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SOCIO-ECONOMIC CONDITIONS OF FISHERMEN AT JAINTIAPUR UPAZILA IN SYLHET

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Abstract

This study was conducted to investigate the livelihood status of fishermen of the Sari-Gowain River at Jaintiapur upazila under Sylhet district, Bangladesh. Randomly selected sixty fishermen from four villages were interviewed by using a structural questionnaire based on focused group discussion during December 2017 to May 2018. It is revealed that most of the fishermen (48.25%) were of middle age group (31 to 50 years). Among the respondents, around 78.5% fishermen were Muslim, and rests were Hindu. Around 71.5% respondents had nuclear family and 28.5% had joint family. Their family size ranged from 3-12 members; 10% fishermen had small family with 3-4 members, 60% had medium family with 5-7 family members, and rest 30% had large family with 8-12 family members. About 25.5% of the sampled fishermen received no education, 58.25% could sign only, 10.5% of the fishermen had education up to primary level, and 5.75% of the fishermen had education up to secondary level. Fishing is identified as the main income source for a large amount of fishers (41.5%) whereas 38.5% of the fishermen were involved in agricultural activities, 37.75% were involved in labor, and 23.25% were involved in boating as secondary occupation. About 70.5% of the fishers had access to drinking water from tube-wells and 29.5% used neighbours' tubewells. Of the sampled fishermen 45.5% used earthen latrine, 4.25% used semi-cemented latrine, and 50.25% used open field for toilet purpose. Most of the fishers (45.25%) were found to live in houses in corrugated tin roof and bamboo wall houses. Among the fishermen 61.25% borrowed money from non-government organizations (NGOs), 30.5% from relatives, and 8.25% were economically self-sufficient. About 69% of the fishermen were dependent on village doctor and *Kabiraj* for treatment, 21.5% on upazila health complex, and 9.5% on MBBS doctor for health facilities. All of these findings indicate the poor socio-economic conditions which might have negative impact on their livelihoods, and thereby should be improved in order to make positive impact on the fisheries biodiversity of the river.

***Keywords*:** Social status, fisherman, livelihood, biodiversity.

Introduction

Bangladesh is a land of rivers as around 700 rivers flow through the country (Wazed, 1991). These rivers are rich in aquatic biodiversity and offer great scope and potentiality for augmenting fish production; thus have significant role in capture fishery. These fisheries resources can play a vital role to improve the socio-economic conditions of the fishermen and respective stakeholders. These also help eradicating or at least reducing malnutrition, creating employment opportunities, and earning foreign currencies.

In 2017-18, this sector contributes 3.57% to the national Gross Domestic Product (GDP) and more than one-fourth (25.30 %) to the agricultural GDP. The fisheries sector plays a vital role in the national economy, consistently contributing more than 3% to the GDP in the last few years (FRSS, 2017, 2018). Among various sub-sectors of fisheries the inland aquaculture sector contributes more than 55% of the total fish production of the nation (DoF, 2016). Recently the inland fisheries production of Bangladesh globally ranked 4th (FAO, 2018). In 2016-2017, total fishery production of Bangladesh was 4,134,434MT of which 39,27,142MT were obtained from inland capture fisheries (FRSS, 2017). In spite of these, there are not much research works on the socio-economic conditions of the fishermen of these upazilas. Therefore, the socio-economic conditions of the fishermen of Jaintiapur upazila were considered to investigate in this study.

Livelihood can be described as the way of earning money or resources with conveniently involvement of occupations by which one can cope with stress and can lead life. A livelihood comprises the capabilities, assets, and activities required for living (Chambers and Conway, 1992). Household livelihood security can be defined as adequate and sustainable access to income and resources by a person to meet his basic needs including adequate access to potable

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water, food, housing, health facilities, educational opportunities, time for community participation and social integration. The risk of livelihood failure may be averted if people have secure ownership or access to resources including reserves and assets, and income earning activities to offset risks, shocks and meet contingencies (Singh and Gillman, 2000). However, in general the livelihood conditions of fishermen of Bangladesh are not satisfactory as most of them have no free access to open waterbodies for harvesting fish and most of the rivers and wetlands are now being controlled by rich or influential persons. Therefore, for proper development of the fishing community it is necessary to understand the baseline information for initiating proper developmental steps and improve the livelihood of fishermen.

At this situation, research work is very much necessary to understand the core problems of the fishermen and thereby keep the proper management steps. However, there are lacks of published reports on livelihood status of the Shari-Goyain River fishermen at Jaintiapur upazila of Sylhet district. Therefore, this study was carried out to investigate the socio-economic conditions of the fishermen at Jaintiapur upazila around the Shari-Goyain River.

Materials and Methods

Study area

The Sari-Gowain River is one of the trans-boundary rivers of Bangladesh originated from Meghalaya state of India. It enters Bangladesh through the northern part of Jaintapur upazila in Sylhet district and flows southwestward through Jaintapur, Gowainghat, SylhetSadar, and Chatakupazilas, and then meets the Surma River near Chatak Bazar (Al-Hadi, 2012). It receives flow from the Gowain River at Gowainghat upazila, Sylhet. This river is navigable and a large number of fishermen are dependent on this river for fishing. Thus, it plays an important role in their economy through supply of animal protein and employment generation, etc.

Jaintiapur is a large upazila (280.27 km^2) in the Sylhet district of Bangladesh which is geographically located between 24'59″ and 25'11″ north latitudes and in between 92'03″ and 92'14″ east longitudes (Figure 1). It is bounded by Meghalaya state of India on the north, Kanaighat and Golapganj upazilas on the south, Kanaighat upazila on the east, and Gowainghat and Sylhet Sadar upazilas on the west. In this study we have considered only the Jaintiapur portion of the Sari-Gowain River. This river is locally known as "Chenger Khal". In this study we have considered the fishermen of Shikarkha, Umonpur, Moakhai and Vittikhel villages under Chiknagul union and number two Jaintiapur union under Jaintiapur upazila.

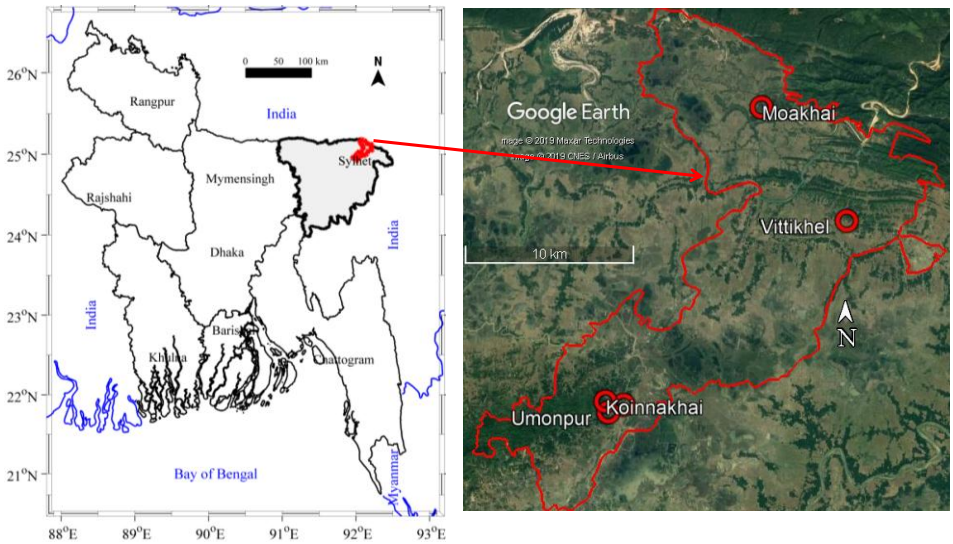

Fig. 1. Map depicting location of the study area

Preparation of questionnaire

A draft questionnaire was developed for pre-testing in the study area. During pretesting, attention was given to incorporate any new information which was not designed to be questioned in the draft interview schedule. The questionnaire was then modified according to the experience gathered from the pretest. The final questionnaire was then developed in logical sequence, so that the fishermen could understand and answer easily. Questions related to socio-demographic condition, income of fishermen, the family structures, and other relevant aspects were included in the questionnaire.

Collection of data

Data were collected from both from primary and secondary sources. The primary data were collected for a period of six months from December 2017 to May 2018 through questionnaire-based interview of the fishermen. At first, as participatory rural appraisal tool focus group discussion was conducted with fishermen to get an overview of issues such as, existing fishing systems, socioeconomic condition of fishermen, etc. Afterwards, a total of sixty fishermen were randomly selected from the fishers' community, and were interviewed at the river sides or at their houses, wherever available. Cross-check interviews were conducted through key informant interviews with school teachers, local leaders, relevant non-government organization (NGO) workers, etc.

Data processing, analysis and presentation

The collected data were summarized and listed in worksheets of Microsoft Excel 2007. The same software was also used for processing and analysis of those data.

Results and Discussion

Age structure

In this study, fishers were divided into three age groups: young (20-30 years), middle aged (31-50 years), and elderly people (51-70 years). The age group actively engaged in fishing was the middle age group (48.25%). Among the respondents only 25.5% were young, because most of the young generations were no longer interested in fishing. Though older age group is least suitable for fishing activities, they comprised around one fourth of the fishermen community (Figure 2). Hossain (2012) found similar result among the fishermen in the Punarbhaba River where a large portion (40%) of the fishermen fall in the middle age group.

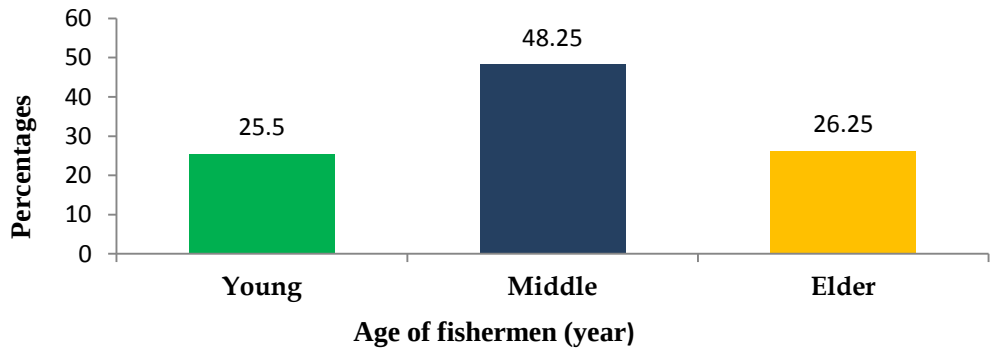

Fig. 2. Age structure among the surveyed fishermen

Educational status

Fishermen were classified into four educational categories according to the ability to write own name or the total year of schooling. Results of the present study show that the highest level of education among the fishers was secondary education which is earned by only 6% of the community. Only 11% had primary education. However, the rest majority of the community members had no education, or can sign only (Figure 3). Rabbani (2007) studied on the fishers of at the Karatoa River where 20% of the fishermen were illiterate, 71.67% of riverine fishermen were up to primary level of education, and 8.33% riverine fishermen had only secondary level of education which supports the present findings.

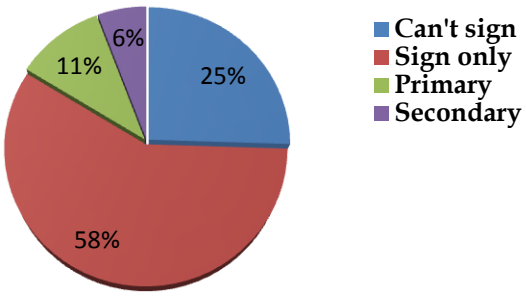

Fig. 3. Educational status of fishermen

Religion

Religion plays an important role in the socio-culture environmental life of people and can act as a notable constraint or modifier in social change as almost all people of the country follow any religion. Though four major religions are followed by the people in the country, in the present study it was found that only two religions, Muslim and Hindu, were practiced by the interviewees where majority of them were Muslim (78%) (Figure 4). In spite of religion differences they were found to work together in groups. Hossain (2012) also found that the most of the fishermen (90%) were from Muslim community whereas only 10% were from Hindu community in the Punarbhava River that coincide the finding of present study.

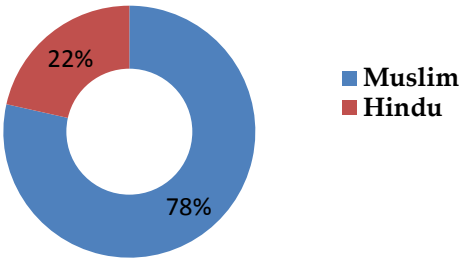

Fig.4. Religious status of the sampled fishermen

Family type

In Bangladesh, commonly two types of family structures are evident: i) nuclear family where married couples lives with children, and ii) joint family where a group of people related by blood or law live together. Low income and high economic pressure is one of the main reasons of forming nuclear family. Thus, the nuclear family is dominant (72%)in the study areas due to dominance of poverty (Figure 5). Ali *et al*. (2009) found different result from their study on the fishermen at Tarakanda upazila in Mymensingh district where most of the fishers (57.5%) live in joint family.

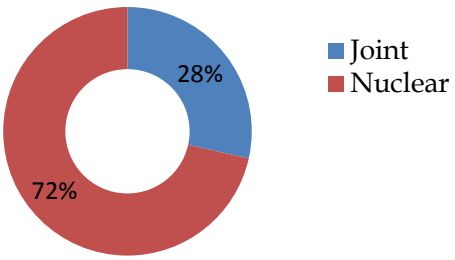

Fig. 5. Family type of the sampled fishermen

Family size

Family size is the number of persons belonging to the same family. According to this criterion the interviewed fishermen were grouped into three categories, viz. small family (2-4 members), medium family (5-7 members), and large family (8-12 members). Though most of the fishermen were from nuclear family majority (60%) of them possessed medium family as they had children more than the government prescribed maximum limit of two. However, only 30% had large family (Figure 6).These findings are supported by Hossain (2012) who conducted a study on the socio-economic condition of the fishermen of the Punarbhaba River.

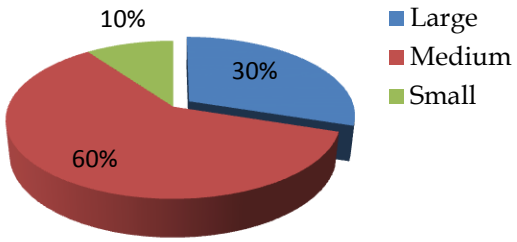

Fig. 6. Family size of the sampled fishermen

Electricity facility

Alike rest of the parts of the country, most of the places under this study were covered by electricity facility. Only10% of the respondents were yet out of the electricity facilities (Figure 7) due to remoteness of their living areas or financial inability to afford that.

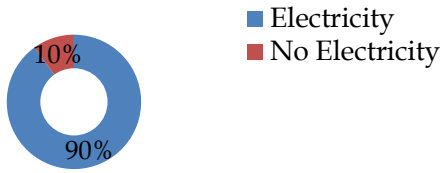

Fig. 7. Electricity facility in the study area

Household water facilities

There were diverse sources of drinking water in the study area, such as tube-wells, ponds, rivers, etc. Tube-well was the main source of drinking water owned by around 71% of the fishermen (Figure 8). The rest 29% used their neighbours' tube-well mainly for potable water, and for other purposes like bathing, washing clothes, utensils and foods, cooking, etc. used water from ponds or river. However, Islam (2012) found that 100% the fishermen of the Tangon River used tube-well water for drinking purpose.

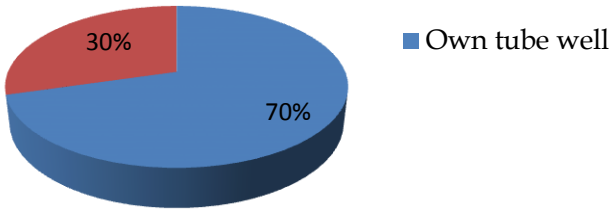

Fig. 8. Household water facilities of the sampled fishermen

Sanitation facilities

It was observed that the sanitary condition of the fishermen was very poor. Three types of toilet facilities were found to be used by the local peoples, viz. earthen, semi-cemented and hanging latrines. Only 4.25% of the respondents used semi-cemented latrines (Figure 9) whereas the majority used open fields or earthen latrines. Kostori (2012) found that 16% of toilets were earthen while 64% and 20% were semi-cemented and cemented in Chalan beel under Tarash upazilaof Sirajgonj district which do support the present finding that might be due to the differences in geographic location.

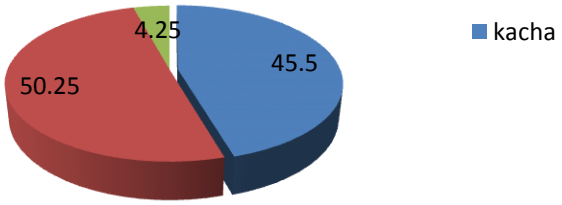

Fig. 9. Sanitation facilities in fishermen community in the study areas

Household status

The majority of the houses of the fisherman were made of traditional bamboo wall with corrugated tin roof. Noticeably, only 25.5% people had corrugated tin made houses, and 7.5% people had half building houses whereas 21.75% people had earthen houses (Figure 10). The majority of the species (45.25%) had tin roof and bamboo wall houses. Islam (2009) found different results where about 75% of fishermen's houses were earthen in the Kali River banks in Bhairab upazila of Kishoreganj district.

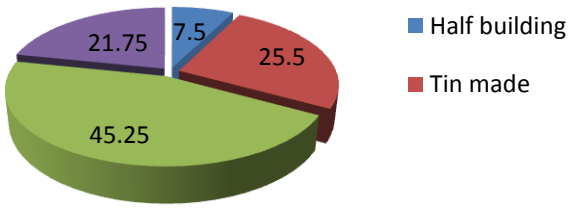

Fig. 10. Housing condition of fishermen in the study areas

Loan/Debt information

Only 5% of the respondents the study area had claimed themselves as self-sufficient, and most of the fishermen lived on hand to mouth. During dry season as their income source is about to cease they become bound to borrow money from relatives and/or different NGOs. The fishers indicated that 61.25% of them borrowed money from NGOs, 30.5% from relatives (Figure 11).Though, the rate of interest charged by those neighbours, relatives, or NGOs are high in some cases, they prefer that due to their less connection with banks, lack of education, no valuable deposit, etc. Alam (2006) found that only 24% of the fishermen in Mithapuqur upazila under Rangpur district received loan while the rest 76% did not get any type of financial support.

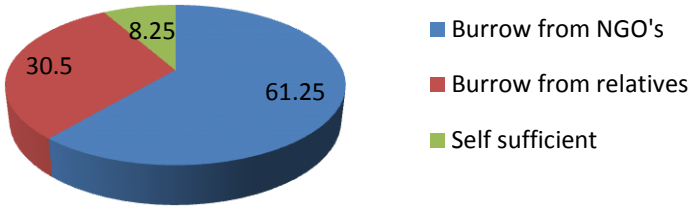

Fig. 11. Sources of credit facilities of the sampled fishermen

Involvement in fishing

Results of the present study indicated that 41.5% people use fishing as a full-time job and 58.5% as subsistence. The subsistent fishermen were dependent other occupations including agricultural activities (38.5%), about daily labourer (37.75%), boating (23.75%), etc. (Figure 13). Islam (2012) conducted a similar study on the fishermen of the Tangon River and found various different types of occupation preferred by the fishermen as subsistence. He found that about 25% of the total fishers were engaged in crop cultivation, 17.5% engaged in rickshaw/van pulling, 20% engaged in daily labourer, 25% engaged in fishing and 12.5% engaged in other activities as secondary occupation.

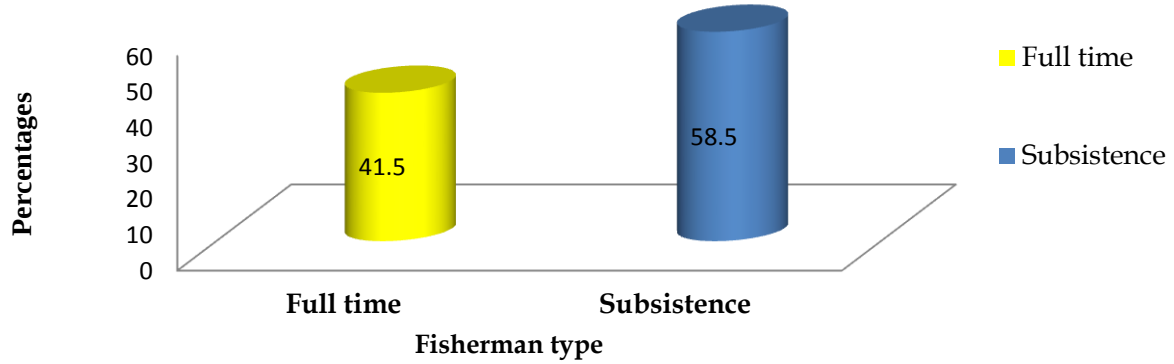

Fig. 12. Involvement in fishing by the sampled fishermen

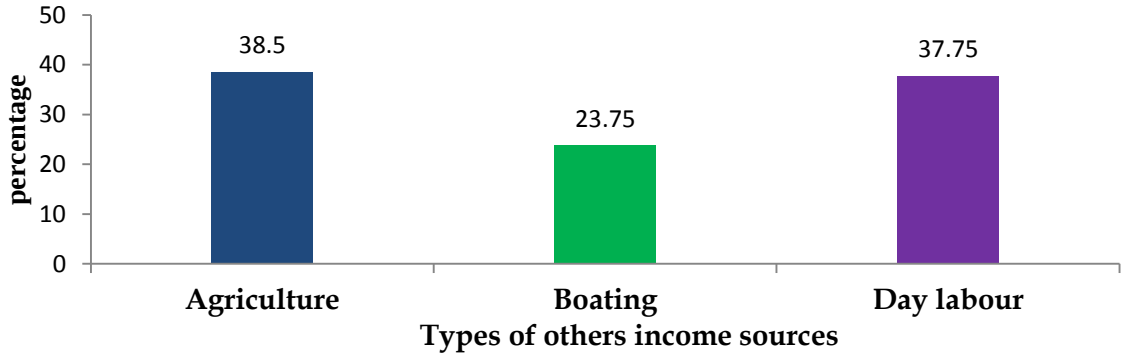

Fig. 13. Secondary occupation of the respondents in the study area

Health Facilities

The health facilities in the study areas were very poor because very few people about 9.5% had ability to go Bachelor of Medicine and Bachelor of Surgery (MBBS) or specialist doctors, only 21.5% people receives health facilities from respective upazila's government health complex and other 34.25% people went to unskilled village doctors. It is an alarming finding that 34.75% went to spiritualist to receive health facilities because of their poor economic status (Figure 14). Hossain (2012) observed that 40% of the fishermen households of the Punarvhaba River were dependent on village doctor, 23% got health service from upazila hospital, and 30% from kabiraj, a special type of local therapist.

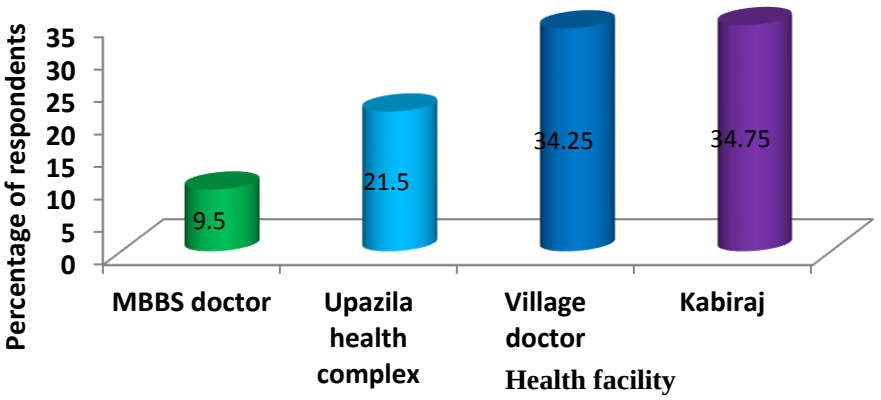

Fig. 14. Access of health facilities by the sampled fishermen

Changing trend in fisher's livelihood

Almost all the respondent fishers (61.75%) stated that their livelihood status was decreasing day by day because of the reduced fish availability due to decrease of biodiversity in the Sari-Gowain River. Some fishers (29%) told that their livelihood remained same as the past. Only a few fishermen (9.25%) claimed that their livelihood status improved than the past because of the foreign currency received from their immigrant family members and/or relatives (Figure 15).

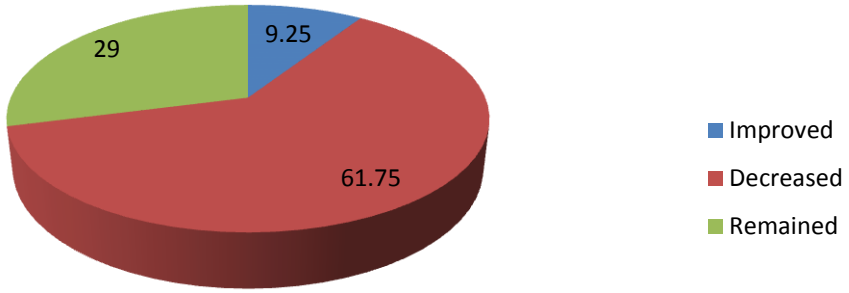

Fig. 15. Changing trend in fisher's livelihood

Gears used in the river

Several types of fishing gears were found to be operated in the study area. Different fishing methods were also employed in different seasons for fishing in those rivers. Modes of operations of gears are dependent on various factors, such as water level, rainfall, etc. In general, fishermen select the gear types, design, mesh size to capture the desired species and size of fishes. Those were mostly of traditional type which can be classified into three groups, such as nets, traps, and wounding gears. Among the interviewed fishermen most of them used to fish with several types of gears depending on different seasons and periods of the day, species and sizes of fishes, etc. Therefore, during the survey we have noted all types of gears used by them. As a result, the cumulative of gears' percentage used by the respondents exceed hundred percent. Around 90% of the fishers used cast net, 87.5% used gill nets, 2.5% used seine nets, 95% used push net, 15% used lift net, 87.5% used daun trap, 85% used bair (one kind of fish trap), and 90% used rod and hooks.

Fish marketing system

The result of the present study indicates that the market chain from fishermen to consumer pass through a number of intermediaries including agents, wholesalers, and retailers. In the study area following two types of marketing channels were observed:

Marketing channel 1: Fishermen →Consumer
Marketing channel 2: Fishermen→Agent→Wholesaler→Retailers→ Consumers

From the results it is found that only around 35% of the fishermen directly sell their fish through marketing -channel 1. The rest 65% of the fishermen used the long marketing channels (2) which have decreased their profit.

Finally it can be concluded that the fishermen of the Sari-Gowain River were mostly illiterate. Due to their illiteracy most of them were not conscious about education, health, and sanitary facilities. It eventually hampers their economic condition. Moreover, in dry season they were unable to catch sufficient amount of fish to generate minimum income to maintain their family. Thus, they had to take loan on very high percentage of interest from neighbours or NGOs rather than banks. These complex situations press them to indiscriminately use current nets and catch fry, fingerlings as well as broods which causes decline in fisheries resources as well as fish biodiversity in the river.

Acknowledgement

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