

Applying the Integrated Multi Trophic Aquaculture (IMTA) marine cage Aquaculture

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Abstract

The rapid growth of aquaculture industry in recent years, has become a concern for ecologists, and has raised deep concerns about the destructive effects of aquaculture on the environment. It has also been mentioned that these effects can also affect the long-term development of aquaculture. For this reason, the poly culture method has been regarded for optimal use of food resources in the environment, but this method has little positive effect on reducing the environmental impacts of aquaculture, so the idea “Integrated Multi Trophic Aquaculture“ (IMTA) has been introduced as a new method to create an aquaculture system based on the use of all levels of food for the sustainability of the environment (biological control), economic stability (product diversity and risk reduction), and social acceptance (better management). The water around fish cages in the sea is full of suspended and dissolved nutrients that can be used to culture other aquatic organisms, including oysters and seaweed, the use of a combined aquaculture system in these areas not only reduce the environmental effects of aquaculture in these areas, but also boost culturing new species, including oysters and algae.

Key words: aquaculture, multi trophic, integrated culture method, environmental impact