TWO FLORIDA COMMUNITIES – A Hypothetical Case Study

Two island communities in Florida were approached by shrimp farming entrepreneurs. One community said yes while the other community said no. Why?

A few years ago both Gull Island and Tern Island were approached by separate companies wishing to establish shrimp farming operations on their islands. The majority of the year-round residents on Gull Island and Tern Island make their living as fishermen and wild shrimpers. While the residents of Tern Island fiercely rejected the proposal for shrimp farming ponds on their island near the coast, the residents of Gull Island grappled with the proposal for some time and eventually decided to accept it and try shrimp farming, hoping to supplement their traditional fishing income. What prompted these two similar communities to have such different responses to shrimp farming on their islands? Let's take a look at these two different approaches.

Tern Island

In 2003, a representative from Shrimp Servers Inc. submitted a proposal for a 10-year lease of 100 acres of coastal lands on Tern Island. The residents of Tern Island were first introduced to the proposal at a public hearing. No attempt was made to introduce the idea to Tern Island's residents prior to the hearing, and the people of Tern Island were not pleased about being left in the dark.

The proposed 100-acre lease area was near coastal mangrove forests, which were important breeding and feeding grounds for the fish and wild shrimp that the residents depended on for their income. The fishing community was concerned about not having access to the coast near those 100 acres but, more importantly, they worried about the effect the shrimp ponds would have on the nearby waters and mangrove forests. They feared contamination of the water from the shrimp food and waste, antibiotics used in the ponds, chemicals used in the shrimp foods, and diseases spread by the farmed shrimp. Another fear was that escaped shrimp could mix with wild shrimp and negatively affect the local native shrimp species. Many of these fears were valid, while others were not. Contamination problems have arisen in some shrimp pond operations due to poor management. Producers using better management practices and following U.S. regulations would have a very low risk of contamination.

The effect of aquaculture on the local economy was another issue for the residents of Tern Island. While Shrimp Servers Inc. promised economic gain, residents feared that the big corporation would bring workers from off-island. Residents researched the job total and determined that there would be a total of only three to five jobs available, which might not make up for the money lost from the 100 acres of land leased to Shrimp Servers Inc.

Another issue was tourism. Tourists and summer residents alike are attracted by the beauty of the island. In the summer, the size of the island swells from 1,200 to 6,000. Islanders feared the shrimp ponds would be an eyesore that would compromise the natural beauty of the island, deter tourists, and reduce the property value of their homes. Due to community opposition, Shrimp Servers Inc. withdrew its proposal.

Gull Island

Soon after the Tern Island aquaculture fiasco, Gull Island was approached with a different shrimp farming proposition. Initially, a representative of Shrimp Lovers Ltd. came to the island to speak with members of the Gull Island Fisherman's Coop. Members of the community were invited to several informative discussions to decide whether they were interested in exploring shrimp farming as an option. Although there was a great deal of negative aquaculture propaganda floating around the community, there was little in the way of concrete information. Keeping an open mind, the Gull Island Fisherman's Co-op thoroughly researched shrimp farming, and visited other shrimp farms in Florida and Texas.

A number of the shrimp farms that Gull Island residents visited were well run operations employing former and current fishermen. The farms used better management practices including fully recirculating water systems and bacteria capable of digesting shrimp wastes rather than traditional water discharge shrimp culture systems. As a result the effluent did not flow into oceans or rivers and affect local fish populations. The farms avoided problems with contamination and disease by ensuring that the shrimp were not stressed by overcrowding, which minimized their use of antibiotics and other chemicals. They followed U.S. laws regarding antibiotic and chemical use, only using those that had been reviewed and approved by the Food and Drug Administration's Center for Veterinary Medicine. Shrimp farmers frequently commented that if the shrimp ponds were to contaminate the waters in any way, their stocks would be the first ones to suffer.

Although the Gull Island fishing community was sufficiently convinced about the merits of aquaculture to continue exploring shrimp farming as an option, there was still opposition from members of the community. Some residents remained concerned about the potential environmental problems associated with aquaculture. Other residents felt that the shrimp farms would bring competition and have a negative economic affect on the wild shrimpers. Still others were concerned with the aesthetic value of their coastline and the affect that shrimp farms could have on the property value of their homes. Much of this opposition came from summer residents and tourists.

Ultimately, there was greater support for shrimp farming than there was opposition to it. Shrimp Lovers Ltd. Offered to help set up any member of the community who wanted to get involved in shrimp farming, so a mutually beneficial partnership was established. Gull Island began shrimp farming very conservatively, with two ponds on 25 acres. They invested in a "zero-discharge" system that used settling ponds and employed bacteria to digest the shrimp wastes, and purposefully stocked shrimp in low densities to avoid problems associated with overcrowding. As a result of their caution, no antibiotics were necessary and the shrimp and the surrounding habitat were healthy.