ROLE OF TRIBAL WOMEN IN RESERVOIR FISHERIES, BANGLADESH

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Abstract

Kaptai reservoir, with an area of 58,300 ha is one of the largest freshwater bodies in Bangladesh, and it generates an annual fish production of about 5,000 tonne. Although the exploitation of fish has been occurring since the formation of the lake, harvesting is totally artisanal. There are about 5,000 people directly or indirectly involved in fishing and fishery related activities at the reservoir, and the role of the tribal women has been significant in the reservoir fisheries. The tribal women are involved in a variety of facets of the reservoir fisheries, such as carrying fish, sorting, icing, packaging and loading on to the transport vehicles. With the abundant production of pelagic fish (Clupeids) in recent years, the reservoir has provided income and employment opportunities to women, particularly in the areas of drying and retail marketing of the fish. This has enabled women to contribute to household income.

The results of the present study show that about 22% of the population involved in retail marketing and 13% of the population involved in fish drying are women. The study also revealed that about 83% of the respondents are tribal women, while the remaining 17% are migrants. All the women surveyed were married, their average age was 31 years. About 33% of the women had a primary level education, and the rest were illiterate. On average, the women handle about 15.2 kg of fish daily with a profit margin estimated at Tk.43 per retailer per day (US$1 = Taka 48.4, 1998). The tribal women were able to be actively involved as they had the constant support of their husbands.

Introduction

Rural women in Asia play a significant role in the agricultural sector, particularly in post-harvest activities (Unnevehr and Stanford, 1985; Begum, 1985). Recent studies in Bangladesh have revealed an increasing involvement of women in field crop production in addition to their traditional role in post-harvest activities (Rahman and Routray, 1998). The fisheries sector, second only to agriculture in the overall economy of Bangladesh, also involves women's participation at various levels with varying degrees of intensity. However, literature on the role and contribution of women to the fisheries sector in Bangladesh is scanty. For example, in recent years, shrimp farming has expanded rapidly, particularly in coastal areas. The expansion of this industry has provided employment opportunities for women in various activities.

The Kaptai Lake occupies an area of approximately 58,300 ha and is one of the largest reservoirs in Southeast Asia. Though created primarily for hydroelectric power generation, it contributes substantially to the national economy through freshwater fish production, navigation, irrigation and flood control. Fishers at the reservoir are composed of migrants, local tribal and non-tribal residents. About 5,000 people are involved directly or indirectly in fishing or fishery related activities in the reservoir. This figure includes a substantial number of women. The present study aims to provide insights into the role played by the tribal women in the activities related to this reservoir's fishery.

Methodology

The study aimed to identify women's role in fishing, marketing and post-harvesting activities (including drying, sorting, icing, transporting, etc.) of the reservoir fisheries. The study was conducted by administering a structured questionnaire at two stages. In the first stage, 493 fishers in four major fishing grounds on the Kaptai reservoir were interviewed. A small number of women (4) were found to be involved in fishing and information was gathered from these women. However, in brush shelter fishing, among 100 fishers (10% were women then 100 fishers) were interviewed. In the second stage, a total of 100 fish retailers in all five major markets were interviewed. Twenty-two of these were women. All 40 fishers involved in fish drying in the existing two fish drying sheds were interviewed; 5 of these were women. Ten women involved in fish packaging, icing, sorting, loading and unloading activities were also interviewed. The results of these interviews yielded a sample of women who were engaged in reservoir fisheries activities of size 51.

Results and discussion

Women's roles in fishing

Fishing gear used at Kaptai reservoir include

i. fish nets (gill, seine, lift, push, and cast)

ii. hook and line (cluster hooks, long line, hand line and reel hooks)

iii. traps

iv. wounding gear

Women were mainly involved in push net activities. Four tribal women out of 20 push net fishers were identified. The main reason for women's involvement with gear of this type is its ease of operation and low investment costs. The net is operated near the shoreline and does not usually require any craft for its operation. Most of the tribal residents' land was inundated when the lake was created (Sandercock, 1996) and in recent years they have become involved in fishing to supplement their limited income from other activities.

Women's roles in brush shelter fishing

Since the early 1990s, brush shelters, the traditional method of fishing used in rivers by women in fisheries, were introduced as fish aggregating devices. It is a simple method of trapping fish in an area of 0.02-0.12 ha by forming an enclosure with bamboo or wooden frames, with the branches of trees set below the frames, which are then placed near the shores of the reservoir. Water hyacinth is placed on the surface of the water within the frames to

keep the area cool and so attract fish. Wheat bran, rice bran, mustard oil cake, fermented rice, locally available spices and other fish feeds are used to attract the fish 2-3 days before harvesting. Women are extensively involved in these preparations and in feeding the fish in the brush shelters. About 10% of the brush shelter owners are women. The indirect involvement in this method of fishing is also high as the female members of the fishers' households are exclusively responsible for feed preparation as well as the feeding.

Women's roles in fish trading

Fish trading at Kaptai reservoir is diversified. Three types of fish trader are identified based on the type and price of the fish handled by them. The large traders trade exclusively in big and highly priced major carps and catfish. The medium traders deal in small sized carps and catfish as well as feather backs and snakeheads. The small traders deal exclusively with low priced clupeids and small prawns.

About 22% of the women were involved in fish trading. However, when the traders were classified into their different categories, women's involvement was found to be nil among the large and medium traders. The women's presence was seen exclusively among the small retail sellers, and was as high as 49% (22 women out of 45 small retailers). One of the major reasons for the increased involvement of women in the selling of clupeids and small fish results from the change in the catch composition at the Kaptai reservoir in recent years. Previously, major carps (Labeo rohita, L. calbasu, Cirrhina mrigala and Catla catla) were the dominant species in this reservoir, making up about 50% of the total landings. However, since the 1990s there has been an explosive production of clupeids and small prawns. These clupeids currently constitute more than 50% of the total catch, leading to an increase in the involvement of women in the trading of these small fishes.

Another reason for the women's involvement in clupeids and small prawns only is the relatively lower investment required for their purchase and transportation. Additionally, the royalty payment to the government for these small fishes is not mandatory since these fishes are mainly for local consumption. On the average, these women handle 15.2 kg of fish daily with an estimated selling margin of Tk.43.4 per retailer per day.

Women's roles in fish drying

Fish drying at Kaptai reservoir has increased at an alarmingly high rate in recent years for a number of reasons. Chief among these is the amount of fish which is dried in the area which has been caught illegally during the May-July closed season imposed by the government. About 21% of the fresh fish caught are dried in the two drying sheds located at Kattoli and Subalang. The direct involvement of women, as owners, in fish drying activities is estimated at 13% (5 women out of a total of 40 fishers). The indirect involvement of women in drying could be much higher as female members of the fishers' households provide substantial assistance. Women are also hired for the pre-drying processing of fish in these drying units, though their numbers could not be estimated.

Women's roles in post-harvest activities

Apart from fish trading and drying activities, women are also hired for the loading and unloading of fish at the pontoon, icing, sorting, grading and packaging of the catch. Depending

on the amount of fish landed and the necessity for hired labour, women are engaged to carry out many of the activities mentioned above. The typical daily wage rates for males and females in the Kaptai reservoir area are Tk.60 and Tk.40, respectively.

Socioeconomic profile of women involved in fishery activities

About 83% of all the women involved in the fishery activities at the Kaptai reservoir are tribal, while the remainder are local residents (non-tribal migrants from elsewhere). All the women involved in fish retailing, fish drying and brush shelter operations were married and middle aged (31 years old). Minors and unmarried women were hired only for the fish loading and unloading operations at the pontoon and icing, sorting, and grading activities. The highest level of education achieved by these women in fisheries was primary school (33% of the surveyed population), while the remainder were illiterate.

Conclusion

Rural women in Bangladesh are restricted in their activities from childhood by tradition. The majority of women's activities are confined to the homestead or to nearby ponds. Increasing marginalization, landlessness and impoverishment have compelled the women to move beyond the home and work on road construction sites, breaking bricks, etc. These are considered low-level jobs (Rahman, 1997). The involvement of women in fisheries activities, activities which are perceived as men's domain, undoubtedly signifies the increasing mobility of women as they move out from their homesteads in to the open market.

An important point to note in the context of women's involvement in the Kaptai reservoir fisheries is that a majority of these women are tribal. In tribal societies the social stigma attached to women engaging in activities outside the home is minimal and this has enhanced the participation of tribal women in the fishery activities. To increase the participation of rural women in fisheries activities, a major effort is required to remove this social stigma and break the cultural constraints that prevent women's mobility and involvement.

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