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Social-ecological system in the context of bivalve aquaculture

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Abstract
Bivalves are of commercial important as they have many vital nutritional value, they are the main biological indicator in ecology imbalance, there role in the ecosystem interaction is very crucial. Hence, they had gained lots of importance in aquaculture. The socio-ecological system in recent years gained lots of attention of the culturing industry in costal region of the world. The Present paper, focus on the major aspect, of social-ecological system in bivalve aqua culturing. The varied aspect in growth of aquaculture in relation to biology, the marketing strategies and the role of different model in this processes of bivalve aquaculture at local to global level.

Key words: Bivalve, aquaculture and SES (Social-ecological system).

Introduction

The aquaculture is one of the significant aspects for social-ecological system which has a focus on the various component such as biological, techniques and social and economic of the aquaculture practicing community. The aquaculture development can reduce the gap in the socio-economy of the people which has communicated with this. The traditional methods the community adopted at present would be motivated with the modern tools and techniques in aquaculture. If these community use this technology and all the modern equipment's in this culturing processes, will definitely help to success, in socio-economic raise.

The proper knowledge of the nutrition value of the product would differently increase the productivity and the construction

of the hatcheries with all equipped tools with the handsome knowledge will help the community to overcome from the problem of the economy. The capturing strategies if change to modern will provide a great value for the commercial valuable production in this allied business of aquaculture.

The applicability of the sustainable aquaculture can provide a jobs for many people with significance increase in the income of the local people. The maintenance of the adequate local data regarding the physicochemical water quality and the related data of the bivalve life cycle, the climatic condition, the environmental conditions and its impact in any uncertain condition the alternative information in such drastic condition would be beneficial for the costal communities. The trading regarding aquaculture and related various development with proper governance in this sector will bring very fruitful economical growth and will raise the commercial value of the product. The expansion of aquaculture would be possible by providing the food security, health and all the information related to infections of bivalve. The proper knowledge of the all aspects of marketing will be beneficial for increasing the business point of view from local to global market.

The oldest aquaculture industry in related to bivalve aquaculture, the pacific oyster culturing is practiced in many countries such as, Asia, North America, and the Mediterranean.[1], at commercial level. As such, my focus is only on the bivalve culture as a socio ecological system in harvesting these commercial important bivalves at the world level.

The aquaculture service at present the bivalve culturing services is just an ecosystem service essential for benefit of development of spiritual, aesthetic cognitive and the social and economical in culture services involved in bivalve aquaculture are receiving at present, and could be receiving in the future [2]. The Millennium Ecosystem Assessment [3] to know the culture aspect as a source of income in shell industry beyond the traditional knowledge [4] The tourism industry, along with food industry would also provide job opportunities from bivalve aquaculture at local level and can provides the occupation for many in these services. SAPEA, [5]. In addition to this the by product can also be beneficial in SES [6].

The bivalve culture is one of the vital parts of the livelihood for much costal community at the globe. The sustainable use would prevent the ecosystem from the environmental crisis related to imbalance of food chain and the food web in context of the ecosystem [7]. The mass mortality in harvesting of bivalves should be keep in consideration for aquaculture development and must adopt the different strategies for culturing these by the communities engage in this sector the raring must to assess during the farming [7].

The growth in production of the bivalve can be obtain by using the modern tools and model with different dynamic aspects of food, nutrition's, productivity and the ecosystem hydrodynamics and the dynamic energy budget model. The important aspect is the carrying capacity and the productive carrying capacity. The different approaches in this will matter a great in entire field of aquaculture in relation to bivalve species. The scope for growth will be possible if the different model utilize in the sector of bivalve culturing [8].

The another most important role of bivalve in environmental restoration as an biological indictor for pollution and a vital role in natural processes of ecosystem as they are the filter feeders thus the water quality at large extend can be studied by the bivalve, the water turbidity can be removed by the processes of filtration. The phytoplankton's availability and the primary production can be a positive feedback in availability of the bivalves. The reduction of the phytoplankton's will be a negative feedback indictor on food availability. In bivalve aquaculture services the balance of positive and negative feedbacks is essential indicator for food for bivalve culturing between the bivalves and their food determines the provisioning services of bivalve aquaculture.

Conclusion

Bivalve aquaculture thus will be one of the important sources for livelihood in the coastal area communities; it will be vital in raising the socio-economic status of people. The modern equipment's along with different models will be beneficial in increasing the business from local to global market with adaptation of different marketing strategies in aquaculture.

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