

# ORGANIC AQUACULTURE INDUSTRY AND IT'S SUSTAINABILITY

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## INTRODUCTION

November 21 is World Fisheries Day! As indicated by a United Nations report, the total population is assessed to develop to 8.5 billion individuals by 2030 and 9.7 billion individuals by 2050. Perhaps the greatest concern with respect to this fast population extension is reasonable food security. Aqua farming/aquaculture, the quickest developing food creation area, could be one such approach to guarantee this. Starting in 2016, more fish is sourced through aqua farming than is being trapped in nature. Aqua farms are exceptionally situated to address the developing interest in fish protein.

Aqua culture plays a vital role in providing sea food and commercial products worldwide as it is a lean source of protein. Aquaculture is turning into a famous business nowadays and freshwater prawn cultivating has gotten a valuable area. Sustainable aquaculture is the need of today's world to achieve the objective of reasonable improvement in the fisheries area. Organic aquaculture is one of the few methodologies that can be utilized to meet the goals of sustainable aquaculture. "Fish that are produced under natural conditions in accordance with the principles of organic aquaculture without any use of preservatives and additives and without any genetic modifications, that are fed feed produced from natural raw materials, that are certified by a qualified institution are defined as "organic fish" catla, rohu and mrigal are the

Indian major carps used in the freshwater fish culture. Purchasers are mostly from the upper middle class. However, India, with its 1.3 billion occupants, is an enormous country and huge regional contrasts in the aquaculture area exist. There is an immense improvement opportunity in aquaculture to improve food security and nourishment for Indians. The developing working class or popularly known as the middle class is adding to these opportunities. The aquaculture can be divided in three areas: fresh water aquaculture, brackish water aquaculture and marine aquaculture which are available in various states.

- **Freshwater aquaculture:** freshwater aquaculture is done in lakes, irrigation canals, reservoirs and paddy fields. It is regularly joined with the production of shrimps in customary low-harsh water lakes. Aquaculture production is principally of a bad quality which requires low degrees of input.
- **Brackish water aquaculture:** Brackish water is water with saltiness levels among seawater and freshwater. It occurs where surface or groundwater blends in with seawater, in profound "fossil springs," and where salt breaks up from mineral deposits over the long haul as precipitation permeates down into springs. Brackish water aquaculture in seaside regions essentially includes shrimp

culture and is far and wide on the east coast in the provinces of West Bengal (conventional bheries), Andhra Pradesh, Orissa and Tamil Nadu. the area of brackish water aquaculture it is worth mentioning that a logical way to deal with the conventional act of catching normally reproduced fish and shrimps in waterfront wetlands or manmade compounds was completed. Drives of the Indian government, exhibition tasks of the Marine Products Fare Development Authority (MPEDA) in blend with credit offices given by business banks empowered the foundation of a few shrimp incubation facilities. Somewhere in the range of 1989 and 2007, the shrimp cultivation encountered a fivefold increment to 144.346 tons each year. Production is diminishing again

nonetheless and 90% of the shrimp ranchers in India are limited scale ranchers which own under 2 ha of land. Some types of shrimps are more sensitive to production relate dangers and illnesses than others.

- **Marine aquaculture:** Marine aquaculture alludes to the reproducing, raising, and collecting of sea plants and creatures. It can occur in the sea, or ashore in tanks and lakes. U.S. marine aquaculture delivers essentially shellfish, molluscs, mussels, shrimp, salmon, and other marine fish. Nonetheless, enormous scale open ocean farms are not yet normal, making versatile management and cautious research a fundamental component of sustainable marine aquaculture development.

## ORGANIC AQUACULTURE – A PATH TO SUSTAINABILITY

Organic aquaculture has gotten more significant as customers have gotten more cognizant about climate, manageability and unsafe effects of serious and impractical aquaculture. Organic aquaculture plans to give fish and fishery items that are environmentally, financially and socially suitable. From different experiments, clearly, the variety at the levels of species, environment, executives and culture systems in aquaculture demands gigantic endeavours to use the huge capability of organic aquaculture.





# PRINCIPLES OF ORGANIC AQUACULTURE

- No use of GMOs (genetically modified organisms)
- Use of only vegetal feed and fertilizer from certified organic agriculture
- Restricted use of synthetic pesticides and herbicides so as to maintain natural diversity on the farm area
- Restriction on energy consumption
- natural medicines are given utmost preference, and absence of antibiotics and chemotherapeutics.
- Severe monitoring of environmental impact, protection of surrounding ecosystem and integration of natural plant communities in farm management focussing on the waste management.
- Processing should be according to organic principles and the final products should be certified as organic.

## CONVERSION TO ORGANIC AQUACULTURE

Conversion to organic aquaculture is a course of evolving farming practices that inspire and uphold a viable and sustainable aquatic ecosystem. Conversion period is the time amid the beginning of conversion to organic aquaculture management and its certification of the produce. Aquaculture production procedures can differ widely according to biology of the creatures, technology used, geographical settings, ownership structure, time duration, etc. These facets should be considered when the length of conversion is specified. Two years is at least required as the conversion period for any aquaculture production system .

## ADVANTAGES OF ORGANIC AQUACULTURE

- Help in reducing the environmental footprint.
- Feed Management is ensured through monitoring as well as adequate feed supply, thereby minimizing the stress to the organism.
- No synthetic chemicals create a sound and safe environment for consumers.
- The usage of local resources and services are very much encouraged.
- value added items For example, Deutsche is professed to be the primary fish finger Altogether created by natural methods from Pegasus fish in Vietnam where breeding is produced using naturally developed fixings.

# CURRENT STATUS OF ORGANIC AQUACULTURE IN INDIA

Compared to organic agriculture, organic aquaculture is far behind in the organic position of the country. The brackish water area which is available in our country for shrimp farming comprises the current traditional prawn filtration fields also, which are situated in West Kerala and Bengal . These massive filtration areas are in fact paddy fields, belonging to numerous entrepreneurs, who do salt resistance paddy cultivation by themselves and later sell the area, after paddy cultivation for doing the seasonal traditional prawn filtration, when the water become saline in nature because of inundation. The traditional kind of prawn filtration system is highly environment-friendly as they use do not use antibiotics, chemicals, etc and hence the paddy fields can easily be adopted for organic aquaculture. Organic products have become very popular now a days due to increase in health and environmental awareness, concerns on food safety and there is a growing demand in developed countries, especially; US, EU, etc. In India, shrimps and fish resources are in abundance and one of the highest in the world.

## CONCLUSION

Many organic aquaculture issues still need to be resolved. Steps should be taken to encourage and enhance the biological cycles with respect to nutrients management and to retain the integrity of the organic product from farmer to consumer and conversion requirement for moving conventional aquaculture system into organic system. For the answer to this question NGOs academia, government and organic sector have to work closely following the necessary guidelines. With continue emphasis on worldwide, aquaculture will emerge as the most environmentally friendly and efficient form of agriculture and as a partner in sustainable development.

