

Involving women in aquaculture

– 25 years of CIFA's contribution

Empowerment of women is a multifaceted and multi-dimensional concept. It is a process through which women gain greater access to resources and also gain control over decision-making. Empowerment indicates a shift from the position of enforced powerlessness to greater self reliance. Of late women's contribution in aquaculture sector have become the subject of global consideration. Involvement of rural women in aquaculture production activities including composite carp culture, seed rearing and integrated fish farming has been advocated for their socio-economic upliftment and generation of self employment. However, lack of focus coupled with cultural and social constraints limit participation of women in training and empowerment. Appropriate methods in aquaculture extension coupled with appropriate technologies can draw rural women towards aquaculture practice in a sustainable way.

The Central Institute of Freshwater Aquaculture (CIFA), Bhubaneswar has operated several transfer of technology projects during the last 25 years. While few projects were exclusively benefitted farm women others adopted substantial number of women as beneficiaries. A brief account of the transfer of technology projects that have contributed to women empowerment is given below.

- 1987: 'S & T for Women' was operated in five villages involving fifty farm women in fish farming. 'Successional aquaculture' evolved for steady stream of income round year.
- 1992: Women in Aquaculture (in collaboration with XIM, Bhubaneswar) benefitted 300 tribal women from three backward districts of Orissa. Involvement of women in aquaculture proved to be beneficial in improving socio-economic status. Indian Major carp spawn were reared in seven small backyard and kitchen ponds measuring 0.05 - 2.0 ha. water area in four villages of Keonjhar district of Orissa by tribal women.
- 1999: Institute Village Linkage Programme (IVLP) was operated in eleven villages around CIFA for technology assessment and refinement through on farm research. Common carp breeding and grow out culture was promoted among women. Through this programme, women demonstrated that if a supportive environment is provided, seed production activity can be easily undertaken by them.
- 1999: Aquaculture development in NEH states. Aquaculture development work was taken up in Assam, Arunachal Pradesh, Manipur, Meghalaya, Mizoram, Nagaland and Tripura. Grow out carp culture, integrated fish farming, ornamental fish breeding and culture technologies were

demonstrated. Hatcheries for carps and magur were established. Pilot scale demonstration on cage culture conducted. A large number of farm women were benefited through this intervention.

- 2000: Under Jai Vigyan National Science and Technology Mission, enhancing freshwater fish production towards ensuring household food and nutrition security was the focus. Potential of freshwater aquaculture in non-conventional areas viz., tribal, hilly and backward areas explored. A group of tribal women from Burumpal, Bastar Burumpal, harvested around 2.0 ton of fish from 1.4 ha waterbody, where nothing could be produced earlier.
- 2006: Economic and livelihood development of SC/ST population through freshwater aquaculture technologies was operated in two tribal dominated districts in Odisha Keonjhar and Kendrapada. Technologies i.e., Carp seed production, carp culture and Integrated fish farming were promoted. Average fish yield in adopted ponds in Keonjhar increased four folds. At Tanar, Kendrapada a women SHG became successful in fish breeding.
- 2009: Sustainable livelihood improvement through integrated freshwater aquaculture, horticulture and livestock development was operated in Mayurbhanj, Keonjhar and Sambalpur districts of Odisha in a consortia mode. Central Horticultural Experimental Station; Central Avian Research Institute and Centre for Development Research and Training were the consortia partners. 3000 farm families were benefitted. An Integrated development approach was adopted involving freshwater aquaculture, poultry and horticulture. Women beneficiaries were actively involved in fish culture, ornamental fish breeding and culture, backyard poultry bird rearing and kitchen gardening. Several women SHGs were organized to adopt farm based vocations for livelihood development.
- 2009: Carp seed production in mobile hatchery and rearing for livelihood development for SC/ST communities was implemented in two backward districts viz., Mayurbhanj and Nayagarh. Ten FRP carp hatchery have been installed and operated for carp seed production. At Khanguri, Nayagarh a women SHG successfully involved in carp breeding and fish seed production.
- 2009: Under the project 'demonstration of FRP carp hatchery techniques and environmental management leading to fish seed production and rearing through women participation in Khurda' sixty women belonging to 4 SHGs were adopted. Carp breeding, seed rearing, grow out culture and integrated farming technologies demonstrated. At Kaijanga the SHG took seven breeding in the year 2010 and 0.46 million spawn produced using FRP hatchery. Grow out carp culture as well as fish-cum-horticulture integrated farming system demonstrated.

2009: Transfer of technology of composite carp culture through demonstration among SC/ST women in Boudh and Purulia district. The project was carried out in Kashipore block of Purulia (West Bengal) and Kantamal block of Boudh (Odisha). 200 tribal women in two districts are benefitted. The mean fish yield of adopted ponds rose to 795.98 kg/ha in 2010-11 from pre-adoption production level of 378.79 kg/ha in 6-8 months. Average income from the adopted ponds was worked out to be Rs 42513.47 per ha.

During the past two and a half decades considerable amount of attention has been paid by CIFA towards socio-economic development of women. A wide range of aquaculture technologies e.g., carp breeding, seed rearing, composite culture, ornamental fish breeding and culture, integrated fish farming etc. have been popularized for adoption by women. Recent years have also witnessed increased number of women participating in CIFA's training programme as well as visiting the Institute for seeking information on aquaculture technologies. These initiatives also helped bringing them closer to Govt. establishments, Banks etc. Office bearers of SHGs have to deal with management and financial aspects of pond management viz., purchase of inputs – fingerling, lime, feed, fertilizers etc. and selling table fish. Additional income accruing from fish culture has also resulted in improved social status of women. Aquaculture is increasingly being recognised as a tool for empowering women even in most difficult areas. If women take up fish culture as a micro-enterprise it will lead to improved household nutrition, food security, better income and enhanced employment opportunity

It is time that we seek to realize the full potential of women in aquaculture, mainstream them in development activities and provide all support and strength for their enhanced productivity. In order to ensure that women utilize their full potential in profitable activity like fish farming it is necessary that they are provided with capacity building support, which eventually will lead to their empowerment. The mechanism of linking the stakeholders with credit, technology, infrastructure, training and trade has to be built in to the project in order to ensure livelihood and economic security of the rural women.

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