

VOCATIONAL EDUCATION AND FISHERIES

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ABSTRACT

The knowledge and skill of the people are important tools for the development of natural resources and for the prosperity of any country. The quality of education is judged not only from the inquisitiveness and knowledge it can impart but also from its usefulness in meeting the urgent economic problems of the country.

Vocational Courses in fisheries are offered in four states. The technologies in fisheries developed offer good scope for Vocational training for self employment. There is an urgent need to have radical revision of the course content to make the students vocationally competent.

FISHERIES EDUCATION - STATE OF ART :

Recognising the need to study, assess and develop the fishery resources of the country, Govt. of India established the Central Marine Fisheries Research Institute (CMFRI) Cochin; Central Inland Fisheries Research Institute (CIFRI) Barrackpore, Central Institute of Fisheries Technology (CIFT) Cochin and Deep Sea Fishing Station, Bombay soon after the Independence. Since then, the fish production trend in the country has been encouraging. The annual fish production has increased from 0.5 million tons in 1950, to 2.6 million tons in 1983. Although the rate of increase has been fairly good, the per capita consumption of fish, even now, is less than 5 kg/yr. Till the 60's apart from the ad hoc training programmes in Inland Fisheries at Calcutta and in marine fisheries at Madras, the country did not have regular fisheries education which is vital for resource development. With the assistance from UNDP/FAO and Govt. of Maharashtra, the Govt. of India set up the Central Institute of Fisheries Education, Bombay in 1961. Since then, the Institute has been playing a pioneering role in providing trained manpower at district level officers at Bombay and its centres at Barrackpore & Hyderabad and also at operatives level for Inland Fisheries at Agra. The Central Institute of Fisheries Nautical and Engineering Training (CIFNET) Cochin has been catering to the needs of trained manpower at operative level in marine fishery. Since.. While the CIFE, Bombay was continuing to cater to the needs for accelerated fisheries development of the country and their neighbouring countries in Afro-Asian region, fisheries education was also started in some of the Agricultural Universities both at undergraduate and post graduate levels. Presently,

five Fisheries Colleges function under agricultural Universities in Karnataka, Kerala, Tamil Nadu, Maharashtra and Orissa, each with capacity ranging from 20-40 students every year. These training facilities cater mainly for manpower development for intermediate and higher levels in services, industry including for planning, development and research. A lot more is required to be done at school and undergraduate level in training the youths for self and wage employment. In this context the Vocationalization of fisheries education assumes greater importance.

The need to develop self-employment especially in rural areas with a view to minimising migration to the urban areas has been emphasised under the 20 Point Programme. Fisheries can play significant role for rural development. The Government of India is keen and had informed the Estimate Committee of the 4th Lok Sabha that the Government's policy about Vocational education and fisheries education is to give a bias for fisheries education even at high schools stage. This should be followed by introduction of graduate degree courses in fisheries leading to post-graduate and doctorate degrees.

PRESENT STATUS OF VOCATIONAL EDUCATION IN INDIA

At primary and high school levels in some of the maritime states like Maharashtra, Kerala, Tamil Nadu Karnataka and Gujarat, fisheries schools have been in existence for several years. The students in these school come mainly from fishermen families. Reports indicate that there are 54 fisheries schools in Kerala, 35 of them are lower primary 16 are upper primary, and 3 a high schools. Each of the High School admits 40 students in the 8th standard, It is estimated that about 400 to 500 high school students are turned out of the school every year from Kerala and Maharashtra.

The scheme of Vocationalisation of Education was launched by the Government of India in 1976-77 based on the 'Kothari Commission' recommendation. Among other things, the scheme was aimed primarily 'to fulfil the national goals of rural development and removal of unemployment and distilution'. Soon the scheme was introduced in various ststes. In Maharashtra, the scheme started in 1978-79 initially in four districts, now covers all districts, with nearly 15 institutions offering various courses. In W Bengal, the scheme was introduced in 1976. Vocational courses in Fisheries are now offered in states of Karnataka, Maharashtra, Tamil Nadu and W. Bengal.

In order to make these students vocationally competent, there is urgent need to have a radical revision of the course content and text book. The new courses should cater to the daily working needs of the students to get complete exposure to the practical aspects so that they can become self employed or can

take up wage employment. Starting of Vocational Education at Secondary level is expected also to relieve pressure on higher education as stated in Draft National Policy on Education, 1979. It is highly necessary that the subject should be based more on requirements, of self employment. Terminal Vocational courses will not cater to the natural aspiration of students after +2 level to go for higher education. However, some statistics show that if vocational courses are available, the demand for higher education may be falling off. About fifty percentage of the students going for higher studies in Tamil Nadu after matriculation are reported to be joining Vocational courses. During fifties and sixties rate of growth in new enrolment to colleges and university has been reported to be 14-15% while in recent years, it has slumped to 3.5%. This has been attributed partly to the headway being made in vocationalising higher education. Fisheries also has great scope for vocationalisation, particularly in Aquaculture, fish processing and marine fishing operations. Development of fishing industry has been made possible largely due to craft training in marine fisheries. The experience of CIFE, in the field of fish seed production and mixed farming in Andhra Pradesh is highly encouraging. Some of the technologies which have been developed by the fisheries institutes under the ICAR and proved to be commercially viable could be included in the curricula of vocational courses as identified at the workshop jointly organised at Bombay during March 1984 by the CIFE and National Council of Educational Research and Training (NCERT), New Delhi.

Some areas which are ideally suited for vocational education are discussed here.

FISH FARMS FOR SEED PRODUCTION AND CULTURE

Inland fish culture has vast scope in the country since it has large number of village ponds, tanks, reservoirs etc. Fish farmers in W. Bengal through culture in properly managed village ponds have been earning an average income of over Rs. 20,000/- per ha. per year. Under the guidance of CIFE, extension of fish culture technology in 5 ponds (total area of 1.0 ha) in Samalkota in East Godavari A.P. yielded about 21,000 kg of fish in 9 months giving a net profit of Rs. 10,000/- Production of 2,000 - 3,500 kg/ha/yr. can be easily obtained from village ponds. This offers great scope for rural self employment and also helps in increasing supply of protein rich fish in the rural areas in fighting malnutrition and recycling of farm and domestic waste. Teaching and Extension of fish seed production technology by the CIFE through its Freshwater Fish Farm, Balabhadrapuram has paid very rich dividends in A.P. Over 130 educated unemployed rural youths have converted their water logged paddy fields into fish seed farms and earn a net profit ranging from Rs. 10,000 - 15,000 per hectare per year as against Rs. 5,000/ha/yr. from paddy cultivation. This has been made possible largely

through regular shortterm Training programmes of the Institute which are designed to cater to the needs of the rural masses. Initially, the training was imparted to a team of rural youths and was followed up by technical advice and visits by the experts when they took up farming activities. Mixed farming in these farms with dairy, poultry and vegetable and cereal cultivation has been paying rich dividends. These examples could be easily followed up in other states also especially where water logging is common.

The seed farms can increase their production through tested hatching technologies. Hatcheries like the D-81 Model designed by CIFE and being operated in 7 States in the country ensure higher percentage of survival and also hatching even under adverse weather conditions. This results in assured profits and eliminates dependence on weather and rainfall. Thus the risk element is also reduced. Hatchery operations would also give additional and ancillary employment opportunities. Fish culture in seasonal ponds and bundh breeding also has good scope for self and wage employment.

BRACKISHWATER CULTURE

The country has about 2 million ha. area which are low lying in the coastal areas. Some of these areas could be profitably utilised for prawn and fish culture. Conventionally, this has been in vogue in Kerala and W. Bengal for years. It has been estimated that through scientific management, a net profit of Rs. 10,000/ha/year could be obtained from brackishwater culture.

One of the prime requirements for brackishwater culture is the availability of quality seeds in time. Most of these low lying coastal areas abound with wide variety of fish and prawn seeds. Large number of rural youths can find gainful employment in seed collection and transport. Assistance in Hatchery production of prawn seed also is another avenue open for rural self/wage employment. It has been estimated that brackishwater aquaculture operations alone has potential to generate employment for 5 million people in the country.

RESERVOIR FISHERIES :

The potential for generating employment by developing reservoir fisheries is estimated to be very high. With large number of minor and major irrigation and hydel reservoirs in the country (3million, hectares), fish catching and marketing vocations gain lot of importance. Estimates show that Gujarat alone has potential for direct employment for 7800 persons in the field i.e. 1.95 million man days per year on permanent basis.

This could go up if the production level is increased from the present average production of 10 kg/ha/yr. to 50 kg/ha/yr. through management practices.

Development of fish seed farms to cater to the needs of the reservoirs in Gujarat is reported to generate 1,837 million man days employment besides 40 thousand man days on permanent basis. Skills in fish capture, net making and mending besides other allied techniques are to be imparted to the rural youths. Large numbers of rural women could be employed in net making and repairing. Efforts of Madhya Pradesh Fisheries Corporation and Maharashtra Fisheries Department are also exemplary in reservoir fisheries development as a tool for providing rural employment. The Indian Council of Agricultural Research through research in its fisheries Institutes have developed large number of technologies in inland fisheries. 'Fisheries Estates' could meet the need for suitable field level organization for effective technology transfer and also open up new avenues for remunerative self employment to rural masses and weaker sections.

In the field of fish processing, fish preservation and storage, fish drying, preparation of fish kheema and other non conventional food from low priced fishes are a few more of the vocations which the youths can take up gainfully and at a lesser capital expenditure. Wage employment opportunities also exist in fish freezing, canning etc. Drying of fish and fish marketing individually or through organized fishermen cooperatives yielded gainful employment to youths and women.

It is imperative that training of the youths in these activities is to be highly organised and effective. It is necessary that the self employment schemes are supported with liberal financing policies. Necessary infrastructure and field facilities in particular, are also highly essential. These can be had through the cooperation from the states. "Earn-while you Learn" scheme also is an attractive idea. The students after vocational education must undergo intensive training in selected fields which are need based either in the Government or private sector and may earn while on training. However, caution has to be exercised, if the "Earn-while you Learn" scheme is implemented in the schools themselves lest schools degenerate into production centres. It may also be necessary for local vocational

schools to change the vocations depending on the employment market.

Taking all these into considerations, it has been the considered opinion of many that the fisheries education in the country at lower levels should be aimed to create a fish and fisheries awareness at the primary stage. elementary fisheries education at the upper primary stage and vocational courses at high school stage for employment to lower levels in service and industry. Fisheries has vast scope in generating self/wage employment but what we need is a systematic, dedicated, and concerted effort to bring in the necessary changes in the educational pattern. Bifocal pattern of vocationalisation may yield better results in the overall context

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