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''CLEANER PRODUCTION INITIATIVES AND CHALLENGES FOR A SUSTAINABLE WORLD''

Environmental Impacts of the Brazilian Shrimp Culture

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Abstract

The possible environmental impacts caused by shrimp culture affect the biological, social and physical area, due to the launch of its effluents in water used in public. Non adequately managed farms may cause several problems. These problems are the appearance and fast dissemination of diseases. The environmental degradation due to high concentration of nutrients. Low quality food results in greater quantity of phosphorus and organic matter release. The shrimp production is an alternative to social development, but it can also generate social impacts. It can cause the expulsion of aquaculture local farmers from their local of work. This can socially exclude the traditional communities' dependents on the mangrove. The ecosystem and landscape degradation is related to the physic impact. The risks of land cover loss, reduction of protected areas, soil salinization are potential impacts to the area of shrimp production. The shrimp production should be adequately planed. If it does not happen it causes several environmental impacts that harm the nearby environment. In other hand, if it is adequately organized it may become environmentally positive. Besides, there is a problem about the mangroves areas. These areas are destroyed to the implementation of shrimp farms. There is a great biological impact because several species lost their habitat. As these impacts advance it may affect the bio atrophic interface, affecting the humans. This paper has a bibliographical review about the main impacts caused by the shrimp culture. These impacts are related to organic matter discharge from bad management practices. This economic activity is growing because it is an alternative to the extractive fish industry but it also contributes to the marine environment degradation. In order to minimize the environmental impacts is take decisions to promote mitigating actions and improve the technology to produce shrimp. These actions include the super-intensive production, use of macrophytes, bioflocs and quality food. The use of macrophytes to treat the liquid effluent minimize the impacts on the aquatic systems, reducing the nitrogen and phosphorus availability. The biofloc shrimp culture technology consists in the use of heterotrophic bacteria that are naturally present in the aquatic environment. The bacteria are capable of assimilate nitrogen compounds and convert it in to biomass when carbon sources are available.

Keywords: *shrimp culture, environmental impacts, sustainable development, mitigating actions*