



Enhancing Habitat and the Social Effects of Mariculture

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DESCRIPTION

Mariculture or marine farming currently produces a significant amount of marine food in coastal areas and will continue to do so in the future. It also provides many coastal communities with jobs and a source of money. Fishery that is properly planned for and managed can also benefit the integrity of the coastal environment. However, the growth of mariculture will be accompanied by increased competition for resources and stress on coastal resources as a result of population growth in many locations. As a result, a lot of focus will be required to enhance aquaculture's environmental management through environmentally friendly technologies and better management, backed by efficient planning and management strategies and regulations.

The growth, preservation, and harvesting of aquatic species in their natural habitats or in enclosures like cages, tanks, or channels is known as mariculture. Seaweed, mollusks, crabs, fish, and echinoderms are just a few of the creatures that are grown. Aquaculture operations can be very extensive or very intensive, as with other forms of aquaculture. At the other extreme, intensive mariculture may occur in an insulated container where all vitamins are provided by the rancher and the environment is maintained through water filtration, sterilization and oxygenation, as well as the control of light and temperature regimes. Extensive mariculture is simply based on the protection of the stock to improve the survival rates of wild juveniles. Ranching is another type of mariculture where young fish raised in a facility are released into the ocean where they feed and develop similarly to their wild counterparts. Ranching has low survival rates, but the costs are lower than they would be for a large-scale farming enterprise. Some have attacked mariculture for what economics refer to as "externalities." Externalities are effects on a person or community that are distinct from the person or community that caused the issue. It's common to refer to pollution as an externality.

For instance, other farm or society may have to spend extra money to clean up the pollution if effluents from a mariculture firm downstream affect the water quality. When mangrove

forests are lost in coastal locations, many species lose crucial breeding grounds and have less protection from storms. The exploitation of mangrove regions for construction, firewood, salt manufacture, and other purposes has resulted in their decline. Additional negative effects will manifest if mangrove habitats are reduced as a result of pond development for mariculture. Lethal techniques are frequently used to control pests on net cages and other forms of mariculture activities. Lethal techniques are used, which raises questions about biodiversity and the sustainability of wild populations. Many of these instances lack a direct connection to other economic activity, but the loss of natural ecosystems brought on by declines in biodiversity may eventually cause other economic issues. This technique of fish production must be put up in the appropriate environment in order to be effective. If the proper growth parameters are fulfilled, marine ranching can show itself to be a successful method of producing the crop when done in the suitable environment for the species. Sea ranching has been used to study a wide range of species, including salmon, cod, scallops, some varieties of shrimp, European lobsters, abalone, and sea cucumbers. Because they are surviving off of the naturally available nutrients inside the water body that the sea pen is built up in, species that are developed using sea ranching methods do not require any additional artificial feed.

A relatively new method of mariculture involves raising marine creatures under controlled circumstances in uncovered, high-energy ocean habitats away from considerable coastal influence. How open ocean fishery might work with offshore installation systems, like wind generators, to make more efficient use of ocean space has received some study. There has been a lot of discussion about how seaweed mariculture, which provides habitat and the foundation of a food pyramid for marine life, may be used to restore destroyed fish populations in the open ocean. It has been suggested that organic seaweed habitats can be mimicked in the open sea by fostering the right conditions for their development through induced upwelling and substrate-supplying submerged tubing. The idea of enhanced stocking is based on migratory behaviour of some species and operant training. In a port, the fisherman nurture hatchlings in a dense

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net while announcing each feeding with an underwater horn. The fish are released from the net when they are old enough so they can develop in the open ocean. About 80 percent of these

fish returned to their birthplace during the spawning season. After blowing the horn, the fishermen net any fish that react.