

During the past two and a half decades due attention has been paid by Central Institute of Freshwater Aquaculture (CIFA), Bhubaneswar 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. The Institute also operated several transfer of technology projects during 1987-2012. While few projects 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 presented.

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 Odisha. 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 benefitted 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 Keonjhar and Kendrapada in Odisha. Technologies viz., 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 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 Kajjanga 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.

Aquaculture is increasingly being considered as a tool for empowering women even in most difficult areas. 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.. 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.



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## INVOLVING WOMEN IN AQUACULTURE – 25 YEARS OF CIFA'S CONTRIBUTION



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