

Employment Pattern of People Living in Tanguar Haor

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Abstract

Tanguar Haor is a vital wetland in northeastern Bangladesh that supports boro rice farming and commercial fisheries. Yet local employment remains highly vulnerable to hydrological and climate extremes. This study examines employment patterns among residents, focusing on available opportunities, seasonal challenges, and future prospects. A mixed-methods approach was used, combining a household survey of 234 household heads with key informant interviews, focus groups, and field observations. Results indicate that agriculture and fishing are the primary occupations, and most household heads, who are sole earners, work in low-paying, informal jobs. Seasonal unemployment and underemployment are widespread, especially during extended flooding, and limited education and skills hinder transitions to diversified or non-farm jobs. Households report low savings, heavy reliance on natural resources, and frequent losses from floods, storms, and disasters, which deepen livelihood insecurity. Despite these challenges, respondents see potential for employment diversification through local resources, including ecotourism, livestock and duck farming, fish processing, and heritage crafts—if policy support, infrastructure, and risk-reduction initiatives are improved. The study highlights the importance of tailored, integrated interventions that promote livelihood diversification, climate-resilient resource management, and better connectivity to strengthen employment stability in Tanguar Haor.

Keywords: *Employment Pattern · Seasonal Unemployment · Livelihood Vulnerability · Tanguar Haor · Wetland Economy*

Introduction

A haor is a wetland ecosystem located in northeastern Bangladesh, stretching across districts such as Sylhet, Sunamgonj, Mymensingh, Habiganj, Maulvi Bazar, Kishoreganj, and Netrokona. These areas include rivers, canals, baors,

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and beels. It is characterized as a bowl-shaped depression within swamp systems and the Floodplain Lake, filling with water extensively during the monsoon and mostly drying up afterward (Monwar et al., 2014). There are approximately 373 haor regions supporting about 19.37 million people in northeastern Bangladesh, covering roughly 858,000 hectares—about 43% of the total haor area (Master plan of haor areas, 2012).

Tanguar Haor is a distinctive wetland covering 10,000 hectares in Sunamgonj's northeastern district, near the Indian border at the base of the Khasi Hills. It is among Bangladesh's globally important haors, situated just 10-20 km northeast of Sunamgonj town. Despite its significance, it remains a remote area (Haque & Kazal, 2008). The Haor's fertile land makes it valuable for agriculture, and it boasts rich ecosystems and biodiversity. However, villagers face limited employment opportunities due to frequent flash floods and powerful waves. During such floods (April to October), the entire crop land is submerged for 6-7 months. Although ecologically rich, local residents live beneath the poverty line. Overfishing by leaseholders and growing population pressure have led to ecological decline (Hossain, 2013; Tima et al., 2021). Consequently, Bangladesh designated Tanguar Haor as an 'Ecological Critical Area (ECA)' in 1999, and it was listed as an international wetland under the Ramsar Agreement in 2000 for its natural resources (Haque & Kazal, 2008).

Rana et al. (2009) observed that haor lands are used for boro and robi crops, with beels serving as sites for fishing, bird hunting, and the collection of aquatic plants for food, fodder, and fuel. Rivers and canals facilitate fishing, boating, and transportation, while fallow lands are utilized for grazing, occasional cultivation, and gathering grass and fuelwood. There is considerable potential to create more employment by managing resources effectively in the Haor region. Tourism is also emerging as a promising employment sector. During winter, migratory birds visit the Tanguar Haor, boosting its natural beauty and attracting tourists (Banglapedia, 2003). Qualitative assessments by Ahmmed & Kashem (2008) and Rabby et al. (2011) indicate that agriculture and fishing are the primary occupations for Haor residents, with fishing being the second most significant livelihood activity. The labor market largely stalls during the 5 to 6 months of flooding, as people lack access to infrastructure and resources, making their livelihoods increasingly difficult. Earlier research reports show that average household income falls short of expenses, forcing families to borrow, while poor water and sanitation conditions prevail in haor areas (Alam, 2005). Mamun et al. (2013) highlighted that employment opportunities in Tanguar Haor are declining due to overextraction of resources, illegal fishing, agrochemical use, natural calamities, and high population density. An IUCN (2010) study found that communities in Tanguar Haor are highly socio-economically vulnerable, facing

threats from flash floods, hailstorms, and wave erosion that impact their lives, livelihoods, and environment. These disasters often force residents to migrate to cities in search of alternative employment. A mixed-methods study by the NFPCSP (2010) revealed that haor inhabitants are mostly illiterate, dependent on farming, and unemployed for approximately 6 months during the rainy season due to flooding. Nearly all research indicates that climate change and flash floods adversely affect the livelihoods of haor residents.

Although the Haor region contributes significantly to the national economy, residents face many hardships. The geography of Haor often limits residents' ability to hold full-time jobs. After the boro rice harvest, just before the monsoon, most people in the area become unemployed. The region floods, leaving fishing as the only livelihood option. While some NGOs have recently created limited employment opportunities, their impact remains minimal. Since the community is accustomed to agriculture, shifting to diverse occupations is challenging. Additionally, creating jobs during the rainy season is difficult, prompting many to migrate to cities or other areas in search of work. Lacking skills beyond agriculture, they often resort to low-paid daily labor, which cannot adequately support their families. Despite numerous studies on the living conditions of haor dwellers, several gaps persist. Most research centers on poverty, resource depletion, ecological risks, and broad livelihood patterns, with limited focus on detailed employment structures in Tanguar Haor—such as seasonal employment, diversity, challenges, and emerging opportunities. There is especially little empirical evidence on how employment varies across seasons, how households manage employment gaps, and the potential for new or unconventional jobs in this vital wetland. Therefore, this study aims to analyze the employment patterns of residents in Tanguar Haor, focusing on constraints and future prospects. Its specific objectives include:

- identify the nature and types of employment opportunities in the Tanguar Haor area.
- examine the key challenges and difficulties associated with employment in the Tanguar Haor area.
- explore the potential prospects for improving and diversifying employment in the Tanguar *Haor* area.

Methodology

Study Area and Sampling Site

This study used a sequential explanatory mixed-methods design comprising two distinct phases (Creswell et al., 2003). The first phase used a quantitative approach, and the second, a qualitative one. As Tanguar Haor is the second-

largest haor in Bangladesh after Hakaloki Haor (Figure 1), it covers 88 villages, 10 Mauzas, and 02 Upazilas, namely Dharmapasha and Tahirpur, in Sunamganj district. From there, 6 villages were purposively selected for data collection (Table 1).

Data Collection, Sampling Tools and Techniques

The study population comprised employed household heads aged 18 years and above in the selected villages, and a total of 234 respondents were surveyed using a standardized interview schedule (Table 1). For the qualitative phase, three techniques were used: direct observation, in-depth open-ended interviews, and the review of written documents. To obtain rich, detailed insights into employment-related issues, 12 key informant interviews (KIs) and 6 focus group discussions (FGDs) (group size: 4-10 persons; time span: 30-60 minutes) were conducted in the study areas, supported by checklists.

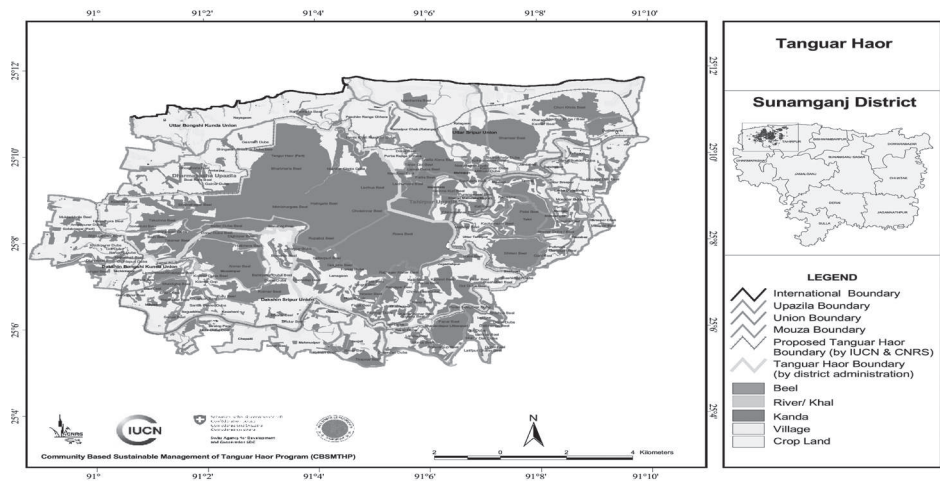


Figure 1. Location map of the Tanguar Haor Ramsar wetland in the north-eastern region of Bangladesh (Source: IUCN Bangladesh Country Office).

Table 1. Geographical Area Coverage, Sample Size and Tools used in this Study

Study area			Tools		
District	Upazila	Village	Households interview	FGD	KII
Sunamgonj	Dharmapasha	Antarpur	71	1	2
		Rajendrapur	40	1	2
		Mujrai	44	1	2
	Tahirpur	Golabari	29	1	2
		Jibionpur	18	1	2
		Jangail	32	1	2
		Total		234	6

Data Analysis

Qualitative data analysis entails classifying and interpreting linguistic or visual materials to understand the underlying and explicit structures of meaning and what they signify (Flick, 2013, p. 5). In the quantitative analysis, the data were manually edited, coded, organized, and compiled into a tabulation sheet. Descriptive statistics, including frequencies, percentages, and means, were calculated by hand to profile the entire sample and address questions about network composition.

Findings

Socio-Demographic Information of the Respondents

Household heads participated in the study, and, as expected, none were under 18. Most respondents were aged 33-37, with 13.24% aged 57 or older. The predominant religions are Islam (67.52%) and Hinduism (22.48%). A small group, about 10%, consists of indigenous communities like the Garo, Hajong, and Banai, who are Christians. In line with socio-cultural norms, Bangladeshi families are typically male-led; only 13.68% of households are headed by women, while 86.32% are headed by men. The literacy level among Tanguar Haor residents is very low due to poverty and their remote location. Participants noted that schools are far, and poor road conditions hinder regular attendance. Seasonal floods and natural disasters also disrupt schooling, often leading children to drop out. The uneducated population lacks the skills for alternative employment and needs better education and training.

Sources of Income, Monthly Income, Savings, Expenditure & Living Standard

The income of Tanguar Haor residents primarily depends on local resources, mainly agriculture and fishing. Their earnings fluctuate seasonally, with the highest income during the dry season when they can cultivate their lands. Since many respondents are uneducated or informally employed and lack written records, accurately assessing their family's income is challenging. Under the current market conditions, this income often falls short of covering basic needs. The study shows that the average monthly income is Tk 5,529, which remains inadequate for the respondents and their families. Some individuals earn more, mainly through remittances. Finding enough food, clothing, and shelter remains difficult due to income scarcity. Most spend their entire monthly income on essentials and debt repayment, and saving is largely unheard of. The community is generally unaware of personal bank savings, although many are familiar with local NGO savings schemes called 'Baro (12) takar Shamity', which they often participate in.

Nature and Employment Opportunities in the Tanguar Haor Area

Nature of Employment

The study reveals that residents of the Tanguar Haor area struggle to secure stable, year-round employment or income. Seasonal unemployment and underemployment are prevalent. Many respondents indicated they cannot find work daily and are often paid low wages due to the nature of their jobs. Environmental disasters and climate change negatively impact their employment and income. The geographical features of the Haor restrict occupational diversification, limiting earnings to two or three sectors. Crop diversification is also hindered by natural calamities, making full-time agricultural work impossible. The lack of higher education pushes most into the informal, temporary, and seasonal sectors. Consequently, seasonal unemployment remains a significant challenge. Since most people are involved in informal work—mainly agriculture and fishing as self-employed labor—they depend heavily on natural conditions.

Because most respondents work in the informal sector, working hours are not predetermined. Hours vary with the seasons and employers' needs. Respondents describe this as follows: we do not care about time when we harvest crops, catch fish, or irrigate farmland during the dry season; on the other hand, we go to the farm land late once winter disrupts us, and we stay even through the night once we catch fish during the peak season. However, laborers have to work long hours at their employers' discretion. Data show that their working hours range from 8 to 12 hours.

Main Occupation or Employment

The study found that fishing and agriculture are the main occupations for income. Although fish production is declining and fishers face various challenges, the Haor continues to naturally produce a wide range of local and indigenous fish varieties. Based on this geographical advantage, a large number of people from the fishing community have lived in the haor areas from time immemorial. Therefore, the fish sector can be considered a better source of income in the Haor area (Table 2).

Table 2. Main Occupations or Employment of the Respondents

Main Occupation or Employment	Name of the Villages						Total (Percent)
	Antarpur	Rajendrapur	Mujrai	Golab-ari	Jibionpur	Jangail	
Farmer	23	11	20	13	05	14	86 (36.75%)
Fisherman	22	14	16	10	09	11	82(35.04%)
Fish-related business	01	02	01	01		01	06 (02.56%)
Day Laborer	19	11	03	01	01	04	39 (16.67%)
Petty Business	01	01	01	01	01	01	06(02.56%)
Boatman	01	01	02				04 (01.71%)
Others	04	00	01	03	02	01	11(4.7%)
Total							234(100%)

Supportive or Secondary Employment

It was found that both males and females are engaged in joint rearing of cattle, ducks, and chickens for additional income. Small and seasonal businesses, such as weaving fish nets and mats, handicrafts, middleman ship, house making and repairing, day laboring, digging soil, and crushing stone, are commonly found as secondary sources of income that can offer additional income for families (Table 3).

Table 3. List of Secondary or Supportive Employment of the Respondents

Secondary Employment	Name of the Villages						Total (Percent)
	Antarpur	Rajendrapur	Mujrai	Golabari	Jibionpur	Jangail	
Cattle rearing	01	01	01	00	02	03	08 (06.15%)
Sewing/ Tailoring	01	01	02	00	00	00	04 (03.08%)
Poultry rearing	05	05	02	03	03	07	25 (19.23%)
Business of paddy	00	00	00	00	01	00	01 (0.77%)
Small trade	02	01	01	03	01	02	10 (07.69%)
House making	01	00	00	00	00	00	01 (0.77%)
Catching fish	41	17	13	14	13	18	113 (86.92%)
Labor	13	15	04	03	04	00	39 (30.00%)
Boatman	10	00	00	02	00	00	12 (09.23%)
Cultivation	06	01	04	01	05	00	17 (13.08%)
Digging soil	06	02	09	00	00	00	17 (13.08%)
Crushing stone	00	00	08	00	00	00	08(06.15%)
Mat weaving	00	00	00	00	00	11	11(08.46%)

* Multiple answers remaining

Employment Pattern During the Dry Season

Data show that the haor economy and livelihoods vary widely across seasons. Both survey respondents and FGD participants reported that their income increases during the dry season. The dry season is suitable for paddy production and other agricultural activities in the haor areas. People can also engage in fishing and related activities, and mobility becomes easier in this season. People can travel to distant places to earn income. Local residents earn additional income from work. Employment types during the dry season are shown in Table 4.

Table 4. Employment Pattern during Dry Season

Employment pattern during the dry Season	Name of the Villages						Total (Percent)
	Antarpur	Rajendrapur	Mujrai	Golabari	Jibionpur	Jangail	
Digging soil	03	02	05	00	00	01	11 (04.70%)
Mending house	01	00	00	00	00	00	01 (0.43%)
Building poultry firm	01	01	01	02	01	01	07 (02.99%)
Sewing quilt	01	00	02	00	00	00	03 (01.28%)
Fishing	67	40	44	29	18	27	225 (96.15%)
Carpenter	01	00	00	00	00	01	02 (0.85%)
Driving Motorcycle	64	25	10	08	04	19	130 (55.56%)
Weaving fishing net	00	00	02	00	00	00	02 (0.85%)
Tilling land	67	39	42	32	18	32	230 (98.29%)
Doing business	63	37	37	27	18	19	201 (85.90%)
Working as labor	05	01	03	00	01	01	11 (04.70%)
Rearing cattle	15	04	01	01	00	01	22 (9.40%)
Rowing boat	03	00	05	00	00	00	08 (3.42%)
Crushing stone	00	01	25	00	00	00	26 (11.11%)
Making boat	00	00	00	00	01	00	01 (0.43%)
Weaving mat	00	00	00	00	00	11	11 (04.7%)
Working in a shop	00	00	00	00	00	01	(0.43%)

* Multiple answers remaining

Employment Pattern During the Rainy Season

During discussions, some participants highlighted that flash floods are a major disaster impacting the main production sector, endangering the lives and livelihoods of Tanguar haor residents during the rainy season. The cultivated land is submerged for approximately six months each year, causing crop losses due to floods, hailstorms, and cyclones. Rice, in particular, suffers from flooding. Consequently, many people remain idle during this period without work. The

prices of local products increase sharply, limiting people’s ability to afford food and essentials. FGDs participants mentioned an unusual practice called “advance sale of labor,” where poor individuals are compelled to sell their labor at lower wages before the peak season. Some are forced to liquidate livestock and assets or take loans from microfinance institutions and moneylenders, who often charge high interest rates. Additionally, some are driven to migrate to cities seeking alternative employment. Table 5 details the types of employment available during the rainy season.

Table 5. List of Employment Patterns During Rainy Season

Employment pattern during the rainy season	Name of the Villages						Total (Percent)
	Antarpur	Rajendrapur	Mujrai	Golabari	Jibionpur	Jangail	
Mending house	02	00	00	00	00	00	02 (0.85%)
Sewing	02	00	01	00	00	00	03 (1.28%)
Crushing stone	00	00	08	00	00	00	08 (03.42%)
Fishing	71	40	41	29	19	21	221 (99.44%)
Rowing boat	64	36	28	28	18	19	193 (82.48%)
Earning from informal migration	69	33	19	24	08	15	168 (79%)
Rearing poultry	57	20	13	19	08	20	137 (58.55%)
Selling cattle	07	02	00	00	00	01	10 (4.27%)
Driving a <i>Troller</i> (engine-driven boat)	00	01	01	01	00	00	03 (01.28%)
Running a small trade (at home)	03	02	01	01	01	01	09 (03.85%)
Weaving mat	00	00	00	00	00	11	11 (04.70%)

* Multiple answers remaining

Employment Related Challenges and Difficulties

The study found seasonal variations in employment opportunities in the haor areas. Haor geography is critical and vulnerable to natural disasters, which usually occur during the rainy season. On the other hand, the dry season is suitable for paddy cultivation, but fishing opportunities decline. Therefore, fishers are at risk during this season, as are agricultural workers who face problems during the rainy season. The study’s findings are presented below, divided into two major seasons:

Employment-related Challenges and Difficulties During the Rainy Season

The rainy season typically signals a better outlook for fishing and related activities. However, severe floods and strong winds often hinder fishermen, making fish catching difficult and restricting travel to water bodies. As one fisherman explained, they must wait several months for the fish to mature. Meanwhile, farmers face severe challenges, as land flooding reduces agricultural output. Those raising cattle are frequently compelled to sell their livestock at reduced prices. The study found that roads and farmland also become submerged during the dry season, preventing cultivation and leaving laborers without work. Farmers are unable to leave their homes to seek employment because they need to protect their property from disasters. Only a few boats are used for transportation, which is expensive and risky. The survey found that 99.57% of respondents identified flash floods as the primary cause of income loss during the rainy season (see Table 6).

Table 6. Employment-related Challenges and Difficulties during Rainy Season

The problems are in the income-generating activities in the rainy season	Name of the Villages						Total (Percent)
	Antarpur	Rajendrapur	Mujrai	Golabari	Jibionpur	Jangail	
Flash flood	70	40	44	29	18	32	233 (99.57%)
Decreased rate of fish production	57	36	38	23	16	25	195(83.33%)
Bad transportation and communication	63	38	27	28	17	19	192 (82.05%)
High transport cost	31	08	16	19	19	12	105 (44.87%)
Lack of funds for leasing water bodies	25	01	21	20	07	06	80 (34.19%)
Limited access for fishing	21	18	27	17	06	08	97(41.45%)
Damage to crops	50	36	37	19	13	29	184 (78.63%)
No alternative employment opportunity	07	05	04	02	09	15	42(17.95%)

* Multiple answers remaining

Employment-related Challenges and Difficulties During the Dry Season

Though the dry season creates opportunities for farmers, people whose livelihoods depend on occupations during the rainy season are at risk. Most respondents have mentioned that dryness is becoming a major problem in cultivated land. Drought is a problem that reduces paddy production during this season, one of the key informants noted. FGD participants mentioned that during the dry season, the

size of the haor water body shrinks, leaseholders impose restrictions on open fishing, and, as a result, poor fishers cannot catch fish who are not leaseholders. This creates massive seasonal unemployment among fishers. Table 7 presents problems with income-generating activities (IGA) during the dry season.

Table 7. Employment-related Challenges and Difficulties During the Dry Season in the Tanguar Haor area

The Problems are in the income-generating activities during the dry season	Name of the Villages						Total (Percent)
	Antarpur	Rajendrapur	Mujrai	Golabari	Jibionpur	Jangail	
Dryness/Drought	68	40	38	29	18	22	215 (91.88%)
The number of fish is decreasing	30	36	38	29	16	29	178(76.07%)
Highly travelling cost	62	26	31	27	18	29	193 (82.48%)
Seasonal diseases of poultry and cattle	01	02	00	01	00	02	06(2.56%)
Legal barrier for fishing	03	02	04	02	02	03	16 (06.84%)
Having no transportation for going to work place	01	03	05	02	01	01	13 (05.56%)
Insufficient and low quality of travelling vehicle	08	07	03	05	03	02	28 (11.97%)
Lack of scope of alternative livelihood	15	18	23	13	17	05	91(38.89%)

* Multiple answers remaining

Disaster, Climate Change and Employment

Due to climate change, people in this area face multiple challenges, including income losses from agricultural production. The study revealed that people in Tanguar Haor face various types of disasters that affect the haor’s economy and employment opportunities (Table 8).

Table 8. Perceptions of the Haor People About Climate Change in the Study Area

Observation of the Haor People about Climate Change	Name of the Villages						Total (Percent)
	Antarapur	Rajendrapur	Mujrai	Golabari	Jibionpur	Jangail	
Rainfall is decreasing day by day	00	00	00	02	00	00	02 (0.85%)
Decreasing of fish in the haor	37	14	19	06	00	13	89 (38.03%)
Scorching heat	30	19	02	02	06	09	68 (29.06%)
The depth of the bills or rivers is decreasing	23	18	01	00	01	07	50 (21.37%)
Various aquatic decreasing	08	04	12	08	00	08	40 (17.09%)
Flood in advance	50	35	18	18	10	09	140 (59.83%)
Drought out of season	44	26	06	07	05	09	97 (41.45%)
Hailstorm out of season	07	01	02	02	01	00	13 (05.56%)
Storm is out of season	26	10	05	06	09	10	66 (28.21%)
Decreasing Hijol & Coros trees	19	11	00	01	02	02	35 14.96%)
Destruction of the ecosystem	02	01	00	01	01	00	05 (02.14%)
Changing of the time of season	02	00	22	09	10	06	49 (20.94%)
Irregular rainfall	01	01	18	22	10	20	72 (30.77%)
Decreasing aquatic plants & animal	04	03	06	00	01	01	15 (06.41%)

* Multiple answers remaining

Prospects of Employment

Despite having various challenges, the prospect of employment in the Tanguar Haor area is high due to its rich natural resources. Key informants, FGD participants, and survey respondents mentioned that multiple employment opportunities could be created here. The following table depicts the prospects of multiple employment in the Tanguar Haor.

Table 9. Prospects of multiple employments in the Tanguar Haor area

Prospects of multiple employments	Name of the Villages						Total & Percent (%)
	Antarpur	Rajendrapur	Mujrai	Golabari	Jibionpur	Jangail	
Agriculture-based factory/ industry	00	00	06	00	00	00	06 (02.56%)
Duck farm	00	00	00	02	00	03	05 (02.14%)
Import of coal	00	00	18	00	00	00	18 (07.69%)
Murta plants culturing(to weave Shital Pati or cool mats)	00	00	11	00	00	07	18 (07.69%)
Tourism area	50	36	25	17	13	16	157 (67.09 %)
Producing goods based on the demand of tourists	05	00	00	08	01	00	14 (05.98%)
Creation of a market for the cottage industry	60	30	17	10	13	12	142 (60.68%)
Production of agricultural goods	18	13	02	02	02	01	38 (18.24%)
Fishing & fish related trade	26	13	10	12	04	12	77 (32.91%)
Cattle rearing	02	04	03	05	03	03	20 (08.55%)

* Multiple answers remaining

According to experts, tourism has significant potential, particularly during the rainy season and winter. Both of the seasons have special beauty. Once the harbor is flooded, the beauty is enormous, resembling a sea, and water rides on the water bodies can be attractive to travelers. Tourism can create employment opportunities, such as boatmanship and crafts, as well as supportive businesses related to tourism. Hoar becomes a haven for migratory and residential birds during winter, and a huge number of travelers come from different parts of Bangladesh. Multiple tourism arrangements can increase employment opportunities. The following pictures show the natural views of the haor areas, which may attract tourists.

Respondents also noted significant opportunities to create various types of employment by establishing an industry based on local resources. According to key informants, the fish processing and glass industries can be established, as raw materials are available in the Haor areas. According to FGD participants, the industry can create employment for many people in the Haor area. Most of the respondents suggested that effective action should be taken to promote the export of coal, the rearing of ducks, the cultivation of purls, the rearing of poultry, and the

rearing of cattle, so that people may be engaged in different employments. One of the key informants opined that duck rearing can be a highly profitable source of employment for haor dwellers, as the area is flooded for about half the year. Many also suggest government attention to establishing large-scale livestock farming, such as milk vita. They argue that unused government land can be used for livestock grazing, and that this industry can create significant employment for local people. Mat weaving can be another important source of income. Recently, UNESCO declared the Mat of Sylhet (Sheetal Pati) a heritage site, which has increased its demand both in the national and international markets. If people are supported with training and logistics, a good number of employment opportunities can be created, and the country can earn foreign currency by exporting mats. Figure 2 shows the prospects for seasonal employment in the Tangaur Haor wetland areas, including the cultivation of Murta plants to weave Shital Pati (cool mats), rearing ducks and cattle, etc.

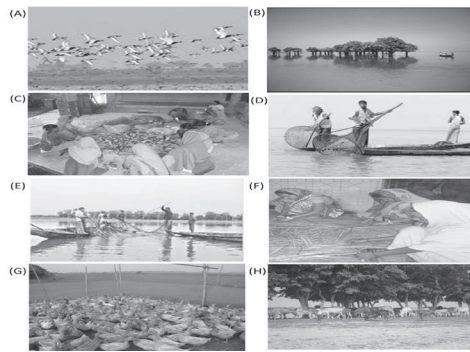


Figure 2. Potential prospects of seasonal employments in the Tangaur Haor Wetland Areas of Bangladesh

Above figure 2 shows (A-B) potential prospective tourism area; (C) Women's involvement in post-harvest handling of fishing; (D-E) Fishing operation; (F) Women weave Shital Pati (cool mats) using Murta plants; (G) Duck rearing; (H) Cattle grazing in the haor basin during the dry season.

Conclusion

Although the Tangaur Haor is rich in natural resources, the villagers in this area are dreadfully poor, and their socioeconomic conditions are extremely miserable. Agriculture and fisheries are the primary sources of income for the people in the Haor areas. However, both occupations are at serious risk from natural disasters and climate change. In line with the study objectives, the findings show that year-round employment opportunities are scarce, livelihood options are weakly diversified, and seasonal unemployment and underemployment are pervasive, particularly during the prolonged inundation period. The people of the study area express aspirations for positive change in their locality and believe that the

opportunity for full employment can ensure their overall well-being. Respondents consistently emphasize the need for multiple, locally adapted employment options that respect the geography, traditions, skills, and climate risks of the haor context, alongside improved road and transport infrastructure to connect workers to markets and services. First, promote diversified, nature-compatible livelihoods - such as eco-tourism, duck and livestock rearing, fish processing, and heritage crafts (e.g., Shital Pati) - through targeted training, start-up finance, and market development. Second, reform and strengthen resource and disaster governance in haor areas, including more equitable fisheries access, climate-resilient agricultural support, and investment in all-weather connectivity and basic services. Third, design integrated employment programs that deliberately engage both men and women - linking skills development, micro-enterprise support, and social protection - to reduce seasonal joblessness and enhance the resilience of Tanguar Haor communities.

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