MAINSTREAMING GENDER CONCERNS IN FRESHWATER AQUACULTURE DEVELOPMENT

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Amartya Sen

Equality in access is critical step to economic empowerment to create gender equality

Definition (Economic and Social Council, UN)

Mainstreaming gender perspective is the process of assessing the implications for women and men of any planned action, including legislation, policies or programs, in all areas and at all levels. It is a strategy for making women's as well as men's concerns and experiences an integral dimension of the design, implementation, monitoring and evaluation of policies and programs in all political, economic and societal spheres so that women and men benefit equally and inequality is not perpetuated. The ultimate goal is to achieve gender equality

Fact file

- 45% of the world's population depends on agriculture, forestry, fishing or hunting for its livelihood and that worldwide
- Workforce participation rate of female 25.51% against 53.26% for males
- Women constitute 45% of the agricultural labour force, producing a large portion of the world's food crops
- 47% of the total population depending on capture fisheries women
- 65% of the fish marketed fresh, with women dominating in the retail fresh fish trade in all maritime states of India
- 20% of the fish catch processed using traditional methods like salting and drying, done mostly by women in coastal areas
- > 40,000 women employed by the organized seafood processing sector in the country
- In aquaculture operations too, women playing increasingly important role
- Though women serve as an important link in fisheries and aquaculture value chains, their contributions hardly understood and realized

List of Livelihood projects operated by ICAR-CIFA

Sl. No	Title of the project	Sponsor
1	Women of Fisheries (1992-1995) (Karaput, Mayurbhanj and Nayagarh)	UNIFEM
2	Enhancing freshwater Fish Production and providing food security in tribal, backward and hilly areas (Kalahandi Dist)	NATP
3	Economic and livelihood development of SC/ST population of Keonjar and Kendrapara through integrated Freshwater Technologies	DBT
4	Transfer of technology of composite carp culture through demonstration among SC/ST women in boudh and Purulia	DST
5	Carp seed production in mobile hatcheries and rearing for livelihood development for SC/ST communities in selected district of Odisha (Nayagarh and Mayoubhanj)	DBT
6	Sustainable livelihood development through integrated freshwater aquaculture , horticulture, and livestock development in Mayurbhanj, Keonjhar and Sambalpur Dist of Orissa	NAIP
7	Community based management for sustainable aquaculture in rural areas	ICAR-CIFA
8	Mainstreaming gender concerns in freshwater aquaculture development: An action research	ICAR-CIFA

Women in aquaculture

- About 300 tribal women from backward districts (Koraput, Mayurbhanj and Nayagarh) of Odisha benefited through carp culture in small backyard and kitchen ponds
- Tribal women from Kalahandi trained in fish culture, harvested around 2.0 ton of fish from 1.4 ha pond in hilly terrain where nothing could be produced earlier
- About 300 families from Keonjar and Kendrapada benefitted in fishing, marketing, sale of inputs and other farm produce

Women in aquaculture

- 200 tribal women from Boudh and Purulia districts were trained in carp culture - Mean fish yield of adopted ponds rose to 795.98 kg/ha from pre-adoption production level of 378.79 kg/ha in 6-8 months, generating average income of Rs 42513.47 per ha
- Women belonging to 22 SHGs in Deogargh district benefited through rearing ornamental fish (live bearers) and sale linked to trader – established "Ornamental fish villages"

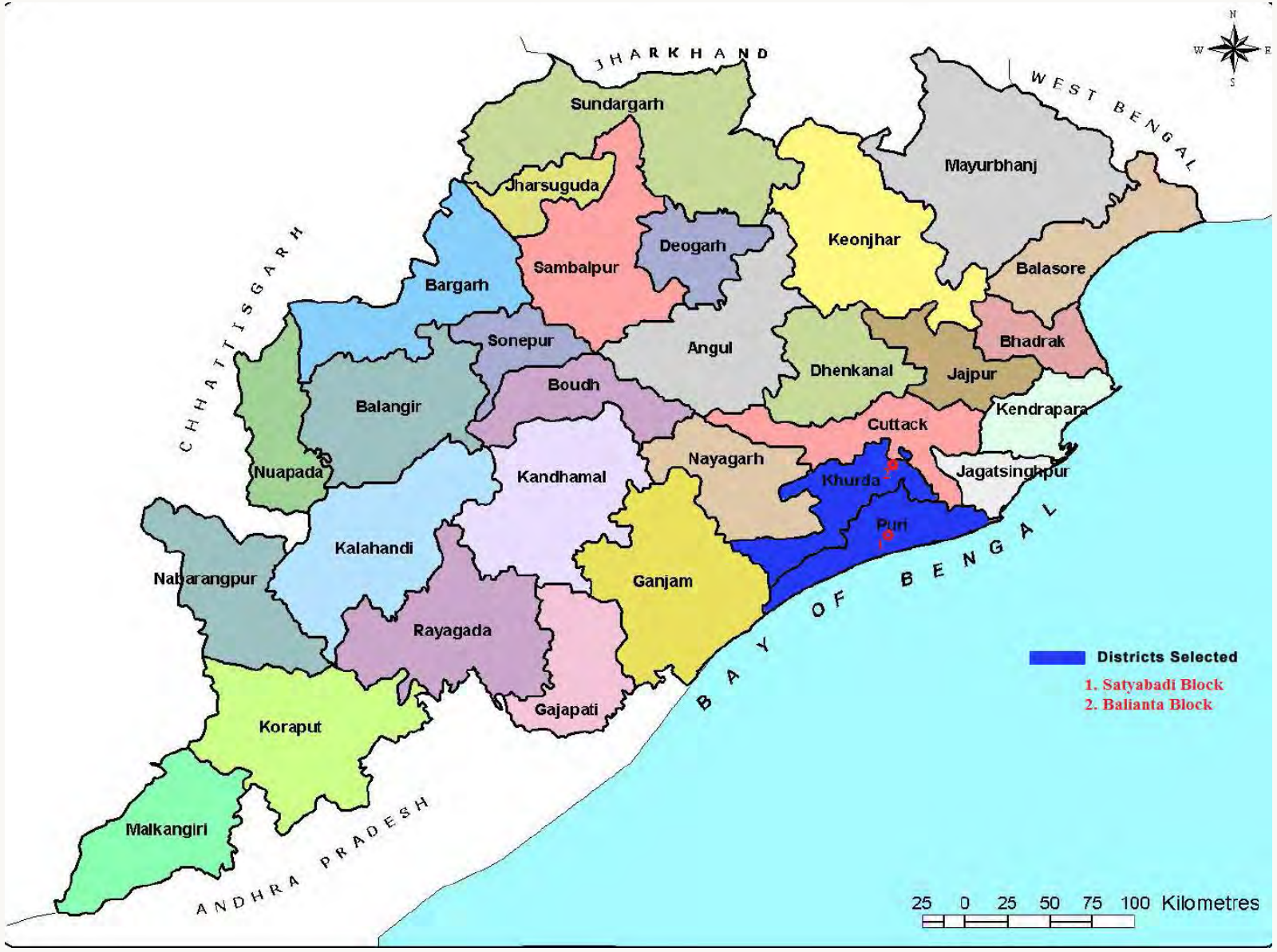
Glimpses from project

Mainstreaming gender concerns in freshwater aquaculture development- an action research

Objectives

- To explore the possibilities of introducing fisheries related technologies (carp culture, ornamental fish farming and post-harvest technologies and value addition) as a means of strengthening the livelihood of farm women
- To evaluate the socio-economic impact and empowerment of the farm women by interventions of CIFA technologies
- To motivate the women for direct involvement in aquaculture activities through self-help group approach
- To alleviate gender inequality

Map of Odisha showing the blocks and districts selected for the study



STUDY AREA AND SELECTION OF SAMPLES

- Jaipur village, Satyabadi block- Puri district - 5 ponds (3 new + 2 old) – total water spread – 5.0 acres

- Paribasudeipur village, Balianta block- Khurda district – 3 ponds – total water spread - 1.5 acres

- Fakirpada village, Balianta block – Khurda district – 3 ponds - total water spread -1.5 acres

Sampling Units

Jaipur village – 5 WSHGs – 81 members

Paribasudeipur village – 2 WSHGs – 39 members

Fakirpada village – 2 WSHGs - 40 members

ICAR- CIFA's Intervention (Input supply, technology dissemination and training)

- **Input supply:** Indian Major Carps 1:2:1(Catla:Rohu:Mrigal) fry, lime and feed distributed to the WSHGs to initiate aquaculture
- **Training Programme**

➢ **Orientation training:** imparted to 160 members women self-help groups of Jaipur, Paribasudeipur and Fakirpada clusters during 5-9 July 2012. They were trained for pond preparation, manuring, seed rearing and grow out culture

➢ **Pond Management:** "Hands on training" given to the WSHGs on the pond site for pond preparation, fertilization and feeding

ICAR- CIFA's Intervention (Input supply, technology dissemination and training)

- **Ornamental fish farming:** Training on ornamental fish culture demonstrated by a documentary film and hands on training given to the women of the WSHGs in three villages of Khurda and Puri districts

- **Post-harvest value addition technology:** Hands-on training on Post-harvest value addition technology given to 150 women members during 18-19 July, 2014 at ICAR - CIFA. The members were motivated to do the same by themselves

- **Visits, interaction and monitoring :** Regular visits made to the pond site for monitoring the fish culture, soil and water testing by the farm women and interaction with the WSHGs for problem solving.

Participatory Rural Appraisal (PRA) Survey in three villages

Training Programme on Mainstreaming Women in Freshwater Aquaculture Development (5-9 July, 2012)

Pond Fertilization

Fish Seed Stocking

Demonstration of Feeding in ponds

SHG members watching documentary film on ornamental fish in Jaipur village of Puri district

Demonstration of ornamental fish rearing to the beneficiaries of Jaipur village

Netting in Jaipur village, Satyabadi Block, Puri district

Harvest in Paribasudeipur, Dist- Khurda

Harvest in Fakirpada, Dist- Khurda

Harvest in Fakirpada, Dist- Khurda

Mushroom cultivation in Fakirpada and Coir work in Jaipur village as alternative group activities

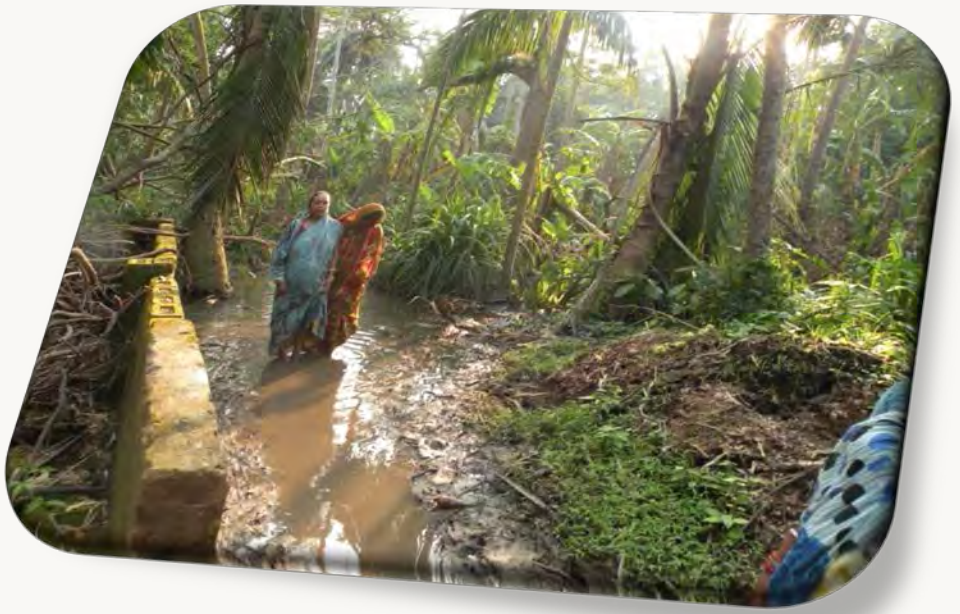
Exposure visits

Loss monitored due to Phailin in Jaipur village

Overflown pond water invaded into the backyard

Loss of mushroom beds

Damage to the houses and gardens of the beneficiaries



Water overflowing from pond to the back yard

Post- Phailin in Jaipur village

- Lost the tender for weaning food for Anganwadi
- Adopted the coir making as one of their group activity to meet their daily expenses
- some inputs supplied by CIFA to the beneficiaries to continue aquaculture as their group activity

ICAR-CIFA's intervention in Phailin aftermath damage

- Liming
- Fish feed
- Training on post-harvest technology

Performance in three adopted villages during 2012-2015

NAME OF THE VILLAGE	TOTAL CULTURE AREA (acre)	YIELD (kg)			TOTAL YIELD (kg)	TOTAL SALE VALUE (Rs.)	TOTAL EXPENDITURE (Rs.)	TOTAL INCOME GENERATED (Rs.)
		2012-13	2013-14	2014-15				
Jaipur	5.0	675	1000	1100	2775	249750	45000	204750
Fakirpada	1.5	150	160	175	485	43650	17500	26150
Paribasudeipur	1.5	110	150	160	420	37800	16800	21000

Percentage of women having acceptance of their opinion in decision making matters in their households

Decision making matters	Jaipur (n=81)	Paribasudeipur (n=39)	Fakirpada (n= 40)
Access to properties (land, house and other financial resources)	100.0	62.9	70.2
Monthly expenditure	100.0	62.9	95.8
Education of their children	92.3	64.5	87.6
Marriage of their children	88.5	66.1	84.3
Participation in family function	100.0	69.4	86.7
Livelihood activities	100.0	72.6	75.6
Attending meetings, exhibitions and trade fares	92.3	71.0	78.5
Marketing of the farm produce	50.0	25.8	35.6
Contest for political posts	73.1	64.5	57.4

Percentage of women faced different types of constraints in doing fish farming

Types of constraints	Jaipur (n=81)	Paribasudeipur (n=39)	Fakirpada (n=40)
Primary occupation (agriculture and daily wages)	**25.8**	**19.2**	**21.5**
Labor for netting	20.4	15.6	18.4
Loan	10.6	16.9	12.6
Work load in house	**35.5**	**37.7**	**38.8**
No constraint	7.7	10.6	8.7
Total	100.0	100.0	100.0

Opportunities

- Aquaculture as alternative livelihood option
- Nutritional security - adoption of nutrifarm concept with animals and plants
- Improvement in socio-economic status
- Bridging the gender gap in accessing to resources
- Experience in fish farming through ICAR-CIFA technologies
- Hands on training on post harvest technology -an avenue for microenterprise

Challenges

- Regular feeding
- Adoption of scientific method of sustainable aquaculture
- Quality seeds
- Bank linkage and Insurance availability
- Marketing
- Cohesiveness in the group
- Capacity building (training, exposure visit, etc.) on regular basis
- Conduct of monthly meetings and updating the ledger and savings pass books
- Disaster Management

Publications

1. B. Sahu, U. L. Mohanty, Sukanti Behera, N. Panda, D.P. Rath, B. Pati, D. K. Senapati, S. Mahali and P. Jayasankar(2013): Carp machha manjira prakriakarana ebam mulyaguna brudhhi. *Minalok* Vol. 4(2), pp 26-27.

2. B. Sahu, U. L. Mohanty, Sukanti Behera, N. Panda, D.P. Rath, B. Pati, D. K. Senapati, S. Mahali and P. Jayasankar(2013): Bina kanta carp machha prakriakarana . *Minalok* Vol. 4(3), pp 5-10.

3. GFAR website- http://www.egfar.org/news/livelihood-innovation-rural-women.

4. Jayasankar, P., B.B. Sahu, H.K. De, Rajesh N., A.K. Dash, Nirupama Panda, Utkal Laxmi Mohanty, P.R. Sahoo, S. Behera, D.P. Rath and P.N. Ananth (2013). Mainstreaming gender concerns in freshwater aquaculture development – an action research – Abstract published in the Proceedings of National Conference on Agro-Bio Diversity Management for Sustainable Rural development held during 14-15 Oct, 2013 at NAARM, Hyderabad.

GFAR website- http://www.egfar.org/news/livelihood-innovation-rural-women

Livelihood Innovation of Rural Women

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Let us present here the success story of a group of women belonging to families with poor economic status. They have defied dogmas of the community and came out of shell with drive and determination to turn around things. In 1999, 10 motivated rural poor women formed a Women Self-help Group (WSHG) called "Pragati" in the village Jajpur of Satyabadi block in Puri district of Odisha state in India. The women were so poor that they had started savings a fistful of rice every day from each of their households. At the end of every month, they used to sell the rice @ Rs. 10/- per kg. As a result, Rs. 1200/- in total was saved monthly by this group. Consequently, the group savings increased and now the corpus fund is in lakhs.

There is a community pond named 'Bahira' of 1.1 ha area in this village. The pond belonged to the village Panchayat which was infested with aquatic weeds. The pond was used by the villagers for multiple purposes like bathing, cleaning their livestock, washing clothes and utensils, and sometimes even for drinking water from it. The village women were suffering from several gynaecological problems. One day, Laxmi Sethi, President of Pragati Mahila Mandali of this village came forward and has played a leading role for motivating the women for cleaning and de-weeding the pond despite the protests raised by their male counterparts. The then male Sarpanch was also strongly opposing. But the women members ignored the protests from the male counterparts, worked hard and cleaned the pond using long handoes and hassara sticks. But even the snake bites deterred them from cleaning the pond, and continued to ignore the sarcastic remarks and criticisms of other people.

In 2008, the pond was leased for five years with leasing value of Rs.1000/- per year and fish culture operation was started. They got a profit of Rs.10K thousand in 2009. In 2010, the pond was damaged by flood, resulting in crop loss. In 2011, the pond was renovated through MGNREGS (National Rural Employment Guarantee Scheme). Now the Group is actively participated in fish farming through intervention of Central Institute of Freshwater Aquaculture (CIFA), Bhubaneswar, Odisha, India.

Base line survey was done in the village to assess the socio-economic status of the members before CIFA's intervention. CIFA's intervention in supplying Indian major carp seeds in the ratio 1:2:1 (catla:rohu:mrigal) for stocking in the community pond enabled the women to take initiatives to grow out fish production. Pond preparation including liming and weed removal were done by the WSHG members. On farm demonstration and hands on training on pond preparation, de-weeding of pond, fertilizer application, feed broadcasting, etc. were carried out for the members of the WSHG. Locally available materials like cow dung, GNOC, mineral mixture, SSP and Potash were used to fertilize the ponds.

Expected Socio-economic Impact of the Project

- Income and employment generation
- Knowledge generation
- Aquaculture as an alternative livelihood
- Cross learning experience
- Empowerment of women – economic and social
- **Education** (already many women have learnt to sign and manage their bank accounts since the inception of the project)
- Alleviation of gender gap in access to resources

Epilogue

- Although women have proved to be competent in adopting new aquaculture technologies, their role still very much restricted and often ignored
- Major reasons may be the location of aquaculture sites and several sociocultural taboos against women who strive to earn for their family's subsistence in rural areas
- Gender bias in many aquaculture activities
- To ensure that women utilize their full potential in profitable activities like aquaculture, it is necessary to provide capacity building support to rural women, which will eventually lead to their empowerment
- Technology adoption should linked to socio-cultural aspects, and also to age, rural-urban status and resource availability

Achieving millennium development by 2025:

Equal participation in aquaculture sector, equal access to resources, to reduce work burden of women by 20% through improved technologies, to increase women and gender equality by 30%

THANKS FOR YOUR ATTENTION