

**AQUACULTURE ENTERPRISE ZONES**  
**Concepts for Development**  
*Maryland Aquaculture Coordinating Council*

**Background**

Maryland Aquaculture Plan

The concept of Aquaculture Enterprise Zones (AEZ) has existed for years. Early in the administration of Governor Schaeffer, a committee was appointed to create a state aquaculture plan. The Governor was interested in the potential economic benefits of expanding the industry in Maryland. During committee discussions, the concept of AEZs was raised. It was suggested as a way to solve one of the most continuously identified problems in shellfish aquaculture – the theft of privately owned aquaculture products from growing areas.

It was noted that, in areas where shellfish aquaculture had grown and become successful, various models for protection of private property had been developed. In a state like Maryland, where maintaining both a public and private fishery was deemed beneficial, a way needed to be created to keep theft of private shellfish from occurring, if investment was to be successful. The



idea of aggregating, or placing leases together, was suggested. This model had been successful in the Nanticoke area, although it had developed there as an unplanned adjunct to the growth of one of the largest oyster businesses in the United States.

During the 1980s, approximately twenty-six percent (26%) of the oyster leases in Maryland were in the Nanticoke area (this included the Upper Tangier Sound, Nanticoke and Wicomico rivers). Aggregated lease areas were found in several other parts of Maryland as well, usually in conjunction with the location of large oyster processing companies. Keeping leased areas in proximity seemed to provide additional eyes and ears for growers to police their property for protection. While the concept of AEZs was discussed by the committee in formulating the State Aquaculture Plan, it was not included in the final version.

The mandated aquaculture plan was produced within ninety (90) days and led to passage of legislation designed to support and expand the industry. However, the most contentious topics were not addressed, including the opening of more areas of the Chesapeake Bay to leasing, or the creation of AEZs. With declining interest in aquaculture at high levels of government during ensuing administrations, shellfish aquaculture never expanded or reached what some thought should have been its actual potential for growth and economic development within the state.

**Seafood and Aquaculture Task Force**

In 2003, the Maryland Legislature created a task force to expand the seafood and aquaculture industries. In creating this group, it was noted that the seafood industry had declined, largely due to the loss of most aquatic resources in the Bay. Aquaculture had potential but had not lived up to its economic promise. This task force investigated and discussed concepts and ideas for expansion. During the task force process, the University of Maryland Agricultural

Experiment Station funded two conferences for informational support. The first, a Maryland Aquaculture Development Conference, was held in Annapolis during August of 2003. Among the topics discussed were AEZs, using models in use in Florida and Alaska as working examples.

#### *Florida model*

In Florida, a statewide referendum led by recreational fishing interests, had led to the banning of gillnets as a legal harvest method in coastal waters. The resulting unemployment within the fishing industry caused several projects to be carried out as an alternative for unemployed fishermen. The most successful was the development of hard clam (*Mercenaria mercenaria*) aquaculture using soft bags on leased bottom made available by the state. Within a decade, the popularity and economic success of this method led Florida to become the leading producer of hard clams in the nation. On the west coast of Florida, an area was created providing leases to commercial fishermen willing to transition to growers. In the first several years, a barge with living accommodations was anchored on the grounds and growers would take turns spending time onboard as a cooperative means of protecting the product. In later years this was abandoned, since most local fishermen became part of the business.

Florida also changed its laws so that all aquaculture was placed under the Department of Agriculture and Consumer Services (DACS). Growers obtained certificates for operating and had to adhere to a set of Best Management Practices. They were overseen by inspectors of the DACS, who visited them annually to ensure compliance. Centralizing authority within a single state agency was deemed critical to success in the industry and has been strongly supported by the Florida producers.

#### *Alaska model*

Alaska also reportedly created an AEZ as a means of attracting economic development to one of the poorest areas of their coast. A nine hundred acre site was created for the purpose of shellfish aquaculture with a simplified application system for residents wishing to obtain a lease in that area. Alaska has not traditionally been friendly towards aquaculture and, with its strong tradition of salmon harvesting, has banned finfish aquaculture. The move towards pre-permitting a shellfish aquaculture site was considered a major step in bringing economic development to a depressed area. Significant work was done with indigenous tribes and other citizens in order to generate support for this concept.

## **2005 Maryland Aquaculture Legislation**

These models were discussed during the Aquaculture Development Conference by representatives from several states. At the conclusion of the Maryland Seafood and Aquaculture Task Force, recommendations were submitted to the legislature. These led to passage of 2005 legislation designed to solve several problems. First, the creation of an Aquaculture Review Board placed state regulatory agencies together on a regular basis to track permits and resolve interagency problems. Second, the Aquaculture Advisory Committee was replaced with a Maryland Aquaculture Coordinating Council. As part of its assigned tasks, the group was charged with developing Best Management Practices for all forms of aquaculture; annually reporting to the legislature regarding ways to advance Maryland aquaculture; and recommending Aquaculture Enterprise Zones. No definition of AEZs was provided in the legislation for guidance with their identification or development.

## **Concepts**

Aquaculture Enterprise Zones could provide several functions critical to the success of an aquaculture business. Among these are:

- Protection
- Permitting
- Magnet areas
- Economic development

### *Protection*

Critical to success in all aspects of society is the reliance on protection provided for private property. We recognize this as a basic right of people and an important function of government. Without protection for private property rights, loss of property will quickly render any business insolvent. In shellfish aquaculture, this has been a principal cause of concern for decades, as property has usually been placed on bottom leased from the state. This has frequently been stolen at night or during periods of reduced visibility. Surveys of leaseholders in both 1979 and 2002 placed theft near the top of the list of problems and concerns. It takes only a small number of people to steal enough to cause a business to cease to exist. In many cases over the years, a combination of lack of enforcement personnel to help police private leases, lack of vigor on the part of prosecutors to seek significant penalties for those caught stealing aquaculture product, and a reluctance by judges to consider the taking of private aquaculture property as theft worthy of heavy penalties has unfortunately been the norm. If this problem is not solved, the shellfish industry cannot and will not be able to expand successfully.

Aggregating leased areas for shellfish production has been one method suggested to help combat theft, by placing many leases in a single location. Having many producers in a designated area would create a corps of growers, all of whom would have a vested interest in making sure that property was protected and working together to help carry this out. Having a designated AEZ would allow law enforcement personnel to more effectively police these areas, helping to watch for thieves and more effectively targeting protection.

### *Permitting*

AEZs could assist and attract industry by easing permitting in these designated zones. This would entail having AEZs located in areas where applicants could quickly and easily obtain the leases needed for their businesses or, in an ideal situation, having zones pre-permitted. These options could require legislative action, depending upon the site, type of culture system, and

other factors, but could help solve industry problems with current long periods of time for permits to be approved prior to startup of a business.

The process of identifying pre-permitted zones would also allow for input from the wide range of interests that could be effected by these zones. There are many users of the bays and there is a need for input from general public as well as organized NGOs in the process of identifying AEZs. However, there should be the recognition that shellfish aquaculture is essentially a beneficial industry, with significant positive environmental factors in addition to those of economic development.

#### *Magnet areas*

A concept that could be provided is that of using AEZs as a means of attracting new entrants to the aquaculture industry, as well as helping to guide them to areas where they would be more likely to find the support of government agencies and other groups. This could help to make the businesses more successful. Having areas that are pre-permitted would help in this regard. While it is not assumed that AEZs would be the only areas allowed for either bottom or water column leases, having those that are readily permitted would provide a significant attraction for a potential business person to locate in one.

Creating AEZs that are large enough to attract multiple shellfish growers, for example, would also provide a way for shoreside facilities to be used cooperatively between producers, as well as offering an attractive area for supporting businesses to locate nearby in order to service the industry. This could also involve local planning and zoning personnel in the process of identifying and locating AEZs, since they are most aware of the situations and planned uses of their locales.

#### *Economic development*

An area that has not been adequately determined is that of using AEZs to aid economic development in shoreside or upland areas. Here, they could be useful in several ways. First, in order to be successful in any marine businesses, there needs to be a shoreside component that supports the open water operations. This requires dockage, storage, and other support facilities. In this, AEZs could incorporate a shoreside element that would include these functions.

Along with that could be the use of shore-based AEZs to attract support businesses that could further economic development in a location. Processing, marketing, and transportation facilities could be used to support jobs and development the infrastructure necessary for industry support. In essence, the creation of an AEZ as an aquaculture industrial park could be investigated.

A concept of a shore-based AEZ could also include attracting other forms of aquaculture production, such as recirculating production systems. Many of these systems have been tried in Maryland, where most have relied on the production of tilapia for the live foodfish market. When that market became saturated, most producers ceased operation. Other opportunities, however, still exist for growers. For example, one business on the Eastern Shore began by raising ornamental fish for the aquarium trade, while another is raising shrimp. University of Maryland facilities at Horn Point and the Center for Marine Biotechnology in Baltimore are examples of operations that can support potential industry through research and education. Both have worked with industry in the past and could be incorporated into a development

program that could be used to support development of an AEZ targeting tank culture of multiple species.

### **Organization**

The Maryland Legislature charged the Maryland Aquaculture Coordinating Council (MACC) with the task of recommending Aquaculture Enterprise Zones. Therefore, it is suggested that the following steps be taken to provide recommendations back to the Legislature regarding this issue:

1. *Creation of subcommittee*: A subcommittee to address the topic of Aquaculture Enterprise Zones would be made up of appointees from the MACC and chaired by the Aquaculture Coordinator.
2. *Expert resources*: The subcommittee would be empowered to request assistance and advice from persons able to provide relevant information to them for their report.
3. *Outcomes*: The subcommittee would be charged with investigating existing Aquaculture Enterprise Zones in the United States for applicability to Maryland. Information would include:
  - a. What models exist for AEZ that would be suitable for Maryland?
  - b. What should the definition of an Aquaculture Enterprise Zone be?
  - c. What benefits should an AEZ bring to the State?
  - d. What should be the benefit of locating a business in an AEZ?
  - e. Where should AEZs be located? In carrying out this item, the subcommittee should recommend locations and sizes.
  - f. What laws or regulations would need to be modified, enacted, or deleted for establishment of AEZs?
4. *Timeline for completion*: The subcommittee will provide interim reports on their progress at the March and May meetings of the MACC. A draft report on findings and recommendations will be reported by the subcommittee at the September meeting by discussion and vote of the MACC, with resulting recommendations to be submitted to the Maryland Legislature in the next annual report of the MACC by October 1, 2007.

**NOTE ON PROJECT TO DATE (2008):** With the creation of the Maryland Oyster Advisory Commission (MOAC), and the charges given to that body by the General Assembly, it has been decided not to finalize this project for submission during the 2008 legislative session, but to further refine the concept of the AEZ and spend the time to more fully address issues involved in site selection. It is the intention of the AEZ Subcommittee and the Maryland Aquaculture Coordinating Council to submit plans for development of these zones to the MACC for review and approval and then to forward the plan to the MOAC with the objective of having the plan included in a comprehensive legislative package on oyster restoration for the 2009 General Assembly.

*Don Webster*  
*University of Maryland*