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GENDER RELATION STUDIES ON THE EXTENSION OF AQUACULTURE TECHNOLOGIES OF FISH PRODUCTION IN BANGLADESH

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ABSTRACT

Azad SA, Rahman MM, Rahman MS, Azam KI (2014) Gender relation studies on the extension of aquaculture technologies of fish production in Bangladesh. *Marine Res. Aqua.* 2(1), 7-11.

A research was conducted gender relations regarding extension of aquaculture technologies of fish production in Bangladesh with the objective of identifying the problems and potentials as to improve the sector through modern media extension methods. The works were conducted through technical field studies using a structured questionnaire cum case studies and Focus Group Discussion (FGD). The use of Fisheries technologies in Bangladesh were found to be higher enough, but only about 32% of the technologies are mostly partially suitable for active participation of rural and professional women. Thus it was recommended to develop women compatible technologies and packages that may be safe and suitable for rural women community through result demonstration and extension, specially the marketing sector of the business chain. It was reported that that the gender neutral crop technologies were more than 50%. (NARS-BARC Tech) in Bangladesh. Access to resources and women participation as a part farming system activities and their empowerment need to be more transparent by regulations arranging easy lease matters on a gender neutral mid term soft system. The total issues of gender fisheries were found to be very positive in the context of climate change as scored by 78-83% active respondents suggesting for land policy (2009) amendment in favour of women right and empowerment.

Key words: gender relation, aquaculture, fish extension

INTRODUCTION

Fisheries being the most fast growing sector in Bangladesh and women participation in this sector has been considerably increased. A good number of researches conducted in on Fisher status and extension development program activities showed that community based development projections do not contain the rural professional gender issues (Haque *et al.* 2013a; Haque 2013b; Rahman *et al.* 2013a; Rahman 2013b; Wahiduzzaman *et al.* 2013).

As such, effort should be made immediately to attract more locally available female professionals. As stated here, this phenomenon is not only limited to the fisheries production but also affects the total fisheries value chain starting from fish hatchery, nursery, grow-out & fish harvest phases. Using the base year 2005 = 100, the professional productivity index for fisheries sector declines from 109 to 106 by 2010 subsequently (DOF 2008; BBS 2011). Recently, World Bank report identified the weaknesses of fisheries sector, Bangladesh. These were: i. Lack of sufficient technical capability in fisheries development planning where the gender sensitive plans and programs were not appropriately addressed putting in the right place, ii. Lack of clear definition and assignment of functional responsibilities for fisheries extension and GO/NGO support services, lack of female extension service providers, iii. Complicated and time wasting procedures in case of water body lease, especially for female applicants, and iv. Lack of trained manpower, inadequate career planning and development especially on gender basis (DOF 2008; Amin *et al.* 2009).

All these indicate that though have probed recognition gender relations in the fisheries sectors has not been possible to establish even after the declaration of the women rights and governments women development principles of the country under the purview of UN.

However, demand driven technological advancement has lead to tremendous development with regard to technicalities in both backward and forward linkages. In the context the present research program was developed and conducted on gender Relation prevailing on the Extension of aquaculture Technologies in Fish Production of Bangladesh with specific objectives to identify i. the status of existing aquaculture technologies in Bangladesh, ii. the problems facing during the extension of aquaculture technologies in Bangladesh with a focus to gender relations, and to iii. priorities for overcoming the situations.

MATERIALS AND METHODS

The works were performed conducting a technical field visit study using a structured questionnaire along with Focus Group Discussion (FGD) and specific case studies. The major land water soil physiographic characteristic features are given in the Figs. 1-5. The methods and sites used in the studies were formulated as per recommendations of the few previous related works (Chowdhury 1986; Ali *et al.* 1993 and Uddin 2002).

Sites sampling for the studies – Districts and Upazila

1. Dhaka- Savar, Keraniganj, Dhamrai, Nowabganj
2. Munsiganj- Sadar, Serajdikhan, Louhajang, Srinagar, Gazaria
3. Manikganj- Sadar, Singair, Saturia, Shibaloy
4. Mymensingh- Sadar, Trishal, Sambhuganj, Bhaluka
5. Netrakona- Sadar, Barhatta, Mohanganj, Kendua
6. Sylhet- Sadar, Golapganj, Biswanath, Joyantia, Kanaighat
7. Sunamganj- Sadar, Dharmapasha, Bisambarpur, Dherai
8. Comilla- Sadar, Chandina, Daudkandi, Meghna
9. Noakhali – Sadar, Begumganj, Senbag, Companiganj, Kobirhat
10. Sirajganj- Sadar, Belkuchi, Tarash, Raiganj



Fig. 1. Sirajganj Jamuna alluvial areas



Fig. 2. Noakhali area mild saline silty soil



Fig. 3. Netrokona areas, Brahmaputra Surma Kushiara water- neutral reaction



Fig. 4. Dhaka Manikganj Ganges Meghna water



Fig. 5. Sunamganj Sylhet areas Surma Kushiara Basin areas

A. Respondent's Identity: Upazila.District-... Name:...Gender:... Age:.... Educ:
Profession/ Category of respondents: Fish farm owner, Fish labour, Fish entrepreneur

B. Fish farm information:

1. Farm status:-i) Big pond ii) Mini Pond iii) Canal iv) Lake
2. Size of the farm:-i) >0.5 acre ii.) 0.5 -1 acre iii) 1-2 acre iv) <2 acre
3. Nature of the farm:-i) Seasonal ii) perennial iii) mixed
4. Farming duration:-i) >1 year ii) 1-2 years iii) 2-3 years
5. Investment in farming (000Tk): i) > 10 ii) 10-20 iii) 20-50 iv) >50
6. Income from the farming: i) Loss ii) profit iii) equal iv) high profit
7. Training on the job: i) No ii) >1 week iii) 1-2 weeks iv) >2 weeks
8. Financial assistance i) No ii) Bank iii) Govt agency iv) NGO
9. Have membership i) Co-op Soc ii) Kaiborto community iii) Govt exten iv) NGO

C. Research Questions:

1. Status of fish professionals as per gender female ratio?
 - (a) Fisheries farm owner : i) < 10% ii) 10-20% iii) 20-30% iv) 30-40% v) >40%
 - (b) Fisheries labour : i) < 10% ii) 10-20% iii) 20-30% iv) 30-40% v) >40%
 - (c) Fisheries entrepreneur : i) < 10% ii) 10-20% iii) 20-30% iv) 30-40% v) >40%
2. Problems in fisheries extension faced by females? i. Most techs are not female adoptable ii. Social insecurity iii. Less role in decision making iv. Less mobility v. Weak financial and academic background vi. Lack of skill vii. Lack of awareness viii. Lack of land ownership ix. Non-equitable gender rights
3. Priority sector for enhancing female led fish farming i. Exten of small scale and homestead farming ii. Establishing local fish market iii. Extending education iv. Credit without collateral v. Training on aquaculture vi. Female extension agents vii. Campaigning viii. Empowering for decision making ix. Gender based farmer right
4. Main problem from family i. No direct right on land/pond ii. Unsecured mobility iii. Lack of efficiency iv. High risks of profit v. Physical weakness
5. Main problem from society i. Movement of distant markets ii. Carrying fishes and inputs iii. Dragging nets and working in water iv. Overnight stay outside v. Lack of stakeholder interaction
6. Main problem from the friend circle i. Lack of dignity ii. Less income iii. Negative interaction with relatives iv. Disadvantaged time schedule
7. Main problem from the husband part. i. Lack of encouragement ii. Direct objection iii. Non-co-operation iv. Negative interaction with children v. Not allowing land or pond

RESULTS AND DISCUSSION***Fish farm information***

The results obtained from the studies are presented in the Table 1. The results on the status of fish farms are presented in the Table 1. The information collected from the fish farms shows that about 49% respondent mentioned that size of the farms are less than one acre. The majority of the participants informed that farming duration is more than 2 years, ponds are seasonal, training they received is less than 1 week. The highest (86%) respondent of Mymensingh mentioned that investment is between 1-2 lakh whereas, lowest (29%) respondent was found at Sirajganj mentioned about their investment in between 1-2 lakh. Haq (2007) Khan (2008) in their works and reviews identified several sites specific certain species and fisher category groups. The present results show significant change in the trend due to the composition of fisher groups and farming systems and available facilities.

Table 1. Fish farm status in the study areas

Districts	Farm status Pond < 1 acre	Farming type Seasonal	Farming duration 2-3 yrs	Investment Tk. 1-2 lakh	Income Break- even	Training < 1 week	Finance Micro- NGO
Netrakona	54	40	67	75	71	38	41
Sirajganj	53	43	65	29	66	68	56
Dhaka	68	49	45	36	42	32	29
Comilla	44	59	55	37	51	37	59
Sunamganj	41	34	47	64	36	52	64
Manikganj	41	37	37	37	47	36	37
Munsiganj	47	44	49	40	44	33	44
Noakhali	38	33	47	37	41	37	63
Mymensingh	64	52	73	86	61	56	42
Sylhet	41	37	58	37	37	36	43
Mean	48.56	43.11	52.89	44.78	47.22	43.00	48.56

Mean fish farm information

Mean fish farm information as mentioned in the Table 2 and Fig. 6 shows that about 49% respondent's farm size is below 1 acre, 43% pond is seasonal, 53% culture duration is 1-2 yrs, 45% farm's investment is 1-2 lakh, 47% farm's income is within break-even, 43% respondent got training < 1 week and 49% respondent got micro credit from NGO.

Table 2. Fish farming criteria

Farm status	Farming type	Farming duration 2-3 yrs	Investment Tk. 1-2 lakh	Income Break-even	Training < 1 week	Finance Micro-NGO
Pond < 1 acre	Seasonal	52.89	44.78	47.22	43.00	48.56

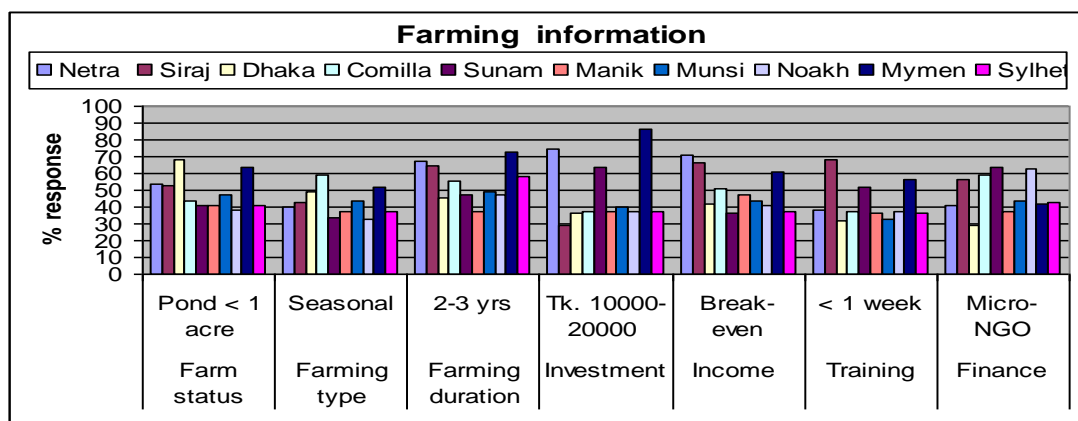


Fig. 6. Mean fish farming parameters as per District area sites

Quantitative status of fish professionals expressed by female ratio

The results as given in Table 3 and Fig. 7 shows that more than 50% of the respondent told that the participation of women as fish farm owner is less than 20 percent. Respondents were found to be highest in Dhaka (53%) and lowest in Sylhet (33.67 %).

Table 3. Fisher Categories and women participation

Districts	Fisheries farm owner		Fisheries labour		Fisheries entrepreneur		Mean
	<20%	>20%	<20%	>20%	<20%	>20%	
Sunamganj	54	43	57	45.50	51	33	45.50
Sirajganj	58	42	66	47.50	60	30	47.50
Mymensingh	64	40	45	43.17	42	32	43.17
Comilla	53	39	55	45.17	50	37	45.17
Netrakona	48	34	40	37.33	36	32	37.33
Manikganj	41	37	37	37.50	37	36	37.50
Munsiganj	47	44	49	44.00	44	40	44.00
Noakhali	38	40	47	40.00	41	37	40.00
Dhaka	61	52	60	53.67	62	41	53.67
Sylhet	42	34	32	33.67	31	30	33.67
Mean	50.60	40.50	48.80	42.75	45.40	34.80	42.75

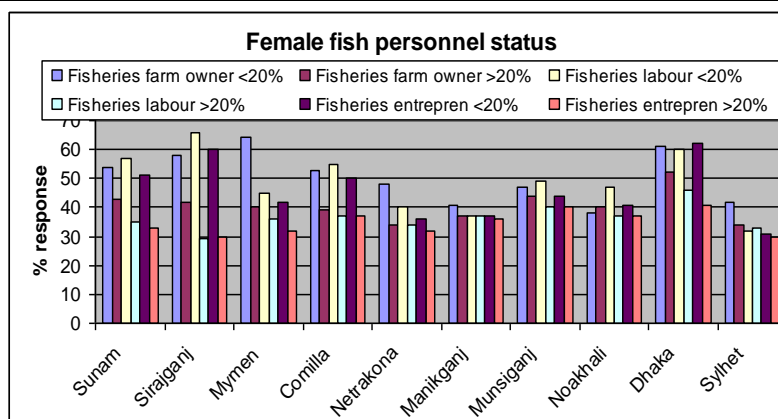


Fig. 7. Participation of female fisher as per District areas

The figure indicates that the highest nos. of respondent mentioned that (>60%) <20% farm owners are in Mymensingh. More than 50% respondent told that >20% farm owners are in Dhaka.

CONCLUSION

The status of existing aquaculture technologies in Bangladesh is high, however, only about 32% of the technologies are mostly partially suitable for active participation of rural women. Therefore, steps must be taken to develop gender sensitive aquaculture technologies and packages which readily may be available to rural women community through result demonstration and extension. It may be mentioned here that the gender neutral crop technologies were reported to be more than 50%. (NARS-BARC Technologies). Access to resources is another constraint that restricts women in participation toward productive farming activities and their empowerment. The land / pond resource may be arranged on a gender neutral mid term leasing system. Land policy 2009, therefore, should accordingly be revised and managed. Professional training for rural farmers must be provided with a focus on gender mainstreaming.

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