



SUSTAINABLE FISHERIES DEVELOPMENT: A CASE STUDY OF ACADEMIA INTERVENTION

Dr. Mariya T Cheeran*

Abstract: Kerala, which is situated in the south west coast of the Indian sub-continent with a coastline of five hundred and ninety kilometers, is rich in marine fishery resources. The fisheries sector of Kerala helps the state in earning huge amounts of foreign exchange and goodwill. The fish products from the state are very famous all over the world and are exported to many foreign countries. The state has two hundred and twenty two fishing villages in the marine sector and one hundred and thirteen in the inland sector. The total population of fisher folk residing in the state of Kerala is estimated to be twelve lakhs, which includes eight lakh in the marine sector and four lakhs in the inland sector. Nearly fifty per cent of the fisher folk in Kerala are women. Even though Kerala has extensive sea shore facility and inland water resources, the fishery resources are depleting drastically. A holistic approach of fishery management is necessary to tackle the issue. This paper examines the scope of academia in implementing sustainable fisheries development.

“Give a man a fish and you feed him for a day; teach a man to fish and you feed him for a lifetime.”

-Maimonides

Keywords: sustainable development, cage culture, fishers, academia, rural, fish village

*Assistant Professor, School of Management and Entrepreneurship, Kerala University of Fisheries and Ocean Studies



INTRODUCTION

The focus of this paper is the scope of contribution of academia in governance of small-scale fisheries in the light of the critical role that higher education has to pay in uplifting the living standards of the neighborhood. Kerala University of Fisheries and Ocean Studies (KUFOS) is the first fisheries university in India and it has developed a unique model in sustainable fisheries development. This paper is presented in seven sections. The section follows the introduction defines sustainable development and small scale fisheries. Third section examines the reasons of depletion of fishery resources and fourth section narrates author's experience. Fifth section explain Etawah project and the next section explains KUFOS model. Seventh section concludes the paper.

UNDERSTANDING TERMINOLOGIES- SUSTAINABLE DEVELOPMENT AND SMALL SCALE FISHERIES

Food and Agriculture Organization of the United Nations defines Small scale fisheries as traditional fisheries involving fishing households using relatively small amount of capital, energy, small fishing vessels, making short fishing trips, close to shore and mainly for local consumption (FAO 2005). Brundtland Report of The United Nations World Commission on Environment and Development says "Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs. The word need here emphasizes the priority for the needs of the poor in the world (Brundtland 1987).

The sustainable development has the "interdependent and mutually reinforcing pillars" as economic development, social development, environmental protection and cultural diversity. In this context development does not mean mere economic growth but more satisfactory intellectual, emotional, moral and spiritual existence.

In fisheries management and development, the importance of sustaining small-scale fisheries is highly recognized. More than 24 million people in Asia depend on small scale fishing for their livelihood. Over 120 million people across globe are directly involved in activities as capture, processing and sale of fish. The very notable point is that 95% of them are from developing countries.



WHY FISHERY RESOURCES DETERIORATE?

The corporate structure always supports industrialization of fisheries and tries to deteriorate small scale sector. But recent researches show that a continued expansion of artisanal fisheries is taking place contrary to the expectations. The expansion of both industrialized and artisanal fishing has, however, prompted fears of a world-wide crisis in fisheries with resource depletion, threatening livelihoods and, through reduced per capita supply in developing countries.

Sustainability and well being of small scale fishers will be adversely affected by two factors: One is the Depletion of resource and the other is the Lack of skills for alternative livelihood opportunities

Depletion of resources is a worldwide phenomenon and global fishing policies and strategies can only counter this menace. It involves a lot of diplomatic dialogues and discussions and formation of international laws and covenants. UN and its various allied agencies have taken this as a serious issue and developments are taking place in this area.

Many studies of small-scale fisheries in developing countries have emphasized the small-scale fishers' resource dependence. The resource dependence and open-access nature of small scale fisheries lead to resource degradation, poverty and marginalization (Allison and Ellis, 2001). Small scale fisher folk mainly depends on the fisheries resources locally there. Continuous and injudicious harvesting by the local fishers community may cause depletion of resources considerably. Proper education and introducing scientific harvesting methodologies like an equilibrium view of fisheries resources, where fishing capacity is matched to the productive capacity of the resource, with the objective of achieving a maximum sustainable yield, can improve the scenario.

AUTHOR'S EXPERIENCE

Lack of skills for alternative livelihood opportunities and lack of capabilities to resilient to changes should be addressed locally. Livelihood diversification should be focused in fishing communities. Policies and strategies that educate and enable fishers to take up part-time job other than fishing are preferable. Fisher folk are either unaware or inhabitant to generate more income from the available resources. 'Value added products' is still a development slogan for many coastal villages.



Author observed from the field interaction that even though the state and central government has spent a substantial amount for social development of the fishermen community, it has not been achieved as expected. Lack of awareness of various development schemes available in this segment and Lack of efficiency in the effective utilization of existing development schemes are two major barriers that hinder the development. We also noticed that Lack of awareness of the social security ensured by the constitution of India allows the law offenders to exploit this marginalized community. For example money lenders are levying huge interest rates on this poor people. Their Poor psychological level to defend adverse effects of life situations like disaster, domestic violence, and communal disharmony deteriorates their quality of life. The poor sanitary and health practices they follow make them vulnerable to epidemics. Their Ignorance of the importance of value addition to indigenous fishery products and lack of communication and presentation skills are other factors that allows middle men to exploit them.

UGC'S VIEW ON EXTENSION

At this juncture I would like to cite the UGC vision on the role of universities in uplifting the marginalized communities by providing adult and extension education. Secretary (2011) states "The Continuing Education programme should be targeted towards those who have had the benefit of University Education but need to return, either for updating their knowledge or skills or acquiring new skills. These could include groups/participants from industry and the services. These could be short-term courses or offered as certificate/diploma courses. They could be for those already in services or for the unemployed to improve their employability." "Adult and Extension Education should include programmes of training of a short-term nature aimed at various groups who would not normally be entrants in the University system. These courses could be skill-based, such as, skills for income generation, entrepreneurship development, family life education, value education or based on social issues such as para-legal training and various types of training for grass root workers/activists."

ETAWAH EXPERIENCE

Yadav(2010) observe the Etawah project as one of the early rural development project implemented in India after independence. The objective was the implementation of various schemes for the development of cottage industries and subsidiary employment. It envisaged



the extension workers are colleagues who meet people directly and execute the project based on the needs of the people. Bang and Ramabhai(1952) after an objective study of the project commented that the project was a failure and the failure happens because it was neither the plan of the people and not for the people and by the people.

ROLE OF KUFOS

The programs for rural development should be designed and implemented based on the actual need of the beneficiaries. KUFOS, being the first fisheries university in India, understands its high responsibility in playing the leadership role in establishing new courses and extension activities for the well being and sustainable development of Small Scale Fishers. Samagra Matsyagramam Project(Integrated Fish Village Project) is an extension activity of KUFOS. It plans to offers various extension activities like model costal village development project, entrepreneurship programs for fisher folks etc. KUFOS offer Rural Management specialization for MBA students and students are engaging actively in community development activities.

SAMAGRA MATSYAGRAMAM (INTEGRATED FISH VILLAGE) PROJECT

Cage culture of fish is the practice of growing fishes in confined areas which facilitate feeding, harvesting and other management procedures. Samagra Matsyagramam project is envisaged to promote cage culture in coastal villages in Kerala. This project is executing with the support of Rashtriya Krishi Vikas Yojana (RKVY) and Kerala State Fisheries Department. The pilot project was implemented Puthnavelikkara Grama Panjayat in Ernakulum district and it is accepted as fool proof method from results. KUFOS has implemented other fish farming practices like freshwater fish culture, brackish water fish culture, cage culture, integrated farming, ornamental fish culture etc in public and private water resources. All these programs are designed and executed with the help of actual beneficiaries and they accept it as their own program. This ownership attitude showed by the stake holders is the success mantra behind these programs. Red tapism is zero level in KUFOS and shows flexibility in redesigning the program based on the change in requirement. KUFOS plans to offer training on various means of alternative livelihood development like Solar Tent Dryers, value added fish production units connected with fisheries and Paper Bag Units, Rabbit Rearing Units etc in non fisheries segment. Entrepreneurship Development Programme in fishery and non fishery segment is another key area of operation of KUFOS.



Cage culture

CONCLUSION

Every extension programme by higher education must be framed and executed in a style which is acceptable to the user community. The reported failure in Etawah and success in Puthenvelikkara proves it. The argument here is that all extension programs should be designed and executed with the help of the actual beneficiaries. Furthermore the authorities should be ready to redesign the program if the requirement changes abruptly during the execution of the programme.

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