

## Satellite-based monitoring and statistics for raft and cage aquaculture in China's offshore waters

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### Description

Cage culture is currently of interest to both researchers and commercial producers. Factors such as increasing fish consumption, declining wild fish stocks, and inadequate management have increased interest in cage farming. Many small farmers and farmers with limited resources are looking for alternatives to traditional crops. Aquaculture seems to be a rapidly growing industry, and there are opportunities even on a small scale. Cage cultures also offer farmers the opportunity to tap into existing water resources, although most can only be used to a limited extent for other purposes. In cage farming, fish are reared within existing water resources and placed in mesh cages that allow water to flow freely. It is an aquaculture production system consisting of a floating frame, net materials, and a mooring system using ropes, buoys, anchors, etc. It consists of Equipped with round or square floating nets for rearing and breeding large numbers of fish, it can be installed in reservoirs, rivers, lakes or oceans. A catwalk and railings are built around the floating cage battery. There are four types of breeding cages: Fixed cages, floating cages, underwater cages, and underwater cages. From an economic point of view, cage culture is a low-impact agricultural method with high yields and the lowest CO<sub>2</sub> emissions. Farming fish in existing water bodies removes one of the main limitations of farming fish on land, the need for a constant flow of clean, oxygen-rich water. Cage farms are positioned to take advantage of natural currents that provide fish with oxygen and other suitable natural conditions. Given the high yields achievable with cage culture systems, this could play an important role in increasing India's overall fish production. Brackish water bodies, and other little-used water bodies, can be better utilized by the introduction of cage cultures. Low investment and little to no land area required make this farming method ideal as an alternative income source for small fishermen. This can be included as a domestic/wife job as it has minimal workload and can be managed by a small family. The design

of the cage and its accessories can be tailored to each farmer's needs. It can be grown in any of his four culture systems: Ponds, raceways, circulation systems, or cages. A cage or net pen is a system that encloses seafood in a mesh pen. Strictly speaking, cages and net enclosures differ in construction. The cage has a fully fixed frame (on all sides) and the mesh pen has a fixed frame only on the top. However, the terms "cage" and "net enclosure" are often used interchangeably. Seacages are often referred to as net enclosures, and vice versa, even though they have a completely rigid frame. No effect. Cage farming uses existing water resources (ponds, rivers, estuaries, open sea, etc.) but confines the fish in a type of net enclosure. Nets restrain fish and facilitate feeding, observation and harvesting. The service life of the underwater frame bamboo pole is much longer than the one above. A mature hardened bamboo stick that is at least 7.5 meters long and 8-9 cm in diameter at the base is best for building a frame. For a battery with 8 cages of 15 m each, the battery must be 13.75 meters long and 11.05 meters wide. To make such a frame, you will need 32 bamboo sticks for the upper frame and 24 bamboo sticks for the lower frame.

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### Conflict of Interest

The author declares there is no conflict of interest in publishing this article.

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