shellfish cultivation is focussed on mussels, to a lesser extent oysters, and we are now seeing development for other species, such as scallops. The lines of buoys from which mussel ropes are suspended can be difficult to see, particularly at night, and if inappropriately planned, can cut off access to large areas of sailing water or lead to a risk of collision and entanglement. The EBA recognises the essential importance of clean water with low counts of coliform bacteria for shellfish cultivation, however, it considers that the risk to shellfish farms from recreational boating is low compared with other sources of contamination.

Marine algae cultivation

Increasingly, there are proposals for the cultivation of marine algae. Such farms will be similar to mussel farms with buoys connected together with ropes hanging beneath them. As these schemes would be likely to cover large areas of sea and may be located further offshore than mussel farms, they have the potential to pose significant hazards to recreational sailors. Production can be seasonal, depending on species (e.g. brown or red seaweeds) and it may be possible to alleviate potential navigation hazards by treating farms as temporary structures that can be removed during the recreational season (June to August) or, if not possible, sited away from recreational areas.

Navigational Safety

Prior to departure, mariners are required to make a passage plan based on their assessment of weather, tides, limitations of the vessel and crew, and navigational dangers. Offshore and near shore developments, such as aquaculture installations, become an additional potential navigational hazard to the mariner. If well designed, marked and maintained, aquaculture developments should not be an intolerable navigational hazard for recreational boating. For safe passage planning, developers and navigation authorities should ensure information to mariners is accurate and up to date, particularly with regard to the position and extent of an aquaculture facility.

Collision and Entanglement risk

Provided that an aquaculture development is well marked by day and by night then risks to navigation can be minimised. Navigating around static hazards is part of sailing. However, installations may pose a risk to safety in restricted waters (i.e., narrow passages) or where there is high recreational use along traditional passage routes, at the entrances to ports and harbours or on the approaches to anchorages and safe havens. The EBA has some recommendations to ensure safe navigation is unaffected.

Underwater obstructions are a particular concern. These include anchor chains and ropes between mussel buoys. Positioning ropes and cables can also run at an angle from facilities, resulting in a greater “footprint” of the site than otherwise appears on the surface.

In some circumstances, feed for fish cages can be cost-effectively piped from shore to the cages. As these pipes float at the surface of the water they are a hazard to craft that would otherwise be able to pass between the farm and the shore, for example to reach an anchorage. In these cases, it is important that the location and marking of any impediment to navigation is considered in order to minimise potential dangers.

Recent experience in the UK has shown that it is important that the coordinates of fish farming sites conform to the WGS-84 datum, as the use of another datum can lead to significant errors in the position marked on nautical charts.

The EBA believes that the threat to recreational yachts can be minimised by consulting with stakeholders at an early stage and by following IALA guidelines, together with the requirements of the appropriate national navigation authority, for marking hazards.

Risk management

Risk management provisions should be formulated from the results of a site specific risk assessment that accounts for all types of craft that use the area where a facility is proposed. Aquaculture developers should recognise the significant differences between recreational craft and other vessels, particularly with respect to under keel clearances, resilience to collision damage and entanglement of steering gear and propulsion.

When assessing the risks an aquaculture facility may pose to navigation, it is important to consider the intensity of use by recreational craft, proximity to passage routes, and how craft use the area during adverse conditions (i.e., routes taken in low visibility and to sheltered anchorages and safe havens/ ports of refuge in poor weather conditions).

For recreational craft, developers assessing navigational impacts should take into account the following parameters:

- The number, size and type of local vessels
- The number, size and type of national and international vessels
- The proportion of craft equipped with AIS when undertaking surveys (this proportion may be fewer than 10% in some areas)
- Annual events that are not covered during a short term monitoring programme
- Wave height and sea state conditions
- Seasonal variations including weather conditions
- Proximity to ports of refuge
- Common passage routes for recreational craft
- A range of possible incidents

Risk assessment consists of an objective evaluation of concrete and potential hazards and subsequent evaluation of any associated risks. During the assessment, assumptions and uncertainties must be clearly considered and presented. Part of the difficulty in risk management is that measurement of both of the quantities with which risk assessment is concerned - potential loss and probability of occurrence - can be very challenging, and the chance of error in measuring these two concepts is large. Risk assessments should consider the worst case, i.e. a vessel under

sail approaching an aquaculture facility in stormy conditions at night. This might be, for example, a vessel seeking shelter.

Weather

Current aquaculture developments, such as fin fish farms, are generally located in sheltered inshore waters which also, by their nature, act as refuges for recreational craft in poor weather conditions. Increasingly, newer developments impact recreational craft on passage further offshore. The local weather conditions should therefore be examined in the risk assessment and measures to reduce the effects of poor conditions, low visibility and fog should be included in the risk management plan. The key issue is the exact layout of the aquaculture development within the leased area. Offshore aquaculture will result in different and significant risks in adverse conditions.

Marking and lighting

Much work has been done to achieve consistency in marking and lighting marine aquaculture sites. In the IALA Recommendation O-139 on *The Marking of Man-Made Offshore Structures*, guidance is given to appropriate marking where an aquaculture farm is considered a 'danger to navigation'.

The EBA considers that all such farms should be considered a potential hazard to navigation. We strongly encourage adherence to these guidelines. Lines of shellfish or seaweed farm buoys that lie low in the water can be particularly hazardous to small boats, and effective marking and lighting of the ends of the lines of buoys is essential.

Although fish farms are marked on charts, only the boundary of the active leased area is shown. It is difficult to keep the charts up to date as the actual location and extent of the farms may not match their charted positions, e.g. due to rotation or expansion of sites. It would therefore be more useful for information on 'as-laid' moorings to be made widely available. Post deployment notice of such equipment will be valuable to navigation and fishing interests. The EBA is supportive of this approach and would encourage its adoption more widely.

There is also the issue of farms that are being fallowed; these may still have cages in place but are not always clearly marked in terms of lighting at sea and as navigation marks on admiralty charts.

The EBA supports the guidance issued by IALA and national Marine Aids to Navigation and Lighthouse Authorities, on these issues in order to identify site specific issues that may occur.

Location

The location of future aquaculture structures can be critical for navigational safety. EBA members will engage constructively with national navigation authorities and the marine spatial planning process in their respective countries.

Engagement with stakeholders such as the national boating organisations at an early stage can help speed up the consenting process. The EBA Secretariat can assist in identifying contacts in the relevant EBA member organisations.

Recreational routes, general sailing areas, racing grounds and anchorages must be considered when examining the impacts of aquaculture developments.

Loss of cruising routes and impact on offshore racing

Marine aquaculture developments have the potential to impact on recreational boaters where they are located offshore on common passage routes, or in narrow channels. Some routes, typically in narrow channels with strong tidal flows, may already be hazardous at times to navigate through and additional hazards in these areas may seriously affect navigational safety, particularly for sailors unfamiliar with the waters.

Loss of anchorages and ports of refuge

Along many stretches of coast, recreational craft may need to seek shelter in poor weather. Sheltered harbours and anchorages, and routes to these safe havens / places of refuge should be protected. Anchorages are sheltered inshore areas, which provide either a refuge from bad weather or simply a secure stopping point for boats. However, we recognise that these sheltered areas may also provide good conditions for the aquaculture industry and it is vital that the recreational boating community do not lose these protected areas through intensive aquaculture development.

Although many anchorages have been used for centuries they may not be marked as such on nautical charts although they can be identified in the relevant sailing directions, nautical almanacs and through consultation with the local boating community. Anchorages need to be accessible and it should be possible to be entered under sail (at least by experienced sailors), as well as under engine. Therefore, there is a need to minimise entanglement risk to approaching craft. It is important to note that boats at anchor will swing around their anchor under the influence of the tide and wind and need sufficient room to do so safely – the swinging radius can be calculated as up to 6 times the water depth.

Effect on general boating areas

Many general boating areas are close to the shore and in sheltered waters, however some may extend further offshore, particularly where offshore racing is a significant activity. Recreational activity is important to the health and wellbeing of the community as well as providing economic support for the local coastal economies. Retaining the undisturbed remoteness of some waters will be important in terms of its wilderness and amenity value.

Interference created by an aquaculture development in an area routinely used by recreational boat users would create a significant negative impact on the area and diminish its appeal.

Cumulative effects

Although fish farming, particularly for salmon, is predicted to increase significantly, there has been a trend towards fewer but larger farms. Further, expansion into new areas is now being observed, alongside the expansion of types of aquaculture, in response to various government initiatives. The *cumulative effects* of the aquaculture industry and other developments on navigational routes, general boating areas, racing grounds and anchorages need to be taken into account. The space required for each aquaculture development will have to be considered on a site by site basis, taking into consideration any other proposed developments within the area, such as

offshore wind, tide, and wave generators, to ensure there is still adequate provision for recreational boaters to safely access existing cruising routes and harbours of refuge.

End of Life

Dereliction

Whilst we would hope that these installations remain economically viable for the lifetime of the structures, the EBA recommends that prior to consent being given appropriate measures are taken to secure the removal of the structures at end of life. This will ensure that if an aquaculture development becomes redundant for any reason, it would not become derelict and unmarked or unlit, and thus a hazard to vessels.

Decommissioning

Equally, any decommissioning plan needs to ensure that the structures associated with aquaculture are completely removed. Any parts of the structure remaining after the commercial operation of the aquaculture development has ceased may pose a hazard to navigation and should be avoided. However, the EBA recognises that secondary uses may be identified for some structures that would benefit recreational boating, such as jetties and pontoons. If structures remain in the water, navigational safety must be taken into account and structures should be appropriately marked and lit.

Consultation

The EBA Secretariat can act as a primary point of contact for matters concerning the development of aquaculture sites and the recreational boating sector. The EBA Secretariat can assist in identifying contacts in the relevant national EBA member boating organisations.

Developers may use the local knowledge from these organisations to gather timely site specific information, particularly at the start-up of any project.

Good working relationships have resulted in an effective marine aquaculture industry while preserving the rights of recreational boaters.

The EBA Position on Marine Aquaculture

The EBA believes that the impact that marine aquaculture development has on recreational boating can be minimised provided the following key points are fully considered:

- **Navigational hazards:** If well designed, positioned, marked and maintained, aquaculture developers can minimise the potential navigational hazard to recreational boating;
- **Collision and Entanglement risk:** The EBA believes that the threat to recreational yachts can be minimised by consulting with national and local boating organisations at an early stage and by following IALA guidelines and national navigation authority requirements for marking hazards;

- **Marking and Lighting:** The EBA supports the guidance issued by IALA and national navigation authorities, Marine Aids to Navigation and Lighthouse Authorities, on these issues in order to identify site specific issues that may occur.
- **Location:** Recreational routes, both for local vessels and those on longer passages, general sailing areas, racing grounds, anchorages, safe havens, and places of refuge must be considered when examining the impacts of aquaculture developments.
- **Surveys of Recreational Boating Activity:** Any surveys undertaken to support navigational risk assessments must take account of the low proportion of recreational boats that carry AIS. Surveys must also include radar and visual activities, along with consultation with local boating clubs, to fully assess recreational boating intensity. Note must also be taken of the timing of surveys to include the main boating season and any regular events.
- **General boating areas:** Interference created by an aquaculture development in an area routinely used by recreational boat users would create a significant negative impact on the area and diminish its appeal. Socio-economic impacts must be fully considered in any licensing or planning application.

Notes

¹ **European Boating Association**

The European Boating Association, Europäischer Sportschiffahrtsverband, Association Européenne de Navigation de Plaisance, is a civil, not for profit association of recreational boat users' organisations, founded in 1982, and established as an Unincorporated Association whose members agree to be governed by its constitution. The EBA member organisations (see <http://www.eba.eu.com/participantorgs>) collectively represent in excess of 1.5 million recreational boaters and an estimated 20 million active participants.

The purpose of the EBA is to represent the mutually agreed common interests of national recreational boat users' organisations in Europe, and in particular to:

- Coordinate and develop recreational boating activities in Europe by exchange of information, and action on matters of mutually agreed common interest.
- Promote the practice of all activities on the water, promoting and exchanging knowledge and experience between recreational boat users' organisations in Europe.
- Represent EBA members in environmental, regulatory and technical matters affecting their safe enjoyment of recreational boating activities on the water.
- Encourage the safe, unhampered and environmentally sustainable use of recreational boats on all European waters.
- Provide the link between the European institutions and EBA Members for consultation and information on proposed EU directives and regulations.
- Provide the link between other relevant global and regional organisations and EBA Members.

² **Recreational Boating**

The EBA is the European representative organisation for recreational boating.

There is no general consensus as to the terminology used to describe the types of boat used for “recreational boating”, with expressions such as “recreational craft” or “private pleasure craft” being used to describe only subsets of such types of boat for the purposes of specific pieces of EU legislation. “Recreational boating” also includes the use of beach- or slipway-launched water toys such as wind surfers, sailing dinghies, inflatable boats and personal watercraft.

Boats used for “recreational boating” may be small or large, propelled by sail and/or power and used on inland waters and/or at sea. “Recreational boating” at sea can range from close-to-shore to trans-oceanic.

“Recreational boating” also includes the use of such boats privately owned and operated by the owner, hired (on bareboat or skippered charter) or used to provide a service (such as training or race participation).

In the context of this document, therefore, the EBA considers “recreational boating” to mean using boats that are designed or adapted for sport or leisure, whether propelled by sail and/or power, for the purposes for which they are designed or adapted.