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FISHERIES AS HUMAN PROFESSIONAL RESOURCE OF LIVELIHOOD SECURITY IN THE DISADVANTAGED ZONES OF BANGLADESH

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ABSTRACT

Rahman MS, Azad SA, Rahman MM, Azam KI (2013) Fisheries as human professional resource of livelihood security in the disadvantaged zones of Bangladesh. *J. Innov. Dev. Strategy*. 7(3), 19-23.

Techno-development studies were conducted on the Fisheries as Human Professional Resource of Livelihood Security in the Disadvantaged Zones of Bangladesh with the objectives to know the spending professional working time status of fisherman and to identify the major problems causing the variability of situations. The studies were conducted at the field level using technical survey classified discussions. The studies covered Agro-Ecological Zones (AEZ) of Atrai and Ganges Floodplains and Natore, Sirajganj and Jessore districts. The categories of respondents interviewed were rural Fisherman, pond fish farmer and GO/NGO service providers. The findings showed that at AEZ 7 Sirajganj, rural fisherman's response on professional time spent on fish farming was highest, Jessore being lowest. This may be due to better scope for alternate livelihood opportunities at Jessore and less alternative livelihood opportunities at Sirajganj. Pond fish farmer at AEZ 5 Natore spent higher time, AEZ 8 Tangail farmer gave less importance. The mean percent time spent for fish farming with professionalism and livelihood security showed that At Sirajganj district people spent highest time (27%). However, Jessore people spent less time (16%). The **r**ural fisherman spent highest time and the NGO providers spent lowest time. It is recommended that the professional time should be increased by at least more 20% through more technical efforts by the government. Hands on training should be given to the farmers giving cash-capital support on easy terms along with suitable lands.

Key words: *fisheries professional, livelihood security, disadvantaged zones*

INTRODUCTION

Fisheries are most important wet agriculture sector for the sustainable development of Bangladesh. It's contribution to rural livelihood, social and nutritional goals is now not only being documented but increasingly worked by scientists and also acknowledged by the government agencies. Because of its traditional role in food supply and national food security to an extent, fisheries is now increasingly being incorporated into integrated agricultural, rural and community development in the Asian and African regions including Bangladesh (Bavinck *et al*. 2008; CNRS 1996; Dayton 1998; Duzgunes and Erdogan, 2008). For a country endowed with abundant water resources, Bangladesh is the fifth aquaculture producing country in the world. With such an aquatic resource environment, it is assumed that fish is naturally abundant and being a living renewable natural resource. In the year 2011-2012 national fish production was 32.62 lac MT. It is targeted to produce 34.00 lac MT in the year 2012-2013 (Anon. 2001; Anon. DOF 2003). To achieve the targeted production comprehensive public & private effort should be necessary. However, less attention was given to the rational and optimum management of the resource. The basis for fisheries development and management then was to encourage all out productions and harvesting. This is, however changing with time. Thus, the future approach to and basis for fisheries development is for the government to establish the mechanisms and framework as well as develop the necessary skills for and competence in fisheries planning and management, involving all relevant disciplines. Careful management and investment planning based on reliable data and information are also an indispensable part of this new approach.

According to the recommendations forwarded by Gucinski *et al.* (1990) and Haq (2007). in light of the local needs and global climate changes importantly include the general thrusts and directions for fisheries development at present and in the future are alleviation of poverty, improved nutrition, creation of greater employment and income-generating opportunities through increasing the productivity and production in fisheries. In this respect, well-conceived strategies and objectives constitute an integral part of the planning process as suggested by many workers of home and abroad (Khan 2008; and Shertzer and Prager, 2007). Thus the present research program was formulated and conducted with the specific objectives given here. In the context the present research program was designed and conducted with the specific objectives of: i. to know the working time status of fisherman, ii. to identify the major problems causing the variable situations, and iii. to assess the priority sectors for facing the climate change impacts in this regard.

MATERIALS AND METHODS

The methods and materials followed in the study were of both technical and socio-development nature. The Approach Methodology designed for the studies were i. Techno-dev survey, ii. Focus Group Discussion (FGD) and iii. Case studies. The methods of the studies followed were formulated as pe guidelines suggested for the subtropical humid regions (Hohowskyj *et al.* 1996; and Bavinck *et al*. 2008).

Sites and Sampling: The districts included in the studies were Natore, Sirajganj, Tangail, Pabna and Jessore covering the major Fisheres dominant Agr-Ecological Zones (AEZ) of Bangladesh. The AEZ covered were: i. AEZ 4 -Korotoa Bangali Floodplain: Bera, Santhia, Faridpur, Tarash, Raiganj, ii. AEZ 5- Atrai Basin: Natore Sadar, Gurdaspur, Singra, Bagatipara, iii. AEZ 7- Active Brahmaputra Floodplain: Kajipur, Sirajganj Sadar, Belkuchi, Chouhali, iv. AEZ 8- Young Barhmaputra Jamuna Floodplain: Shibaloy, Tangail Sadar, Bhuapur, and v. AEZ 11- 12: Ganges Floodplain (high and Lower): Jessore, Jhenaida as charaterized and technically described by BARC (2005) DOF (2011) and Anon. (2013). The Respondent categories involved in the studies were i. Rural Fisherman, ii. Pond Fish Farmer, and iii. GO/NGO service providers.

Questionnaire Guidelines

The Questionnaire Guidelines for Techno-dev survey, (FGD) and case studies included 3 parts as per the variables and natures of the objectives and expected outputs.

Part I: Personal information

Name:--- Upazila--- District--- AEZ--- Age--- Qualifi-- Gender---- Experience – etc.

Part II: Farm Information

1. Site of farming: i. River ii. Canal iii. Pond iv. Small water bodies (doba)
2. Training received on the job: i. No ii. 1wk or less iii. 2-3 wks iv. 4 wks or more
3. Size of the farm: i. 1 acre or less ii. 1-3 acres iii. 3-5 acres iv. 5 acres or more
4. Duration of farming: i. 1 yr or less ii. 1-3 yrs iii. 3-5 yrs iv. 5 yrs or more
5. Income from farming: i. Loss ii. Equal iii. Profit iv. High profit
6. Investment in farming: Thousand Tk i. 1 or less ii. 1-10 iii. 10-50 iv. 50 or more
7. Professional efficiency: % of the actual required i. <20 ii. 20-40 iii. 40-70 iv. >70.

Part III: Research Questions

Spend time in hrs/ day in the farm: i. 1or less ii. 1-2 iii. 2-5 iv. 5 or more

spend time in hrs/day doing farm work: i. 1or less ii. 1-2 iii. 2-5 iv. >5

Livelihood cost shared from farm income: i. <20% ii. 20-40% iii. 40-70% iv. >70%

Farm income reinvest for further dev: <20% ii. 20-40% iii. 40-70% iv. >70% e

Problems controlling income: Lack i. capital ii. technology iii. sincerity iv. skill

Type of HR need i. Training ii. Land and pond iii. Policy iv. Social dignity

Full time fishing for secured livelihood: i. no ii. no with condition iii. yes iv. yes with condition

Climate changing the fishing strategies: i. no ii. no with condition iii. yes iv. yes with condition

Agree that policies do not considered: i. no ii. no with condition iii. yes iv. yes with condition

Agree that the fishing with accepted proud : i. no ii. no with condition iii. yes iv. yes with condition

The AEZ and District based sites sampled for the studies are illustrated in the Fig 1 to Fig 5. here.

Fig. 1. AEZ 4 -Korotoa Bangali Floodplain: Pabna Bogra: Medium high and medium lowland, high potential for culture fish

Fig. 2. AEZ 5- Atrai Basin: Natore: Medium low and low land high potential for semi-open and open fisheries

Fig. 3. AEZ 11- 12. Ganges Flood plan high and low.: High and medium high land, potential for pond fisheries and controlled river fish culture and nurseries/ hatcheries

Fig. 4. AEZ 7- Active Brahmaputra Floodplain: Sirajganj: Medium low and low lands with risk of flood and erosion, poor community

Fig. 5. AEZ 8- Young Brahhmaputra Jamuna Floodplain: Manikganj Tangail: Medium low and deep river attached capture fisheries potential for professional business

RESULTS AND DISCUSSION

Status of fisherman professionalism

The status of fisherman in terms of professionalism and involvement led livelihood as studied here are given in the Figs. 6 and 7. The results obtained from the present studies are presented here show that at AEZ 7 Sirajganj district, rural fisherman's response time spent on fish farming was highest. However this response in case of AEZ 11 and 12 Jessore district was lowest. This may be due to better scope for alternate livelihood opportunities at Jessore district and less alternative livelihood opportunities at Sirajganj district. In case of Pond fish farmer, at AEZ 5 Natore district they spent highest time, whereas at AEZ 8 Tangail district farmer put less emphasis. This was due to profitability at Natore district. According to Service providers they put highest time at Sirajganj district lowest at Tangail district. The given in Fig. 7 also indicate that the rural fisherman spent their maximum available time, whereas the rural service providers of GO/NGO agencies gave the minimum time.

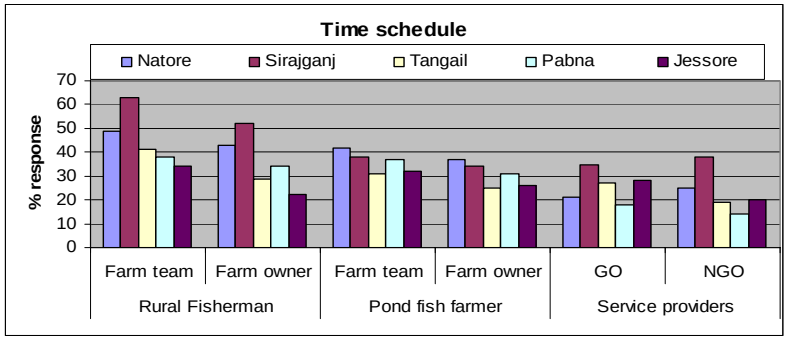

Fig. 6. Working status as per time schedule given for fish farming

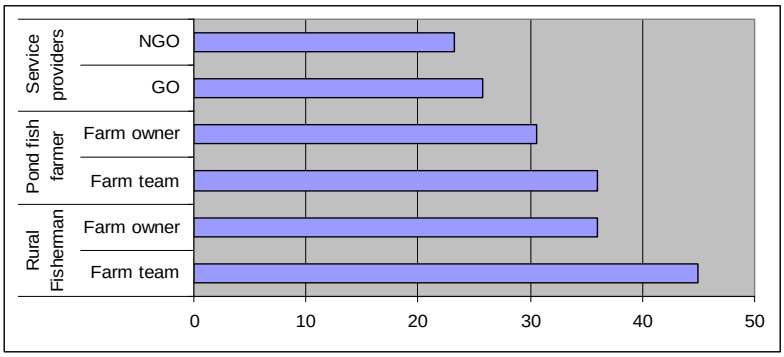

Fig. 7. Working status as per categories involved in fish farming

Professional Time spent for fish farming with and livelihood security

The mean percent time spent for fish farming with professionalism and livelihood security are given in the Fig. 8 show clearly distinct responses at different AEZ and Districts. At Sirajganj district people spent highest time (27%). However, Jessore people spent less time (16%).

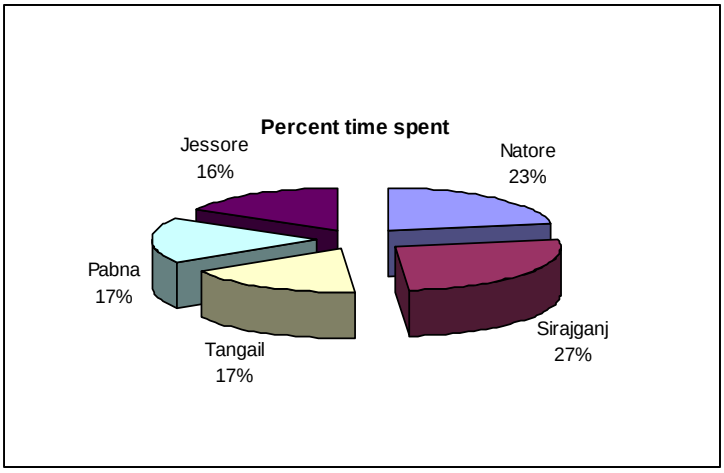

Fig. 8. Percent time spent for fish farming with professionalism and livelihood security

Time Scheduling for Farm Operations

Mean professional time in % of the working period spent for the farm technical management (Mean of AEZ). The results obtained from the studies are mentioned in the Table 1 to 3. The results reveal that Rural Fisherman farm team spent highest working period for farm management. NGO people spent minimum working period for farm management. People of Sirajganj spent highest time and it was lowest in Jessore.

Table 1. Professional time scheduling for farm operations relating to livelihood security

Site	Rural Fisherman		Pond fish farmer		Service providers		Mean
	Farm team	Farm owner	Farm team	Farm owner	GO	NGO	
Natore	49	43	42	37	21	25	36.17
Sirajganj	63	52	38	34	35	38	43.33
Tangail	41	29	31	25	27	19	28.67
Pabna	38	34	37	31	18	14	28.67
Jessore	34	22	32	26	28	20	27.00
Mean	45.00	36.00	36.00	30.60	25.80	23.20	32.77

Mean Districted based times

The results given here in the Table 2 and 3 show that the **r**ural fisherman spent highest time and the NGO providers spent lowest time. At Sirajganj district, people spend highest time whereas; at Jessore district people spent minimum time.

Table 2. Professional time scheduling for farm operations relating to livelihood security

Site	Rural Fisherman		Pond fish farmer		Service providers		Mean
	Farm team	Farm owner	Farm team	Farm owner	GO	NGO	
Mean	45.00	36.00	36.00	30.60	25.80	23.20	32.77

Table 3. Mean professional time scheduling for farm operations as per districts

Site	Mean
Natore	36.17
Sirajganj	43.33
Tangail	28.67
Pabna	28.67
Jessore	27.00
Mean	32.77

CONCLUSION

The fish farmers of AEZ 7 Sirajganj district, rural fisherman's response time spent on fish farming was highest. However this response in case of AEZ 11 and 12 Jessore district was lowest which be due to less scope for alternate livelihood opportunities at Sirajganj. In case of Pond fish farmer, at AEZ 5 Natore district they spent highest time, whereas at AEZ 8 Tangail district farmer put less emphasis due to profitability at Natore. Service providers gave higher time at Sirajganj. The mean percent time spent for fish farming with professionalism and livelihood security showed that At Sirajganj people spent highest time (27%) followed by Jessore (16%). Professional time spent highest working period for farm management. Fish farmers of Sirajganj spent more time and it was lowest in Jessore. All these negative indicators became mainly due to less production skill supposed to be provided by the GO-NGO service agencies. Thus it may be concluded that the professional time to be spent by the fish farmers for ensured livelihood security should be increased from the current 56% to 70% through more technical efforts by the government agencies. Intensive training should be given to the persons who have land-pond system feasibilities giving cash-capital support on easy terms.

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