

Social Development and Sustainable Fisheries: Bangladesh



Prepared by:

Md. Mujibul Haque Munir



International Collective in Support of Fishworkers (ICSF)
2023



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Small-scale Fisherman casting a net, Photo Credit: Din M Shibly

Front Inside

Fisherman at fish landing station at Cox's Baza, Photo Credit: Din M Shibly

Back Inside

Fish transport in carts at Cox's Bazar, Photo Credit: Din M Shibly

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Map of Bangladesh



1. Background

1.1. Introduction

Mache Bhate Bangali, goes a proverb. It means: Bangladeshis are made of fish and rice. It offers a glimpse of the traditional bond with fish. It is also evidence of the role fisheries play in the lives and lifestyle of the country.

On an average, 75 per cent of the calories in the Bangladeshi diet come from rice¹. It is the principal crop of the country, covers about 75 per cent of the crop area and 80 per cent of the total irrigated land². With this staple, fish is the complementary protein.

Over 230 rivers crisscross Bangladesh. The country has one of the world's biggest deltas and the largest of all flooded wetlands. Ideal setting for fisheries to thrive! The fisheries sector directly employs 18.5 million people, contributes 3.57 per cent to the national GDP, 25.30 per cent to the agricultural GDP, and provides a 60 per cent share of animal protein³.

This report offers an overview of Bangladesh's fisheries sector in the context of social development. It examines and analyses government policies and strategies in the sector. A historical background explains current fisheries management, governance and legal arrangements. This is followed by evidence of the impact on fishers' socio-economic conditions of government policies, strategies and social safety-net programmes for poverty eradication, employment, health, sanitation, education, social inclusion, access to justice and the impact of climate change.

1.2. Methodology

This report uses both primary and secondary data and material. The author surveyed the socio-economic conditions of coastal fishing communities and collected information using a questionnaire, interviews and FGDs from participants in three select coastal districts: Bhola, Cox's Bazar and Bagerhat. Seven 'Unions' (the first tier of government) and four 'Upazilas' (sub-districts) provided the administrative information. Of the 20,099 households in these districts, 7,994 (or 39.78 per cent) are fisher households. COAST Trust, a national-level NGO, provided support for the research.

The report uses also material from several secondary data sources. This includes academic literature, published and unpublished books, statistical data from government reports and official websites. In addition, it relies on books, articles, studies and data and information from government publications. To get a handle on governance, the report studied roles and functions of key national institutes. For an accurate portrayal of Bangladesh's socio-economic indicators, this report used several international reports.

1.3. Bangladesh: Country Profile

With 163.7 million people in 2018⁴, it is the world's eighth most populous country. With a meagre total land area of 1,47,570 sq km, it is among the world's most densely populated countries⁵. Despite being classified a poor country till as recently as a decade ago, Bangladesh is now among the top eleven emerging global economies⁶.

Since its independence in 1971, Bangladesh has been able to achieve tremendous successes on several socio-economic indicators. In 1971, the GDP of this nascent, war-ravaged country was US \$6.2 billion. By 2018 it had risen to \$286.27 billion (nominal), the 42nd highest in the world. Today the country's per capita income is \$2,034 (up from \$135.62 in 1970)⁷.

Where agriculture was once the backbone of the economy, the service sector dominates today, with 56.3 per cent of GDP in 2015. Agriculture now contributes a mere 15.5 per cent. Industry is the second highest contributor with 28.1 per cent of the GDP. Manufacturing, a subset of the industry sector, accounts for 17.6 per cent⁸.

1.4. Fisheries in Bangladesh: An Overview

The country has 260 freshwater fish species and 475 marine fish species⁹. One of the world's leading fish producers, Bangladesh produced 4.27 million metric tonnes (MT) of fish in the financial year 2017-18. Fish production is growing annually at the rate of 5.10 per cent.

The fisheries sector is divided into main two groups: inland and marine fisheries. Inland fisheries are then divided into two sub-sectors: capture and culture. Inland capture fisheries comprise rivers and estuaries, *bee/s* (billabongs), floodplains, the Sundarbans and the Kaptai lake. Inland culture fisheries are spread across ponds, seasonal cultured water bodies, *baor* (oxbow lakes), shrimp/prawn farms, crab pen culture and cage culture. Marine fisheries include industrial (trawler) and artisanal fisheries (wooden boats).

Inland capture formed the largest proportion of Bangladesh's fish production. In 1983-84, inland capture fisheries contributed 62.59 per cent to the total, while inland culture fisheries' contribution was 15.53 per cent. By 2017-18, however, capture dropped to 28.45 per cent and culture rose to 56.24 per cent¹⁰.

Fisheries constitute a major part of exports that bring in foreign exchange. Bangladesh exported 68,655 tonnes of fish and fisheries products, worth about Bangladeshi Taka 38.45 billion (\$455 million) in 2018-19. Of this total, 31,158 tonnes comprised shrimp, worth Tk 29.16 billion (\$341 million)¹¹.

The inland capture sub-sector has a total water area of 3,927,142 hectares (ha). The inland culture fisheries sub-sector's total area is 797,851 ha. In aquaculture, ponds are dominant, encompassing 50 per cent of the total area¹². Pond aquaculture production was about 1.9 million MT, which is 44.43 per cent of total fisheries production in 2017-18. Shrimp aquaculture contributes about 254,367 MT and seasonal culture contributes about 216,353 MT¹³.

The main species in inland fisheries include major and minor carps, small and large catfish species, river shads, snakeheads, freshwater eels, feather backs, perches, loaches, anchovies, gobies, glass fish, mullets, minnows, barbs and flounders. The target species are three Indian major carps: *rohu* (*Labeo rohita*), *catla* (*Catla catla*) and *mrigal* (*Cirrhinus mrigala*).

In the past, fishing from open water bodies was the domain of the *Jalada* (water slave), a low caste in rural social hierarchy. In present times, Muslims are most prominent in both culture and capture sub-sectors. A study conducted of the fisher community of a sub-district in Gouripur found 65 per cent were Muslim¹⁴.

New technologies, new species and an improvement in farming—particularly in pond aquaculture—have spurred the rapid growth of inland aquaculture¹⁵. It doubled in a decade, rising to 2.40 million MT in 2017-18 from 1.63 million MT in 2008-9¹⁶. Aquaculture has helped over two million Bangladeshis escape poverty between 2000 and 2010¹⁷. *The State of World Fisheries and Aquaculture* report ranked Bangladesh third in inland open water production and fifth in world aquaculture production in 2020.

Until 1951, all open water bodies—called *jalmahal*—were owned and controlled by the respective landlord or *zamindar*, in accordance with the Permanent Settlement Regulation No 1 of 1793, laid down by the British East India Company¹⁸. In 1951, the State Acquisition and Tenancy Act demolished the *zamindari* system. Under this, the administration of East Pakistan took control of

all *jalmahal* and management of fisheries¹⁹. Now, after Bangladesh's independence, the Ministry of Fisheries and Livestock regulates fisheries and the Ministry of Land (MoL) owns all open water bodies, leasing them to fishers.

Bangladesh's marine fisheries are spread across a coastline of 710 km; its total marine waters are spread over 166,000 sq km. Over 24,000 sq km of this is shallower than 10 metres²⁰. In 2016-17, total marine fisheries production was 637,476 MT (industrial: 108,479 MT; artisanal: 528,997 MT).

Hilsa or *ilish*, recently recognized under the Geographical Indication (GI) system, is Bangladesh's national fish. About 12.09 per cent of the country's total fish production comes from this one fish. Its production was 0.51 million MT,²¹ double that of shrimp at 0.25 million MT.²²

Marine fisheries are regulated under the Marine Fisheries Ordinance of 1983. To implement policies, the government enacted the Marine Fisheries Rules, 1983; these were amended in 1993, 2000, 2004, 2005, 2006, 2007 and 2010. Fishing in Bangladeshi marine waters occurs in three tiers: one, down to 40m in depth from the coastline, by normal fishing boats operate; two, in depths of 40-200m, where mid-water trawlers operate; and, three, at depths lower than 200m, to the end of the EEZ, where longline trawlers operate. Only 242 trawlers are allowed for fishing in those regions by the government²³.

The government has passed a series of laws for the conservation, management and maintenance of fishery resources. It includes:

- The Tank Improvement Act, 1939
- The Fish Protection & Conservation Act, 1950 (amended in 1995)
- The Protection and Conservation of Fish Rules, 1985 (amended in 2008)
- The Fish & Fish Products (Inspection & Quality Control) Ordinance, 1983
- The Fish & Fish Products (Inspection & Quality Control) Rule, 1997 (amended in 2008)
- The Marine Fisheries Ordinance, 1983
- The Marine Fisheries Rules, 1983
- Shrimp Culture Act, 1992
- Shrimp Culture Rules, 1993
- Fish Feed and Animal Feed Act, 2010
- Fish feed Regulation, 2011
- Fish Hatchery Act, 2010
- Fish Hatchery Regulation, 2011

Fishery terms are defined in detail in the Protection and Conservation of Fish Act, 1950 (under the East Bengal Act). The law first defined fishery as "any water body, natural or artificial, open or closed, flowing or stagnant (such as a river, *haor*, *baor*, *beel*, floodplain, canal, etc.) where activities for growing fish, or conservation, development, demonstration, breeding, exploitation or disposal of fish or living organisms related to such activities are undertaken, but does not include an artificial aquarium of fish used as a decorative article, pond or tank"²⁴.

The 1983 ordinance made provisions for the management, conservation and development of marine fisheries. It also defines aspects of marine fisheries like the term fishing, fisheries water, fishing vessels and foreign fishing vessels, among others. The National Fisheries Policy provides guidelines on the management and development of fisheries; it helped develop the National Fisheries Strategy in 2006. Its primary objective is to increase fish production through optimum utilization of available resources with an emphasis on generating employment and alleviating poverty.

2. Findings

2.1. Poverty

Committed to eradicating poverty, the government has a major focus on fostering accelerated, inclusive and resilient growth. The official motto of the General Economics Division (GED) of the Bangladesh Planning Commission reflects this: ‘Making Growth Work for the Poor’. The government aims to halve the poverty rate from 18.1 per cent in 2020 to 9.7 per cent in 2030. There is a renewed focus on the link between poverty, health and nutrition; the government’s fourth Health Population and Nutrition Sector Programme of 2018-22 is designed to achieve SDG targets on health, population and nutrition by 2030.

In 2018-19, more than 13 per cent of the country’s budget—Tk 641.76 billion (about \$7.55 billion)—was allocated towards safety net schemes, designed to combat poverty. Social safety net programmes (SSNP) in Bangladesh cover food security, cash allowances and housing for the ultra-poor and homeless. To ensure food security, the government schemes include distribution of free food, food work and test relief, among other provisions. Vulnerable people such as widows, destitute women and senior citizens get cash allowances. Housing projects include ‘Aktee Bari Aktee Khamar’ (One House One Farm), ‘Ashrayan’ (Shelters), ‘Grihayan’ (Housing), ‘Ghore Phera’ (return to home).

Corruption is serious problem. Transparency International ranked Bangladesh at 146 out of 180 countries in its Corruption Perception Index²⁵. “Selection (or targeting) is not accurate,” wrote Jasim Uddin Haroon of *The Financial Express* in 2020, “due to nepotism, corruption and political factors”²⁶. A huge challenge to making these programmes effective is eliminating these ‘inaccurate beneficiaries’. Inability to do so results in faulty implementation of policy.

A prime example of this ineffectiveness comes from a recent case, when the government offered to disburse Tk 2,500 each to vulnerable people who lost their jobs due to the pandemic. A list of 3.7 million households from sub-district levels was drawn up. However, due to data mismatch, only 1.4 million people received the disbursement.

Exclusion error and inclusion error in beneficiary selection and targeting is high in Bangladesh. The former wrongly classifies poor as non-poor and the latter incorrectly classifies non-poor as a proportion of the total poor. The Bangladesh Household Income and Expenditure Survey found in the classification an exclusion error rate of 71 per cent and an inclusion error rate of 46.5 per cent²⁷. Surveys by the Centre for Policy Dialogue (CPD) suggest 67.8 per cent of old age allowance was going to the non-poor. The report further reported that 65.6 per cent of government funds for poor people under SSNPs went to the non-poor due to political pressure and corruption during the selection process²⁸.

While the Bangladesh government acknowledges the fishing community to be economically vulnerable, in reality, there is no special quota for them under the regular schemes and SSNPs. One exception was a unique programme to compensate fishers for the duration of the seasonal ban on fishing; under this, registered and selected fishers received ration.

A 65-day annual ban on fishing has benefitted fisheries. In particular, it increased the production of *hilsa*. Two annual bans—the first from March 1 to April 30 and the second in October—have protected the fish in its breeding periods. A study found that the recent 65-day ban on fishing in the Bay of Bengal took away work and jobs for 70 per cent of fishermen. Before the ban, as much as 95.8 per cent of the fisher families ate three meals a day; the figure dropped to 49 per cent after. During the ban, the government supported the fisher families with 43 kg of rice. Yet 34.2 per cent of the families have not yet received this assistance²⁹.

Our surveys in the three coastal districts show that over 95 per cent of fishermen’s families have an average income between Tk 20,000 and Tk 100,000. This is below the national per capita

income of Tk 1,74,888. Moreover, 11 per cent of households are severely poor; their regular income is lower than \$1.97 and their annual average income is Tk 13,000 taka. Among those with an average income of Tk 1,600- 8,000, up to 67 per cent qualify as poor.

The survey revealed that fishers invest most of their income on basic needs such as food, medicine, clothes, schooling and house repair³⁰. Housing quality symbolizes well-being. Our survey found that about 90 per cent of the houses were made of bamboo, tin and wood. They were not safe—small, congested and old—and were found susceptible to storms that frequent the coastal region.

Our observation and perception from FGD suggests fisher families do not get adequate food and nutrition. Research in 2013 by M.A. Rahman and associates supports this observation. More than 68 per cent of respondents, among the poorest, had an average intake of about 1,692 kilocalories. About 25 per cent of respondents, classified as absolute poor, had an average calorie intake about 1,890 kilocalories. Only 6.67 per cent of the households had an acceptable level of food consumption³¹.

The pandemic and its lockdowns wrecked the economy. The General Economic Division of the Ministry of Finance estimates that in June 2020, poverty rose to 29.5 per cent³². The Asian Development Bank (ADB) estimated that the country lost 0.2-0.4 per cent of its GDP to Covid-19³³. The tourism sector was projected to lose Tk 97.05 billion between February-June 2020³⁴.

The government declared 19 stimulus packages, worth over \$12.1 billion, to offset the Covid-19 shock. The amount was 3.7 per cent of the GDP³⁵. Incentives for farm mechanization amounted to Tk 2 billion. The 2020-21 financial budget increased the target for government procurement and distribution of rice and paddy by 0.2 million MT to ensure reasonable price to farmers for their produce. A refinancing programme offered Tk 30 billion to farmers with small income and traders of agricultural produce³⁶.

While the fiscal stimulus packages focused on the corporate sector, there was some incentive for agriculture and fisheries also. The prime minister announced a package of about \$588 million for the agriculture sector. Farmers and fishers could avail of loans at 5 per cent interest. The government also provided loans to support the pandemic-hit fisheries sector. By August 21, 2020, it had disbursed loans to the tune of Tk 260 million to entrepreneurs in the fisheries sector to help compensate for financial losses during the pandemic³⁷.

The Department of Livestock Services opened a special control room with a hotline in April 2020 to resolve pandemic-related problems. It took immediate steps to smoothen the production, supply and marketing of products from poultry, dairy and fisheries. Responses at the local level included the navy providing masks and soaps to coastal fishers and organizing awareness campaigns. District-level administrations provided emergency assistance to fishers and other disadvantaged groups. The 2020-21 budget emphasized special initiatives to help fisheries regain its pre-pandemic role³⁸.

2.2. Employment generation

Bangladesh's constitution, in Part 2 of Article 2, makes it the State's responsibility to guarantee employment to its citizens. Yet unemployment and poverty remain monumental challenges, notwithstanding several employment generation schemes. A 2016-17 survey showed 2.7 million people were jobless, an unemployment rate of 4.3 per cent³⁹. The recently drafted National Job Strategy aims to ensure 30 million new jobs by 2030⁴⁰. The pandemic will doubtless change that target. From the earlier target of providing 11.3 million jobs over the coming five years, the government scaled down the target in 2020 to 9 million jobs⁴¹.

The draft strategy estimates that the economy will need to generate 1.84 million jobs annually over the coming decade. Despite the country's impressive economic growth, the annual employment growth rate has declined from 3.32 per cent in 2005-10 to 1.3 per cent in 2013-17. The Seventh

Five Year Plan focused on “creating good jobs for the large pool of under-employed and new labour force entrants” and hoped to create 12.9 million by 2020⁴².

The National Skill Development Policy, 2011, aimed to create, a “reformed skills development system [which] will empower all individuals to access decent employment” and succeed in “enhancing individuals’ employability (in wage/self-employment) and the ability to adapt to changing technologies and labour markets”⁴³.

Other policies that relate to employment include:

- National Labour Policy, 2012
- National Youth Policy, 2003 and 2017
- National Skills Policy, 2012
- National Policy for the Advancement of Women, 2011
- National Overseas Employment Policy, 2016.

The Employment Generation for Poorest Project (EGPP) provides short-term jobs to the extremely poor who suffer seasonal unemployment in the districts of Gaibandha, Kurigram, Lalmonirhat and Nilphomary. It has created 50 million workdays per year⁴⁴. Several studies have described EGPP as effective and inclusive. One such study found that prior to the project, 67.5 per cent of interviewees ate two meals a day and 25 per cent ate one meal a day. EGPP has brought down the number of people eating two meals a day to 7.5 per cent. More than 92.5 per cent can eat thrice a day. Nobody is limited to one meal a day. There has been an increase in quantity, consistency and diversity of food items being consumed. EGPP beneficiaries have improved social standing⁴⁵.

The ‘Ektee Bari Ektee Khamar’ (One House One Farm) programme turns rural households into hubs of economic activity. It focuses on people in hilly/backward localities with 1 acre of land or less. It features a Food For Work (FFW) programme, generating seasonal employment for large numbers. It generates employment in earthworks of over 100 million workdays per year on average, directly benefiting about 4 million people⁴⁶.

The Ministry of Fisheries and Livestock lists 53 development projects for the year 2016-17, of which 20 address fisheries and capacity building of fishing community. The ministry’s Department of Fisheries runs the Sustainable Coastal and Marine Fisheries Development project. A five-year project, it provides community-driven development and promotes alternative employment, along with sustainable fisheries co-management. Doing so will improve the lifestyle and livelihood of people employed in the sector.

At the district-level fisheries offices, the following services are available:

- Training on modern fisheries culture
- Support in implementing fisheries-related laws
- Pre-marketing support for prawn cultivation
- Support in production of fish fry in appropriate healthy ways
- License for a fishing boat
- Support in increasing fish production

These services also directly help generate employment. While poor and disadvantaged community members may obtain support from the employment generation programmes, the fisheries sector is a priority. The Draft National Job Policy, 2019, calls for assistance in the production of fish because it is included in ‘green jobs’. It promotes access for groups historically under-represented in fishing skills training, recognizing fisheries’ importance as a rural industry.

The pandemic has severely hit the job sector. An estimated 1.7 million young people lost their jobs in 2020⁴⁷. A flagship scheme called Aspire to Innovation (a2i), under the Digital Bangladesh umbrella, projected that 33 million people would lose their jobs by the end of 2021⁴⁸. In April 2020, the number of jobs posted on the country's largest employment matching sites was a mere 13 per cent compared to the same time the previous year⁴⁹.

The government's efforts to promote youth self-employment by setting up a start-up fund have not implemented very well, reviews suggest. Its response to the crisis, helping recovery and building resilience to future shocks, will be complemented by the \$250-million Second Programmatic Jobs Development Policy Credit, created with the World Bank's support⁵⁰.

2.3. Decent Work

The 'Declaration on Fundamental Principles and Rights at Work', adopted in 1998 by the International Labour Organization (ILO), "commits the Member States to respect and promote principles and rights in four categories, whether or not they have ratified the relevant Conventions." These categories are: one, the freedom of association and the effective recognition of the right to collective bargaining; two, the elimination of forced or compulsory labour; three, the abolition of child labour; and, four, the elimination of discrimination in respect of employment and occupation⁵¹.

After it joined the ILO in 1972, Bangladesh ratified 35 ILO conventions, including seven fundamental conventions⁵². The country has implemented three Decent Work Country Programmes (DWCPs), one each in 2006-2009, 2012-2015 and 2017-2020. Their priorities were:

- Effective employment policies to improve employability via skill development, including green growth
- The promotion of a healthy and clean working environment for all employees
- Compliance with key international labour standards
- Promotion of fundamental values and labour rights through social dialog and tripartism.

Other than the constitution, which details worker rights, there also exist other laws and policies, providing the legal basis of decent work in Bangladesh. They deserve a closer look.

2.4. Bangladesh Labour Act, 2006

This provides a range of guidelines sufficient to ensure decent employment. Some stipulate basic amenities; for example, an employer must provide a letter of appointment and a photo ID card to the worker (section 5) and retain and maintain a service book containing all the information of the employee (sections 6 and 7). Others ensure that laid-off employees will obtain compensation (section 16); the benefit of family members in case of death (section 264); no person will be retrenched without a one-month prior notice (section 20); maternity benefits to pregnant workers, eight weeks preceding and eight weeks following the confinement date (section 46); and Personal Protective Equipment (PPE) must be provided to workers (section 78).

2.5. National Labour Policy, 2012

This declares that the State will follow the instructions of the Constitution of Bangladesh and develop rules and regulations as per guidelines of ILO Conventions, international labour standards, and other declarations regarding workers' rights. The policy aims to develop skilled manpower and create of employment opportunities, and ensure decent work both in the formal and non-formal sector. Increased social safety for workers, eliminating discrimination between men and women in the workplaces and elimination of hazardous child labour are also among its objectives.

2.6. National Fisheries Policy

Other than 'Enhancement of fisheries production,' this strives to reduce poverty by creating self-employment and improving the socio-economic conditions of fishers.

2.7. National Social Security Policy

Introduced on 1 June 2015, the main components of this policy include the creation of a National Compulsory Social Insurance Scheme (NSIS), based on the premise that employers and workers collectively pay premiums to the National Insurance Fund for work Injury⁵³.

Bangladesh's labour laws substantially cover several criteria of the general codes of conduct, showed a 2006 study by the Bangladesh-German Development Cooperation. This means that a factory that is 100 per cent compliant with national legislation covers about 85 per cent of the provisions of the other general codes of conduct⁵⁴.

Yet the International Trade Union Confederation Index ranks Bangladesh among the 10 worst countries for working people; it says the country does not guarantee worker rights. The Decent Work Check 2020 found that the term 'minimum wage', while not defined by the Labour Act of 2006, sets a procedure for fixing industry-wise minimum wage rates. The annual leave entitlements vary according to the worker's age⁵⁵.

Likewise, our survey found a serious lack of decent working environment in the fisheries sector. In Cox's Bazar and Bhola, there is no formal recruitment system for fish workers and those working on boats owned by others. Fish workers are often forced into labour. Up to 78 per cent take an advance loan from boat owners, which means they cannot bargain for wages. Fishermen also revealed that they do not get paid leave or overtime payment, despite working long hours while at the sea.

In the six villages that produce dried fish in Cox's Bazar Sadar and Moheshkhali sub-districts, 20 per cent of the work force comprises children. In Najirartek, the village in Cox's Bazar that produces more dry fish than any other in South Asia, over 2,800 children are employed⁵⁶. Decent working conditions are totally absent in dry fish production in Cox's Bazar. The country's largest dry fish producing plant in Nazirartek employs between 16,000 and 17,000 workers. All are daily wagers, working on a no-work-no-pay basis. The work itself is not guaranteed either. Workers line up each morning in the hope of getting a job for the day.

About 70 per cent of the workers are women, paid about Tk 300 a day, working 12-hour shifts from 6 am to 6 pm. Often workers need to start after midnight but receive no additional wages for the effort. There are no medical facilities at the plant. There is no protective gear for those working with chemicals and almost all suffer from a variety of skin diseases. If workers fall sick and need to leave, they suffer wage cuts. Women workers lack access to toilet facilities or day care centres for their children, tagging them along to go to work.

The plant also employs children and adolescents. The men work on seasonal recruitment, usually for nine months. They do not get paid for the months they don't work—more evidence that decent work conditions are not in place for fisheries in the country.

2.8. Social Inclusion

Bangladesh's constitution states, in Article 27, that all people are equal before the law; they are entitled to equal protection under the law. Article 28(1) provides that the State shall not discriminate against any person solely on the grounds of religion, colour, caste, sex or place of birth. Article 28(2) grants women equal access to women and men in all fields of state and public life.

Other laws also ensure equality or inclusion for everyone in the country. A key goal of the 2010 National Education Policy is to create a country free from discrimination. The National Women's Agenda ensures an end to sexism. Labour Policy, 2012, discusses fair pay and equal treatment for women and men, while seeking to ensure equal opportunities for everyone, including ethnic minorities, Dalits (discriminated against as low castes), the mentally disabled people and the poor. Other legal instruments to ensure that women and children and the disabled are not discriminated against; they include the law on the Prevention of Violence against Women and Children, 2000, the Act on Domestic Violence (Prevention and Safety), 2010, the Act on the Rights and Protection of Persons with Disabilities, 2013.

The Seventh Five-Year Plan affirmed a commitment to reducing poverty, enhancing human capital growth, and reducing inequality. It pledged that "significant public education against discrimination and towards equity inclusion would be promoted, building greater accountability through social audits and public hearings". The plan includes strategies for Dalits and extreme-poor communities, the ethnic minorities, sexual minority groups and for gender equality.

Incorporation of SDGs into development policies is key for the country's growth. As a UN member, Bangladesh is committed to ensuring that no one is left behind and to remove social and gender exclusion and discrimination⁵⁷. As a signatory to the Convention on the Elimination of all Forms of Discrimination Against Women (CEDAW), the country has a global obligation to eliminate all forms of discrimination against women. It is important to mention that Bangladesh has reservations against Articles that are in direct contradiction with the Sharia law and other personal laws.

The country has made major achievements in empowering women. In the Global Gender Gap Report 2020, Bangladesh ranks seventh in terms of political empowerment for women⁵⁸. Gender parity in access to education at both primary and secondary levels was achieved well ahead of the Millennium Development Goals (MDG) target year. Girls outnumber boys both in primary and secondary enrolments⁵⁹.

Poverty eradication and social inclusion get a shot in the arm from the Chars Livelihoods Programme (CLP) and the Vulnerable Group Development (VGD) programme. Studies show that both services enhance social networks and promote greater opportunities for women in social activities⁶⁰.

There is another side to this coin, however. Bangladesh is also witness to a rise in violence against women. There have been reports of discrimination against women; as recently as June 2020, 308 women and girls were tortured in the country.

There is disparity in economic development, too. This can be gleaned from a comparison between the 2010 Household Income and Expenditure Survey (HIES) with the 2016 survey, using the Gini coefficient, a common measure of economic inequality. On this scale, 0 indicates perfect equality in wealth distribution and 1 represents perfect inequality with one person holding all the wealth⁶¹. In 2010, the country's Gini coefficient was 0.458. By 2016, it had increased to 0.482.⁶²

Oxfam International has a Commitment to Reducing Inequality Index. In 2020, it listed Bangladesh 16th from the bottom in the public services pillar. Furthermore, the country is 8th from the bottom on labour and union rights, proving that little is being done to fight inequality⁶³. Covid-19 has made things worse. Communities and people traditionally faced with discrimination have been increasingly marginalized, losing jobs⁶⁴. Reports also reveal that the poorest have received the least relief offered by the government to fight the impacts of the pandemic. Economists fear that this disparity in relief distribution may exacerbate poverty in the poorest districts⁶⁵.

Kurigram, the poorest district in the country, provides an example of this. The government allocated 1.38 kg of rice per person, Tk 5.70 as cash assistance and Tk 1.56 for baby food. In stark comparison, Narayanganj district, with the lowest levels of poverty, got 37.94 kg of rice per person, Tk 136.62 in cash, and Tk 30.04 for baby food from the government.

For fisher communities, the pandemic has magnified existing vulnerabilities. While there is no clear proof of social exclusion due to Covid-19, there is evidence that social inclusion has been tougher than usual. Fishermen from our three study areas never participated in any decision-making process to avail government support schemes. Very few—less than 5 per cent—have received support from others. None received any support other than advance salary from boat owners or fish traders.

2.9. Health

The constitution charges the government with the responsibilities of medical care and health of the country's citizens. Article 15 says that "it shall be a fundamental responsibility of the State to attain, through planned economic growth, a constant increase of productive forces and a steady improvement in the material and cultural standard of living of the people, to secure to its citizens the provision of the necessities of life, including food, clothing, shelter, education and medical care". Article 18 (1) goes further to say that raising nutrition levels and improvement of public health is the responsibility of the State.

Vision 2021 was a key development policy. It envisioned a decade-long plan, culminating in 2021, to ensure that every citizen has access to healthcare and a quality of life, assuring adequate nutrition⁶⁶. Revitalization of community healthcare was one of its core aims.

To implement health policies, the government introduced the Health Care Financing Strategy 2012-32. The provides a framework for developing and advancing health financing in Bangladesh, aimed at increasing the level of funding for health services. It also aims to ensure an equitable distribution of health financing, improving access to essential health services, to reduce impoverishment from healthcare expenditure, and to improve the quality and efficiency of services⁶⁷.

The key legislation for occupational health and safety is the Bangladesh Labour Act, 2006. A range of laws and regulations include provisions for occupational health and safety. The National Occupational Safety & Hazard (OSH) Policy has made several obligations mandatory. They include:

- Identify the risk of health and safety
- Educate those in formal and informal workplaces on the risk of possible accidents, health risks, and safety issues
- Provide a specialist who can identify occupational diseases
- Ensure health services in the factory and establishment.

The OSH Policy urges the collection and maintenance of all records on OSH related accidents, injuries, death, treatment, compensation and decisions, among other things. It requires that institutions use the data and information to create an action plan and appoint an OSH specialist to ensure safety at the workplace. The policy mandates for treatment and compensation of workers who are victims, and rehabilitate the affected as per his/her capability. The Policy includes several clauses intended to create awareness. They include:

- Regular observance of 'Occupational Health and Safety Day' on April 28
- Publicity on OSH-related issues through government- and privately-owned TV channels and other media
- Include OSH issues in the Secondary and Higher Secondary curriculums
- Motivation of employers to implement the OSH policy, the Labour Act and related laws on OHS
- Arrange a discussion, consultation and training for employers' member organizations
- Provide information on laws related to OSH, rights, and responsibilities of trade unions regarding safe and healthy workplace, and
- Ask trade unions to arrange an orientation for the workers to obey the laws on OSH.

The OSH Policy mandates treatment and compensation for injured workers and suggests a periodic medical examination to identify workplace related diseases and health problems. Government hospitals at the district and sub-district levels, community hospitals, primary clinics, and private clinics exist in all three districts surveyed. Some fishers living near districts and subdivisions have access to government hospitals. Fishers in islands typically rely on local pharmacies and quacks.

Fish workers at Cox's Bazar, working on fishing vessels at sea, said they keep some primary healthcare medication on the boat. But they have no access to any medical facility in case of emergency because there are no mobile medical facilities floating around.

Access to appropriate and effective health care for marginalized communities is low. Availing healthcare in coastal areas is difficult due to a lack of appropriate health facilities and skilled healthcare providers. Existing healthcare services are limited and ill-equipped to address the health needs of the inhabitants in these areas⁶⁸.

Despite over 80 per cent of fishers facing accidents while working, there is little in the way of medical care to help them⁶⁹. Our survey found that 65 per cent usually rely on treatment and medical advice from quacks or salesmen at local pharmacies. About 24 per cent depend on traditional methods or go to religious leaders for help.

To learn about occupational safety, the study arranged two FGDs with fishers and observed landing stations at Moheshkhali and Cox's Bazaar. It became clear that there was a complete lack of adequate safety equipment or medical kits on board for those fishing in the deep sea. Boat owners were not responsible for their employees' healthcare and did not provide insurance either. There was no emergency medical equipment at the landing stations.

While boats or vessels do have some facilities, they were found to be insufficient to serve the number of employees on board. No boat was equipped with a GPS tracker, even if all workers had cellular mobile phones. Recruitment is unofficial and, therefore, no one is provided a letter of employment. A worker's job is not guaranteed. There are no weekly holidays, no incentives and nothing else to facilitate a decent career. There are no minimum or maximum hours of work and; in many cases, employees work longer than the eight hours mandated. There is no compensation for extra work.

2.10. Literacy and education status

Article 17 of the constitution says that the state shall adopt effective measures for establishing a uniform, mass-oriented and universal system of education, extending free and compulsory education to all children to such stage as may be determined by law. Article 28 (3) ensures discrimination-free admission at any educational institution. The goal of the National Education Policy (NEP), 2010, is to ensure education for all. In 1990, the government developed a policy for free and compulsory primary education, from first grade to fifth grade. NEP 2010 has extended free and compulsory primary school education up to eighth grade.

Bangladesh's formal education system is classified into two types: general and religious. General education has three stages: primary, secondary and higher education. Primary schools can teach students till fifth grade; high schools can teach students up to tenth grade, and universities can teach students in the eleventh and twelfth grades.

Religious education, organized around the madrasa for Islamic religious instruction, is divided mainly into three types of institutions, namely, the Quomi, the Hafizia, and the Alia. Quomi madrasas are privately-owned, providing only religious education. Hafizia madrasas offer teachings of the Holy Quran. Alia madrasas are government-funded and they combine religious education with general subjects.

Apart from this formal education structure, Bangladesh also has a non-formal education system regulated by the government's Office of Non-formal Education. This seeks to reach out to uneducated young people and adults in several ways.

Two ministries govern the country's education system: the Ministry of Primary and Mass Education (MoPME) and the Ministry of Education (MoE). The MoPME manages primary education and non-formal education. MoE manages secondary education, higher education, tertiary education, and technical education. It also manages madrasa education with the Department of Madrasa Education.

Poverty is linked to exclusion from education. Bangladesh's Seventh Five Year Plan finds that enrolment among the poor is lagging, especially at the secondary level. The secondary gross enrolment rate for the poor is 45 per cent, significantly lower than the non-poor enrolment rate of 76 per cent. About five million children are out of school, either because they have never been enrolled or because they dropped out early, mainly due to poverty. Poverty is rampant in the fishing community and it is clear that they also suffer from exclusion in education.

Our survey finds that while many fishers have primary school education, there are none with secondary school education. Schools in the survey area were government-owned primary schools and madrasas. Schools are scattered and distanced, but accessible to boys and girls. Every village has a madrasa.

With income a priority, fisher families are not keen on sending children to school in the belief that working is a more viable option. Data shows that girls in coastal fisher communities lag behind in education. While attendance rates in all three districts hover in the 90th percentile, only 60 per cent of women in fisher families have been educated till fifth grade. In our survey, 26 per cent of respondents were found to have received education between grades sixth and tenth. Only 10 out of the surveyed 1,200 people had gone to college.

The Annual Primary School Census 2019 estimated primary school cycle completion rate in Bangladesh to be 82.10 per cent⁷⁰. The literacy in Bangladesh was 74.4 per cent⁷¹. Again, fishing communities lag behind on this indicator. Media reports suggest that there are almost no school-going children among the fishing villages in the coastal district of Bhola⁷².

Although most fishers send their children to school, research by MA Hossain and his associates in 2020 found a lower percentage of highly educated people in the selected areas of Sunamganj. More than 22 per cent of first sons of fishers were illiterate and 34.5 per cent of second sons had no education. Almost 29 per cent of first born daughters were illiterate, a figure that rises to 34 per cent for the second daughter in a household⁷³.

2.11. Housing

Article 15 of the constitution entrusts the State with the responsibility of providing shelter to all its citizens. Recognizing housing as a basic human need, the government is committed to providing planned housing for all. A key objective of the National Housing Policy, 2016, is to ensure accessibility of adequate housing for people from all walks of life, enhance housing and settlements towards sustainable growth and create fair living for all.

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Bangladesh has about 39,330,000 households. Of these, 28,260,000 families live in villages and 11,070,000 in cities. The number of the homeless has been increasing steadily, from 950,000 in 1991, to 1,130,000 in 2001, and then on to about 4,600,000 in 2010. Separate surveys conducted by the Bangladesh Bureau of Statistics and Planning Commission estimate it at about 8,500,000 in 2021⁷⁴.

The government has introduced several programmes and initiatives to offer housing support for the homeless. Launched in 1997, the first phase of the Ashrayan project, completed in 2021, rehabilitated 319,000 families. Of these, about 165,000 families were landless and homeless. The project's second phase was launched in 2010 and is due to be completed by June 2022. The second phase aims to rehabilitate almost 1,37,000 families in 2021-22 and more than 89,000 in 2022-23⁷⁵.

Our survey found four types of houses in the fishing communities of Cox's Bazar (Moheshkhali) and Bhola (Charfasson). They are:

- Jhupri (shacks) made of jute sticks, tree leaves and jute bags, among other things
- Kutcha (temporary) made of mud bricks, bamboo, sun-grass, wood, and sometimes corrugated iron sheets as roofs
- Semi-permanent with walls made partly of bricks, cemented floors, and roofs are made of corrugated iron sheets
- Pucca (permanent, life span of more than 25 years) with walls of bricks and roofs of concrete.

Of the houses within our survey in Moheshkhali, 65 per cent were temporary, while 15 per cent semi-permanent. In Bhola, about 71 per cent of houses were temporary and 23 per cent semi-permanent. A 2015 study by Mridula Das and associates found 61 per cent of the houses were temporary, while 37 per cent were semi-permanent; only 2 per cent of the houses were permanent. The study also found that a great proportion of fishers—60 per cent—were either landless or nearly landless⁷⁶.

Set beside rivers and seas, fishers' houses are vulnerable to loss and damage of property. Those living near rivers and coastal areas suffer the effects of riverbank erosion. As many as 283 locations, with 85 towns and growth centres, along with 2,400 km of riverbank line in Bangladesh, are vulnerable to this erosion. The major rivers, Padma, Jamuna and Meghna, erode several thousand hectares of floodplains every year, rendering thousands homeless and landless⁷⁷.

This report considers the cases of two islands: Kutubdia and Manpura. Kutubdia is in the Bay of the Bengal. It is a sub-district under Cox's Bazar. Fishing and farming are the main occupations on the island. Once 250 sq km in size, the island has been reduced by 65 per cent between 1880 and 1980. It is now only 68 sq km.⁷⁸ More than 60 per cent of its population has migrated to urban areas⁷⁹. Manpura island is a sub-district 80 km from the town of Bhola, which is an island district. Between 1973 and 2010, the island has shrunk from 148 sq km to 114 sq km.⁸⁰

Although there are no special housing initiatives specifically for fishers, the government regularly supports coastal housing. A prime example is the Khurushkul Ashryan Project in Cox's Bazar, the world's largest housing scheme for climate refugees. The project has already provided apartments for 600 families in modern buildings on the bank of the Bakkhali River, just three kilometers from Cox's Bazar town. The scheme seeks to rehabilitate 4,409 climate refugee families at the site. The beneficiaries are victims of the 1991 cyclone that devastated Kutubdia island, forcing residents to take refuge in shanties in Cox's Bazar airport for decades. A large number were dependent on fisheries.

2.12. Water and Sanitation

Approved in 2018, the Bangladesh Delta Plan (BDP), 2100, is one of the major policies concerning water and sanitation in the country. Its main goal is "to secure the future of water resources and mitigate the likely effects of climate change and natural disasters". A lack of water and sanitation services in small towns and rural areas will call for heavy investment by the BDP to achieve the government target. This may absorb as much as 20 per cent of BDP investment up to 2031⁸¹.

Water and sanitation has always been a priority for governments in Bangladesh. Subsequent governments have designed a series of policies and programmes for the sector. The National Policy for Safe Water Supply and Sanitation, 1998, aimed to facilitate a basic level of water supply and sanitation services to all citizens⁸². The National Water Policy, 1999, aimed to “provide direction to all agencies working with the water sector, and institutions that relate to the water sector in one form or another, for the achievement of specified objectives”⁸³. The Pro-Poor Strategy for Water and Sanitation Sector in Bangladesh, 2005, provided for special water and sanitation services for the poorest.

To “promote sustainable use of improved water supply and sanitation infrastructures and to create an enabling environment ensuring comprehensive hygiene promotion and practices to reduce water and sanitation-related diseases”, the Bangladesh government launched the National Hygiene Promotion Strategy for Water Supply and Sanitation in 2012⁸⁴. The Planning Commission’s SDG Progress Report 2020 found that, in 2019, 98.5 per cent of households were using improved sources of drinking water, 84.6 per cent were using improved sanitation facilities, and 74.8 per cent reported having a hand-washing facility with soap and water⁸⁵.

Non-government thinktanks also report tremendous achievements in provision of water and sanitation services. The Centre for Research Initiative (CRI) surveys found that 87 per cent had access to improved water supply, 98 per cent had access to water points, and there was a 39 per cent increase in sanitation coverage⁸⁶.

According to our surveys, 100 per cent of fishers in Moheshkhali have access to drinking water and 84 per cent have a sanitary latrine. The Ministry of Health and Family Planning’s health bulletin reports similar numbers—100 per cent had access to drinking water and 79 per cent to a sanitary latrine⁸⁷.

Bhola district lags far behind the national average. In Manpura island, 45 per cent of the fishers admitted to using an open latrine. In our study, 88 per cent of the respondents had semi-concrete toilet facilities and 12 per cent had a concrete toilet⁸⁸.

2.13. Climate change

Bangladesh is extremely vulnerable to climate change; it is ranked ninth among countries most likely to be affected⁸⁹. This, while ranking among the countries with the lowest per capita emissions. In 2018, its per capita carbon dioxide emissions were 0.56 metric tonnes; per capita carbon emissions of Saudi Arabia are 18.48 tonnes and those of the US are 16.92 tonnes. A 2018 World Bank report says that a temperature increase of 1.5°Celsius by 2050 will affect approximately 134 million people in the country. Up to 70 per cent of the country’s landmass is vulnerable to flooding. The resultant economic loss will amount to over \$167 billion. The life expectancy of its citizens is expected fall by 6.8 per cent⁹⁰.

Government statistics show that about 12.65 per cent of the population lives in disaster-prone areas. Major disasters include floods, cyclones, tornadoes and earthquakes. The number of people affected by disasters in 2014 was 12,881 per 100,000. The major disasters affecting Bangladesh include floods, cyclones, tornadoes, and earthquakes, among others. In 2019, catastrophes affected 4,318 people per 100,000⁹¹.

The study found, that the government has so far enacted 22 national policies directly or indirectly related to fighting the impact of climate change. It has also sought to reduce the number of persons affected by disaster to 1,500 per 100,000 by 2030⁹².

The country’s National Adaptation Plan of Action, 2005, was updated in 2009. The country is now implementing the Bangladesh Climate Change Strategy and Action Plan (BCCSAP, 2009), and the National Plan for Disaster Management, 2010, and the Bangladesh Delta Plan (BDP), 2100.

The government has allocated \$400 million from its annual budget to the Bangladesh Climate Change Trust Fund to implement the BCCSAP⁹³. Two funding mechanisms, the Bangladesh Climate Change Trust Fund (BCCTF), and the Bangladesh Climate Change Resilience Fund (BCCRF) help implement the BCCSAP. The BCCTF is completely funded by the government and BCCRF receives funds from international partners.

The Seventh Five-Year Plan (2016–2020) included climate change and sustainable development to address the way forward. Another cross-sector investment mechanism to mobilize and deliver investment programmes for environmental conservation, sustainable forest management, climate change adaptation, and mitigation and environmental governance is the Bangladesh Country Investment Plan for Environment, Forestry and Climate Change (EFCC CIP) (2016-2021).

Bangladesh has also looked to incorporate climate change mitigation into multiple sector policies and programmes. The National Agricultural Policy, 2010, for example, aims to develop “self-reliant and sustainable agriculture adaptive to climate change and responsive to farmers’ needs”. The Water Act, 2013, prioritizes water management to resolve current regional freshwater shortages likely to be exacerbated by climate change. Bangladesh Coastal Zone Policy 2005 acknowledges climate change as a danger to most households and agriculture.

The country’s focus is on climate change adaptation. In 2010, the Ministry of Environment and Forests approved 34 projects under six BCCSAP themes. Approximately 70 per cent of the investment has been dedicated to adaptation programmes in various vulnerable habitats. The highest has been allocated to mitigation and low carbon growth, followed by a robust disaster management thematic area⁹⁴.

Fishers surveyed understood the impacts of climate change on their profession. A rise in the frequency of cyclones and adverse weather conditions will prevent them from completing their fishing trips successfully. Many fishers have lost nets and vessels due to hurricanes, high waves fuelled by depression, and cyclonic storms. Over the past few years, people in Cox’s Bazar have experienced flash floods along with waterlogging, causing problems for aquaculture. In Bhola, there has been an increase in river erosion, resulting in migration and forcing fishermen to change livelihoods.

Fishers in Cox’s Bazar and Bhola are also witnessing shifts in fish stocks. They point to declining catch, saying the fish have changed their habitat. Approximately 45 per cent of fishers also say that climate change and the resultant job losses increase stress and crises, which results in increasing incidence of domestic abuse.

Due to ingress of saline waters, fishers in Bagerhat have seen their stocks of freshwater fisheries decline. Those culturing fish in ponds and other closed water bodies have experienced unusual diseases and death of fish. They believe these deaths are due to a sudden shifts resulting from climate change.

Such changes in coastal areas have led to forced migration and major impacts on the lives and livelihoods of fishing communities. During the FGDs, fishers in Manpura revealed that due to river erosion every family has migrated in some form or the other. Many admitted to moving six or seven times to find alternative sources of livelihood.

2.14. Association

The constitution allows every citizen the “right to form associations or unions”. The country’s labour law recognizes a worker’s “right to form and join trade unions”. The National Fisheries Policy aims to assist in the establishment of various agencies, such as fish farmers’ associations and shrimp farmers’ associations, for the development of fisheries resources⁹⁵.

Our field survey revealed several types of fishers' organizations in Bangladesh. These include:

- Fishers' cooperatives
- Fishers' groups established by various programmes
- Autonomous local-level fishers' organizations
- National-level organizations
- Fisher organizations as political wings of major political parties

The exploitative and heavy presence of middlemen is a very common problem in Bangladesh's agriculture and fisheries sector. Farmers and fishers often don't get the right price for their product or the exclusive facilities intended for them. Fishing cooperatives have been promoted to address this issue. The Bangladesh Jatio Matshyajibi Samabaya Samity (BJMSS) or the Bangladesh Fishermen Cooperative Society was founded in Bangladesh (then East Pakistan) in 1960 under the name Provincial Fishermen's Co-operative Society. Its objectives have been to ensure a fair price for the production of fish, improve the socio-economic status of fishermen, and ensure adequate marketing facilities for them.

The BJMSS has primary societies at the rural or sub-district level. It also has national management committees. The cooperative has faced recent allegations of not representing actual fishers and instead reaping benefits in their name. The problems in its power structure began with the government's implementation of the policy for leasing water bodies. Water bodies were leased out only to fisher cooperatives. Influential individuals not connected to fishing formed these cooperatives to secure the leases. They then lease them out to real fishermen.

The study found many such examples. Of the 40 members in the Katali Dorshona Fisheries Cooperative, none are fishermen. The President of the Syrajganj Poulosobha Fishermen Cooperative is a representative of the local leader of the ruling party—by no means a fisher. In the Chapai Nababganj district, five new fisher's cooperatives were registered to lease a water body. Local newspaper reports revealed that none of them had offices. Those named as members did not know about the body or their membership either. The Nuranai Fishermen Cooperative in Netrokona district was registered using fake identification papers. Jhilpar Fishermen Cooperative used the same trick during the pandemic to secure financial support from the government. It is clear from the survey that fisher cooperatives have almost no role to play in resolving the difficulties and problems of the community.

There exist some Common Interest Groups (CIG) set up by various government projects and programmes. Each CIG is made up of 15-20 fishers, with a total of 40-50 members, 18 per cent of them female. The main activities of fisher CIGs include mobilizing fishing communities, organizing participatory identification of problems, and preparing CIG micro-plans that represent the priority needs of members. These fisher CIGs are encouraged by local fishing extension agents trained by the Department of Forests.

Three types of fishermen groups, Hilsa Conservation Group (HCG), Hilsa Ghat Group (HGG) and Community Saving Groups (CSG) were created under the ECOFISH-Bangladesh project. Each group has between 30-35 members. At the village level 30 per cent of HCG members are women. Gender segregated data for HGGs at landing stations is not available. Multiple all women CSGs exist at the village level. There are 575 HCGs with 19,500 members across the country. 63 HGGs at fish landing stations manage the hilsa value chain and 148 CSGs have helped save US\$ 125k⁹⁶.

In the Bhola district, the study found 35 all-women community saving groups. They are making savings. The author also talked with some HCGs, FMCs, CSGs. Almost all the groups are active, but there are concerns about their survival with project support already been phased out. Still active, their major activities are only savings and credit. The groups display no interest in asserting their bargaining power or addressing issues that small-scale fishermen face.

The ruling party of Bangladesh, the Awami League has a fishermen wing called the Awami Matsyibni League which has done little work since its inception in 2004. Most within its 111-strong central committee don't even belong to the fishermen community⁹⁷. This is also true for the fishermen wing of the second largest political party in the country.

There also exist national networks like the Bangladesh Fish Workers Alliance (BFWA) and the Bangladesh Farmers Forum. The BFWA raises important issues for policymakers, and establishes linkages among local service providers and fishers. It does not though have an active involvement in solving local problems and issues that the community faces.

The Bangladesh Farmers Forum provides capacity-building support for its member's fishers organization, but it doesn't work directly with the fishermen

Fishers organizations provided no support during the pandemic. The study did find one organization, Nazirartek Motsy Byabsayi Somity (Nazirartek Fish Businessmen Association), working actively in Cox's Bazar to address problems faced by small scale dry fish producers.

The association of boat owners was involved and functional, FGDs with fishermen in Bhola and Cox's Bazar revealed. FGDs revealed that due to a lack of knowledge, leadership, and financial empowerment, workers' unions and their leaders cannot play any role as 'Bargaining Agents' on behalf of small-scale fishermen.

2.15. Women and Fisheries

In addition to household responsibilities, an estimated 43 per cent of women work in agriculture or aquaculture⁹⁸. Women's participation, on average, increases fish production by 10-20 per cent⁹⁹.

Despite this, women's achievements and roles remain insufficiently acknowledged in national statistics. In the fisheries sector, women are chiefly involved in specific activities like stocking ponds, feed planning, feeding, supervising, liming, and harvesting fish for home use. In addition, women also play huge roles in market sorting, cleaning, and grading of fish.

Their involvement in fish production varies across regions and is linked to cultural context. Women in Hindu families, for example, are active in fish farming. The numbers are low for those from conservative Muslim families¹⁰⁰. Women's involvement across the farmed fish value chain is limited. In the southwest of the country, a study found, 0-1 per cent of those involved in trading and retail were women¹⁰¹. In sharp contrast, 80 per cent of those involved in drying fish—part of the capture fisheries chain— are women and children¹⁰².

The constitution is chiefly responsible for guiding and helping create and implement policies concerning women and children. These include policies for women empowerment, preventing violence and ensuring socio-economic, mental and physical development of women. The Ministry of Women and Children of the formulated the Domestic Violence (Protection and Preservation) Rules 2013 under the Domestic Violence (Protection and Preservation) Act 2010 to ensure equal rights and prevent all forms of discrimination in all fields of public life. To ensure the overall welfare of women and children, the Government has also formulated

- National Women's Development Policy, 2011
- National Children's Policy, 2011
- Early Childhood Care and Development Policy, 2013
- Deoxyribonucleic Acid (DNA) Act, 2014
- Early Marriage Security Act, 2017

In addition to these, Bangladesh has also ratified a number of international human rights conventions and treaties on gender equality. These include the Beijing Forum for Action (BPFA),

the Convention on the Elimination of All Forms of Discrimination against Women (CEDAW) and the Sustainable Development Goals (SDGs).

Bangladesh also has policies to promote gender inclusion and equity in aquaculture. The National Fisheries Policy 1998 says “Females will be encouraged in fish culture and be trained accordingly”, a statement that is insufficient and basic, to say the least. The National Agricultural Extension Policy (NAEP) 2012 addresses gender equity. After recommendations from an independent assessment, the Agricultural Extension Policy 1996 was revised to include gender.

To improve women’s positions in the rural and agriculture sectors, many other policies exist. These include:

- National Social Security Strategy (NSSS), 2015
- Bangladesh Poverty Reduction Strategy Paper (PRSP) (March 2013)
- Seventh Five-Year Plan (SFYP) 2016–2020
- Bangladesh Labour Law (Amendment) 2013
- National Agricultural Policy 2018
- National Livestock Development Policy 2007
- National Industrial Policy 2016

The National Development Policy 1997—revised in 2011—is designed to empower women. The country’s National Action Plan to Prevent Violence 2013-25 aims to end and protect women and children from violence by 2025¹⁰³.

A study by COAST Trust reveals the decision-making roles of women in fisher families and surrounding society. The study also identified scenarios for working women in fisher families.

Despite 97 per cent of fishers’ families dependent on fishing for income, a mere 2 per cent of women are involved in it themselves. 70 per cent of women though are involved in activities across the value chain, like drying fish (54 per cent) and net making (11 per cent). Women play active roles pre and post harvesting, but are not directly involved in any Income Generating Activities (IGAs).

The study attempted to find the causes for this discrepancy. Over half the respondents involved with IGAs at home believed working with men is “bad”. 15 per cent revealed experiencing verbal abuse from male counterparts.

Those involved with IGAs outside their homes face salary discrimination. Respondents unanimously revealed receiving lower salaries than their male counterparts. This gap, 40 per cent of them said, was because of the ill-conceived notion that women don’t work as hard as men.

Even at the family level, women are not an active part of decision-making processes. 31 per cent have no involvement in decisions around family assets and 42 per cent have no say in expenditure. Less than half are involved in decisions surrounding the marriage of a family member.

Over two-thirds of respondents said they could go out of the house of their own will, but with some restrictions. An overwhelming majority (98 per cent) visit their neighbours when they want but less than half (42 per cent) could go visit relatives in the same way. Alarming, 35 per cent claimed they could not avail of medical treatment when needed.

At the public level, things are worse. A mere 18 per cent revealed participating in local *Salish* or village courts. None were a member of local institutions. Though 82.34 per cent of respondents admitted knowing about the Union Parishad only 2 per cent have ever communicated with the chairman directly. A mere 12 per cent admitted to being asked for an opinion on development projects in the area.

Violence against women is a real fear in the community, with 62 per cent revealing having faced a form of violence in their life. 74 per cent, said they felt insecure when the male head of family was at sea. When issuing complaints to a neighbour or social leader, a mere 13 per cent have found satisfactory resolution.

Respondents have no ideas on networking. There are no female clubs or organizations in the area. There are many involved with micro finance groups (50.12 per cent), but no other such institutions exist. Knowledge of fishery laws and regulations is scarce. While a majority know about the laws to protect them, 23 per cent don't believe there are any to alleviate their problems and suffering. No respondents have ever taken legal action to seek aid.

2.16. Access to Justice

Despite the constitution guaranteeing equal rights to all, fishers struggle to access justice systems, due to poverty and accessibility. Government designed mechanisms to support the poor and marginalized like the Legal Aid Services Act (LASA) 2000 aims to provide legal support for the poor. The Act is designed for those “incapable of seeking justice due to financial insolvency, destitution, helplessness and for various socio-economic conditions”¹⁰⁴. Under the Act, the government established the National Legal Aid Services Organization (NLASO) and set up District legal aid offices in each District Court's premises to ensure they protect the poor and help them access justice. 100,806 people received government legal aid services through NLASO in FY-2018-19¹⁰⁵.

Under the constitution, fishers are entitled to workers' rights and benefits. Article 14 says that “It shall be a fundamental responsibility of the State to emancipate the toiling masses the peasants and workers and backward sections of the people from all forms of exploitation”, while Article 27 says “all citizens are equal before the law and are entitled to equal protection of the law”.

Despite the many legal provisions available to the marginalized and those in labour, fisher communities have been left on the outside, looking in. The provisions of the Bangladesh Labour Act 2006, for example, are not applicable to all fish workers, especially those involved with fish culture/aquaculture, fish capture, post-harvest processing, fish marketing, and non-fishing economic activities. The Act (Section 2(61)(v)(w)) includes two types of sectors—the fishing trawler and fish processing industry. The Department of Inspection for Factory & Establishments and the Department of Labour responsible for monitoring and implementing the Act, don't focus on the small-scale fisheries sector. Small-scale fisherfolks are deprived of benefits and facilities they are entitled to in accordance with the Act.

FGDs in Bhola, Cox's Bazar and Bagerhat revealed that no fishermen had ever heard of the NLASO or the free legal services. None were aware of the position of a District legal officer either. A majority (80 per cent) did not know their rights based on the country's legal provisions.

Discussions with stakeholders have shown that there are gaps within organizations and institutions involved with fisheries. At the sub-district level, the Upazila Fisheries Office works directly works with fishermen. This office works on issues of fisheries production and some cases of livelihoods, but not socio-economic issues like health, education or justice.

The Union Parishad (UP), the first tier of local governance, does not have fisher participation. While the organization plays a role in registration for ID cards, FGDs revealed that it isn't neutral or honest. Locals alleged that the chairman and members have a role in creating fake ID cards to access benefits.

Similarly, while the Upazila Social Welfare Office is mandated to work on social welfare, and safety nets, there is evidence of misuse and corruption. The department is often forced to list those with political influence as beneficiaries for safety nets.

2.17. Sustainability

For the sector's sustainability, collaborative implementation of a standard code of conduct is necessary. Effective management and stakeholder participation is key. Sustainable management must include creating sustainable socio-economic conditions for the community.

Despite the various initiatives discovered as part of this research, many gaps still exist. There is a severe lack of legal and institutional arrangement. Socio-economic conditions and degradation of resources are also a concern.

Md. Mostafa Shamsuzzaman et al (2017) identified "major gaps in the existing fisheries-related policies and documents" in their research¹⁰⁶. These include:

- lack of stakeholder influence on policy formulation
- insufficient local initiative to broaden marine policy
- lack of marine fisheries policy related review and update
- influence of specific species and fishing gears
- lack of long-term policy perspective
- lack of marine environmental based policy process
- lack of monitoring and impact assessment on policy implementation
- lack of adequate integrated coastal management (ICM)
- inadequate environmental conservation
- insufficient biodiversity conservation

Our field data substantiates this. Decent job environment, workplace protection, access to justice, adequate housing and water and sanitation have not yet attained requisite levels. A fish workers annual income varies between US\$ 235-US\$ 1,174, far below the national average of US\$ 2,064. This contrast is reflected across multiple parameters, illustrated in Figure 1.

The only indicator where fishers don't lag severely behind is access to drinking water and sanitation. Even this is a fallacy. Our research shows that fishers have to travel huge distances to access these services. Deficient labour rights and corrupt fishers' associations can also be attributed as challenges to sustainability.

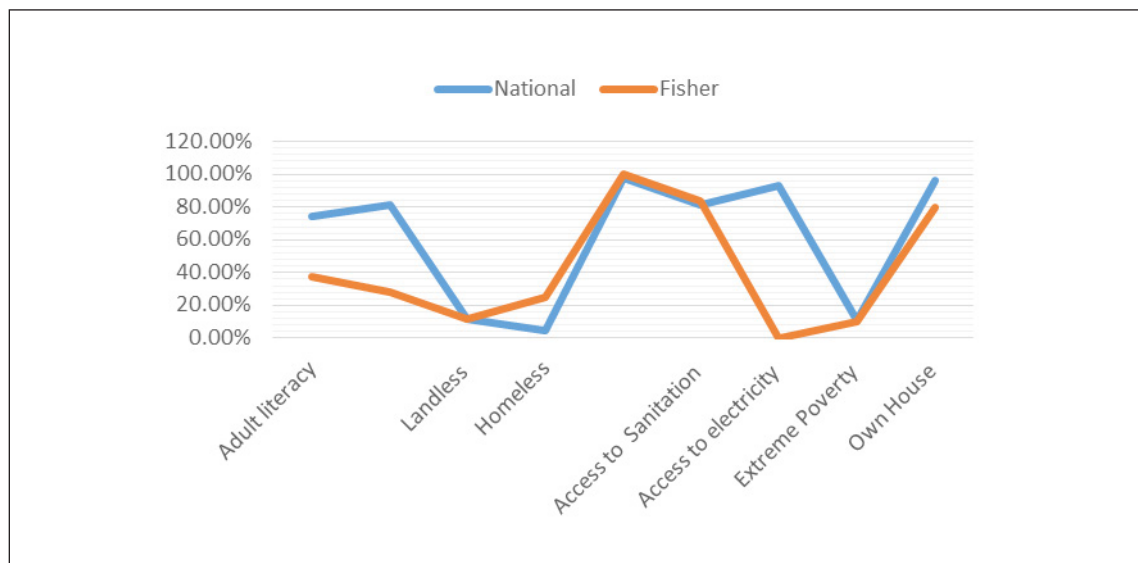


Figure 1: Variation in indicators – Fishers and National averages

Bangladesh has between 70,000-80,000 km of wetlands—nearly 50 per cent of the total land area. Half the population is dependent on them.¹⁰⁷ Sustaining these wetlands is crucial to the survival of many livelihoods. Inland fisheries production suffers hugely from degradation— a fact noted by M Mahbubur Rahman (1986)¹⁰⁸ 35 years ago. Khan et al. (1994) found that have suffered from the impacts of the burgeoning population too. In the Ganges- Brahmaputra-Meghna floodplains, approximately 2.1 million ha of wetlands has been lost to flood control, drainage, and irrigation development.¹⁰⁹

Degrading wetlands lead to extinction of fish habitats, reduction in fish and diversity. Indigenous aquatic plants, weeds and shrubs also die out. All of these directly impact fisheries. They worsen fishers' living conditions, shrink their diets and devastate natural water reservoirs. Wetlands are changing due to environmental factors and anthropogenic impacts. A study by Islam, Shafi (2010) further emphasizes the lack of initiative in protecting them. These areas are controlled by elite groups who flout policy guidelines and management approaches for their conservation.¹¹⁰

The Bangladesh National Conservation Strategy, Part II recognizes water resources management as crucial for resolving many diverse problems and issues. Floods, droughts, expanding water needs of a growing economy, massive river sedimentation and bank erosion are concerns that require urgent attention. A lack of control over rivers originating outside the country is another severe challenge for Bangladesh¹¹¹. The Planning Commission identified river pollution and the survival of riverine life as a major challenge.

Encroachment and dumping of medicinal and human waste has made river water unusable for humans and livestock. The water of the Buriganga is now so polluted that all fish have died. An increase in filth and human waste has turned it into a black gel. The smell makes even rowing across a harrowing experience. The plight of the Buriganga is similiar to many rivers in the country.

Illegal, unreported, and unregulated (IUU) fishing also represents a major threat to sustainable sea fishing. Bangladesh is ranked 47th on the Illegal, Unreported and Unregulated Fishing Index 2019. The country's score is 2.41, less than the global average of 2.29.¹¹²

Not complying with regulations is a serious problem within coastal fisheries in the country, K.V.Kuperan and K.M. Jahan (2010) have found¹¹³. Increasing population, ineffective management, conflicts and competition between commercial and artisanal fishers over resource access, and proliferation of destructive fishing practices don't just impose stress on aquatic resources, but also threaten livelihoods of hundreds of villagers in the coastal areas of the country.

Table 1: National Social Indicators and Fishers' Communities

SL	Indicators	National	Fishers	Source of Information
1	Per capita income	\$2,064	\$235-\$1176	Dhaka Tribune, 11 August 2020 and this study
2	Adult literacy	74.4%	37.7%	Bangladesh Economic Review, 2020, Ali (2014)
3	Primary completion rate	81.3%	28.33%	FAO. 2019. Westlund, L. & Zelasney, J. eds. Securing sustainable small-scale fisheries: sharing good practices from around the world. FAO Fisheries and Aquaculture Technical Paper No. 644. Rome. 184 pp.
4	Landless	11.33%	12%	TBS, 29 October, 2019. Ali (2014)
5	Homeless	4.96%	25%	Shishir Moral (2019) and Aghazadeh, 1994

SL	Indicators	National	Fishers	Source of Information
6	Access to improved drinking water	98.1%	100%	Bangladesh Economic Review, 2020, this study
7	Access to Improved Sanitation	81.5%	84%	Bangladesh Economic Review, 2020, this study
8	Access to electricity	93%	82%	The Daily Star, 6 May, 2019. This study
9	Extreme poverty	10.5%	10%	Bangladesh Economic Review, 2020, these study findings
10	Own house	95.85%	80%	FAO. 2019.
11	Ownership of land	14.8 decimal	0.89 decimal	FAO. 2019 and this study.

3. Conclusion and Recommendations

Field information and secondary data suggests that despite a rise in production, the socio-economic conditions of fishing communities have not really improved. The study used 11 indicators to determine the status of fishers' social development. Fishing communities lag behind the national level on each one, proving that comprehensive change and effort is needed for sustainable development.

Based on our research, we put forth the following recommendations:

1. Legal recognition of the Small-scale fishers, fish workers

There is uncertainty as to who actual fishermen are. With no simple qualifier for identification, many avail of benefits meant for fishers. Government loans for fishers are given to fishing cooperatives, occupied by influential members of the community. Providing ID cards for small-scale fishers and ensuring vehicle registration are effective solutions. The government project to do so needs to be accelerated.

2. Social Safety nets

In inland and marine areas, fishers get nominal ration support—inadequate compensation for a loss of income. Alternative livelihoods and income generating options need to be made available for fishers. When fishing is banned, the government provides families 40 kgs of rice a month. This isn't enough. Financial support needs to be provided too. Elderly members should get old-age allowance. Female members should be trained in fish culture and poultry rearing.

3. Access to the open water bodies and protection of resources

The existing leasing system must be cancelled, so fishers can access open water bodies for free. Open water bodies, now controlled by the Ministry of Land, should be governed and controlled by the Ministry of Fisheries.

4. Access to credit

Fisher populations are deeply impacted by a lack of credit facilities. Access to existing credit services is difficult for both inland and coastal fishermen. Interest free loans need to be given to small-scale fishermen, through a bank of fishers—similar to the Bangladesh Krishi (Bangladesh Agricultural Bank). Minimum wages need to be set for the industry.

5. Health Services

Fishers lack access to health services. Community clinics and medical supplies need to be established within fisher communities. Mobile health centres, for emergency treatment, on rivers and at sea are also needed. Fishers should get health and life insurance and the government should arrange this free of cost.

6. Education

Primary schools need to be built on embankments and made accessible to children from fishers communities. Education materials should be given free of cost and a special scholarship initiated. These efforts will help eliminate child labour from the industry.

7. Market access

Small-scale fishers rely on middlemen and money lenders to sell their fish. Providing them with easy access to credit would reduce fishers' dependence on them for market access. This can also be done by improving roads and improving communication systems. Better roads between fisher localities and Upazilas and district areas will help transport fish quickly. Cold

storage units should be available at landing sites to help preserve catch. The government should purchase fish from the fishers and set a price floor.

8. Workplace Safety

Safety while fishing is crucial for small-scale fishers, since legal legislation is not followed strongly. Boats used often lack adequate safety provisions. All boats need to have life jackets, modern and effective weather forecasting and should be equipped with radio communication. To rescue small-scale fishers from cyclones, emergency speed boats should be freely available. Shelters for those rescued also need to be built.

9. Gender segregated data is a must

Women's role in agriculture and fisheries is invisible due to a lack of gender segregated data. Gender segregated data helps identify their role, their needs, and gaps in policy and practice.

10. Special IGA Support for Women

Economic self-reliance can boost women empowerment. The study has found that very few women are involved with IGAs. IGAs need to be promoted among women in fisher communities. There should be easy access to finance, credit for women.

11. Campaign and Awareness for Women Participation

To increase women's role in society, there is a need to create special programmes. Women self-help groups, which work as a bargaining agent for members in the community, need to be formed. There should be linkage meetings among service providers, local leaders and women groups to ensure their participation in decision making processes.

12. Community Based Action Group on Women Empowerment

Action groups consisting of men and women need to be formed to help sensitize people against violence, create change and offer protection to survivors.

13. Community radio, Using ICTs

Community radio and mobile homes can be used to promote awareness and enhance capacities of fishermen families. Community Radio can facilitate effective flow of information and act as a platform of dialogue.

14. Sustainability of Water Bodies

The government needs to take immediate action to control the degradation of water bodies in the country. These include, taking action against illegal gear, methods of fishing, excessive use of chemical fertilizers and pesticides and industrial effluents in water bodies.

15. Participation of Fishermen in Decision Making Process

There are many laws, programmes and projects for development of the fisheries sector in Bangladesh. But few have been made after engaging with the community. Their active participation in decision making processes will make implementation efforts effective and sustainable.

16. Association and Organization

The study finds a lack of strong and effective associations or organizations for fishermen. Fishermen need to be trained in leadership and negotiation so they can act as bargaining agents themselves.

17. Identification of Threats

Large threats to fisheries and natural resources need to be identified and measures taken to enhance fishermen capacities to face them.

18. Insurance for Fishers

Insurance for fishers should be introduced. In case of a sudden death due to disaster, Tk 100,000 should be provided as cash support to the family.

19. Community Managed Savings and Credit

Leaders of fishermen organizations should be trained to handle community managed savings and credits. These savings and credits guarantee fishermen regular access to finance.

20. Promotion of SSF Guideline

As a member of the FAO, Bangladesh is also a signatory of the SSF guidelines. But unfortunately, there are no visible programmes or priorities to implement the guidelines.

21. Reducing Disaster Risk

A high priority project to build embankments will reduce disaster risk. This will aid fishermen living in coastal areas.

22. Decent work and Occupational Safety of Fish Workers

Fish workers working on boats or dry fish plants are severely disadvantaged. A special policy with strong monitoring is required to ensure labour rights are followed and adhered to.

References

1. Bhuiyan N I., D. N. R. Paul And M. A. Jabber. 2002. Feeding the Extra Millions By 2025: Challenges For Rice Research and Extension in Bangladesh, Proceedings of the Workshop on Modern Rice Cultivation in Bangladesh, Excerpted From A. T. Chowdhury. 2009. Sustainability of Accelerated Rice Production in Bangladesh: Technological Issues and the Environment, Bangladesh J. Agril. Res. 34(3)
2. Bangladesh Rice Research Institute, Bangladesh Rice Knowledge Bank Website, <http://www.knowledgebank-brii.org/riceinban.php>, Accessed On 21st October 2020.
3. Department of Fisheries (DoF). 2018. Yearbook of Fisheries Statistics of Bangladesh, 2017-18. Fisheries Resources Survey System (FRSS), Department of Fisheries. Bangladesh: Ministry of Fisheries, 2018. Volume 35
4. Finance Division, Ministry of Finance Government of The People's Republic of Bangladesh. 2019. Bangladesh Economic Review 2019
5. Countries of the World by Area https://www.nationsonline.org/oneworld/countries_by_area.htm , Accessed On 17th October, 2020.
6. Jim O'Neill, 2018, The "Next Eleven" and the World Economy, Project Syndicate, <https://www.Project-Syndicate.Org/Commentary/N-11-Global-Economy-By-Jim-O-Neill-2018-04?Barrier=Accesspaylog>, Accessed On 17th October, 2020.
7. Abu Afsarul Haider. 2018. From 'Basket Case' To 'Development Model', The Daily Star, December 11, 2018
8. AsianDevelopmentBank, <https://www.adb.org/Sites/Default/Files/Linked-Documents/50197-001-So.Pdf>, Accessed On 21st October, 2020
9. Website of the Department of Fisheries, [http://www.Fisheries.Gov.Bd/Site/Page/43ce3767-3981-4248-99bd-D321b6e3a7e5/-](http://www.Fisheries.Gov.Bd/Site/Page/43ce3767-3981-4248-99bd-D321b6e3a7e5/), Accessed on 19th October, 2020
10. DoF. 2018. Yearbook of Fisheries Statistics of Bangladesh, 2017-18. Fisheries Resources Survey System (FRSS), Department of Fisheries. Bangladesh: Ministry of Fisheries, 2018. Volume 35
11. The Dhaka Tribune, (2019), Bangladesh Exported Tk3,845cr In Fishes, June 30, 2019. <https://archive.dhakatribune.com/business/economy/2019/06/30/bangladesh-exported-tk3-845cr-in-fishes>
12. Bornali JJ, MAH Chowdhury, F Akter, S Bhattacharya, MS Rahman, R Islam And M Moniruzzaman, 2019. Fisheries And Socio-Economic Condition Of Fisher's Community Of Eshulia Beel At Gouripur Upazila Under Mymensingh District. Res. Agric. Livest. Fish. 6 (2)
13. General Economics Division, Bangladesh Planning Commission. 2016. Seventh Five-Year Plan (FY 2016 -FY 2020).
14. DoF. 2018. Yearbook of Fisheries Statistics of Bangladesh, 2017-18. Fisheries Resources Survey System (FRSS), Department of Fisheries. Bangladesh: Ministry of Fisheries, 2018. Volume 35
15. Rashid, Shahidur; Zhang, Xiaobo, (Eds.). 2019. The making of a blue revolution in Bangladesh: Enablers, impacts, and the path ahead for aquaculture. Washington, DC: International Food Policy Research Institute (IFPRI).

16. Ali, M. Y. 1992. Third Fisheries Project Report on Lease Holder Study, Bangladesh Center for Advanced Studies, Dhaka, 1992, Excerpted From Md. Mostafa Shamsuzzaman, Xu Xiangmin & Mohammad Mahmudul Islam. 2016. Indian Journal of Geo Marine Sciences Vol. 45 (11), November 2016.
17. Md. Mostafa Shamsuzzaman, Xu Xiangmin & Mohammad Mahmudul Islam. 2016. Indian Journal Of Geo Marine Sciences Vol. 45 (11), November 2016.
18. Rahman AKA. 1989. "Freshwater Fishes of Bangladesh". Zoological Society of Bangladesh, University Of Dhaka, Dhaka, Excerpted From KM Shahriar Nazrul., Et Al. (2018), "Trend Of Artisanal Fisheries Catch In South-Eastern Coast Of Bangladesh". Acta Scientific Agriculture 2.11.
19. Website of the Department of Fisheries, Bangladesh, [http://fisheries.gov.bd/site/page/43ce3767-3981-4248-99bd-d321b6e3a7e5/-](http://fisheries.gov.bd/site/page/43ce3767-3981-4248-99bd-d321b6e3a7e5/), Accessed on 22nd October, 2020.
20. DoF. 2018. Yearbook of Fisheries Statistics of Bangladesh, 2017-18. Fisheries Resources Survey System (FRSS), Department of Fisheries. Bangladesh: Ministry of Fisheries, 2018. Volume 35
21. Ministry of Foreign Affairs, Bangladesh 2014, Press Statement of the Hon'ble Foreign Minister on the Verdict of the Arbitral Tribunal/PCA Dhaka, Excerpted from Department of Fisheries (2018), Bangladesh Sustainable Coastal and Marine Fisheries Project (BSCMFP), Environmental and Social Management Framework.
22. Ministry of Laws, Bangladesh Government. <http://bdlaws.minlaw.gov.bd/act-details-233.html>, Accessed 31 October, 2020.
23. Transparency International Website, <https://www.transparency.org/en/countries/bangladesh>, Accessed On 23rd October, 2020.
24. Jasim Uddin Haroon, (2020). Identifying Beneficiaries Of Social Protection System In Bangladesh, The Financial Express, 20 July 2020. <https://thefinancialexpress.com.bd/views/identifying-beneficiaries-of-social-protection-system-in-bangladesh-1595258118>
25. Dhaka Tribune. (2020). CPD: 65.6% Of Aid Not Getting To The Poor, 16 September, 2020. <https://archive.dhakatribune.com/business/2020/09/16/survey-of-social-safety-net-program-65-6-beneficiaries-found-non-poor>
26. COAST Trust. July, 2020. About 50% of Coastal Fishermen are in Food Crisis, 45% Borrowed at High-Interest Rates, Dhaka, Bangladesh. Press Release July 7, 2020
27. M. A. Rahman, R. Abka, M. S. Rahman And P. K. Sarma. (2013). Poverty And Food Security Analysis: A Study Of Fishermen Households In A Selected Area Of Bangladesh, Journal Of Bangladesh Agricultural University, Myamensing, Bangladesh.
28. Dhaka Tribune. Jun, 2020. Covid-19 Impact: National Poverty Rate Rises to 29.5% as of June, 12 June, 2020.
29. The Daily Star. April 2020. ADB on Bangladesh: High Outbreak of Covid-19 May Hurt Economy, 4 April, 2020
30. The Financial Express. April, 2020. Tourism Sector to Lose Tk 97.05b During Feb-June Period. 1 April 2020
31. The Financial Express. June, 2020. Govt So Far Announces \$12.11b Stimulus to Combat COVID-19, 4 June, 2020

32. A H M Mustafa Kamal FCA, MP, Minister, Ministry of Finance, Bangladesh Government. 2020. Budget Speech 2020-21, Economic Transition and Pathway to Progress
33. The Financial Express. 2020. Fisheries Sector Entrepreneurs Get Tk 260m Loans So Far, 14 August, 2020
34. A H M Mustafa Kamal FCA, MP, Minister, Ministry of Finance, Bangladesh Government. 2020. Budget Speech 2020-21, Economic Transition and Pathway to Progress.
35. Bangladesh Bureau of Statistics. 2020. Labour Force Survey 2016-17
36. Ministry of Labour and Employment, Government of Bangladesh. 2019. A National Jobs Strategy for Bangladesh (Draft), Technical Report
37. New Age. 2020. Job Creation, GDP Targets to be Scaled Back, 28 September, 2020
38. General Economic Division, Bangladesh Planning Commission. 2015. Seventh Five Year Plan: Accelerating Growth, Empowering Citizens
39. Ministry of Education, Government of the Peoples Republic of Bangladesh. 2011. National Skills Development Policy – 2011
40. Bangladesh Institute of Development Status. 2018. Implication of Employment Generation Programme For The Poorest (EGPP) To Reduce Disaster And Gender Vulnerability, June, 2018
41. Khandokar Zakir Hossain And Md. Isahaque Ali. 2017. Social Safety Net Programs in Bangladesh: An Empirical Study on The Employment Generation Program for the Poorest (EGPP) Project, European Journal of Social Sciences Studies, Volume 2, Issue 3, 2017.
42. Barkat-E-Khuda. (2011). Social Safety Net Programmes In Bangladesh: A Review, Bangladesh Development Studies Journal, Vol. XXXIV, June 2011, No. 2
43. International Labour Organization, Bangkok (Thailand), And Asian Development Bank, Manila (Philippines). 2020. Tackling The COVID-19 Youth Employment Crisis in Asia and the Pacific
44. Aspire to Innovate (A2i). 2020. Post Covid-19 Jobs and Skills in Bangladesh, June, 2020
45. Ryotaro Hayashi and Norihiko Matsuda, (2020). COVID-19 Impact On Job Postings: Real-Time Assessment Using Bangladesh And Sri Lanka Online Job Portals, ADB Brief 135, May 2020.
46. World Bank Website, <https://www.worldbank.org/en/news/press-release/2020/06/19/world-b...-1-billion-to-create-quality-jobs-and-respond-to-covid-19-pandemic>, Accessed On 25th October, 2020.
47. ILO Declaration on Fundamental Principles and Rights at Work, <https://www.ilo.org/declaration/lang--en/index.htm> Accessed on 26th October, 2020.
48. ILO Website. <https://www.ilo.org/dhaka/lang--en/index.htm>. Accessed on 26th October, 2020.
49. International Labour Office (ILO). 2017. World Social Protection Report 2017–19: Universal Social Protection to Achieve the Sustainable Development Goals, ILO- Geneva:
50. Chowdhury, A, and Denecke, H. 2007. A Comparative Analysis Between the Bangladesh Labour Law 2006 And 7 General Codes of Conduct. Dhaka: German Technical Cooperation

51. Ahmad I. 2020. Bangladesh Decent Work Check 2020. Amsterdam, Wageindicator Foundation, February.
52. Bangladesh Post. (2020). Child Labour in Dry Fish Sector Considered as Hazardous Work, 07 September, 2020.
53. General Economics Division (GED), Bangladesh Planning Commission, Ministry of Planning, Government of The People's Republic of Bangladesh. 2020. Sustainable Development Goals: Bangladesh Progress Report 2020
54. World Economic Forum, Insight Report: The Global Gender Gap Report 2020.
55. Shamsul Alam. 2020. Women Empowerment and SDGs In Bangladesh -- Part II. The Financial Express, 09 March, 2020.
56. Omar Faruque Siddiki, Rebecca Holmes, Ferdous Jahan, Fahim Subhan Chowdhury and Jessica Hagen-Zanker. 2014. How Do Social Safety Nets Contribute to Social Inclusion in Bangladesh? Evidence from the Chars Livelihoods Programme and the Vulnerable Group Development Programme, Brac Development Center, ODI.
57. Bangladesh Post. July, 2020. Violence Against Women Rises. 03 July, 2020
58. Bangladesh Bureau of Statistics. 2016. Household Income and Expenditure Survey
59. Development Finance International and Oxfam, (2020). Fighting Inequality in The Time Of Covid-19: The Commitment To Reducing Inequality Index 2020
60. M Tasdik Hasan, Sahadat Hossain, Tanjir Rashid Saran and Helal Uddin Ahmed, (2020), Addressing The COVID-19 Related Stigma and Discrimination: A Fight Against "Infodemic" In Bangladesh, Psyarxiv Preprint.
61. The Business Standard, The Poorest Receive the Least Amount Of Relief, 16 May 2020.
62. General Economics Division, Planning Commission. 2012. Perspective Plan of Bangladesh 2010-2021: Making Vision 2021 A Reality.', Government of the People's Republic of Bangladesh, April, 2012
63. Health Economics Unit (HEU) Ministry of Health & Family Welfare. 2012. Information Brief, Expanding Social Protection for Health: Health Care Financing Strategy 2012-2032. Government of the People's Republic of Bangladesh, November 2012
64. Fauzia Akhter Huda, Hassan Rushekh Mahmood, Aniq Tasnim Hossain, Jasmin Khan, Omar Faruk, Zahed Shafiqur Razzak, Kazi Tamara Binta Kamal, Shams El Arifeen. 2020. Health Needs and Health System Response in the Coastal Districts of Bangladesh. International Centre for Diarrhoeal Disease Research, Bangladesh
65. Mandal, Shibaji & Hasan, Irteja & Hawlader, Nazmul & Sultana, Israt & Rahman, Md & Sagirul, Md & Majumder, Md. Sagirul. 2017. Occupational Health Hazard and Safety Assessment of Fishermen Community in Coastal Zone of Bangladesh. International Journal of Health Economics and Policy. 2. 63-71. 10.11648/j.hep.20170202.14.
66. Directorate of Primary Education, Ministry of Primary and Mass Education Bangladesh. 2019. The Annual Primary School Census 2019.
67. Ministry of Finance. 2020. The Bangladesh Economic Review 2020. October, 2020.
68. Banglanews24.com, Bangla news portal, <https://www.banglanews24.com/climate-nature/news/bd/268836.details>

69. Hossain MA, Sathi SS, Hossain MDS, et al. 2020. Assessing the livelihood status of fishermen at Sunamganj district in Bangladesh. *Biom Biostat Int J.* 2020;9(1):16-20.
70. Shishir Moral. (2019). 5m homeless, 74 pc of the population live in mud houses. *Porthom Alo*, 8 November, 2019
71. Saifuddin Saif. (November, 2020). Accommodation for the homeless: Tk8,962cr sought. *The Business Standard*. 9 November, 2020.
72. Das, Mridula & Ray, Sunuram & Kumar, Uttam & Begum, Salma & Tarafdar, Satya. 2015. Livelihood assessment of the fishermen community in the southwest region of Bangladesh. *Journal of Experimental Biology and Agricultural Sciences*. 3. 353-361. 10.18006/2015.3(4).353.361
73. Islam, Md & Rashid, A. 2012. Riverbank erosion displaces in Bangladesh: the need for institutional response and policy intervention. *Bangladesh Journal of Bioethics*. 2. 10.3329/bioethics.v2i2.9540.
74. Rahman, Munshi & Schmidlin, Thomas. (2014). The Perception and Impact of Natural Hazards on Fishing Communities of Kutubdia Island, Bangladesh. *Geographical Review*
75. Shamsuddoha, M., and R. K. Chowdhury. 2007. Climate change impact and disaster vulnerabilities in the coastal areas of Bangladesh. COAST Trust, Dhaka, Bangladesh
76. Ali, Md & Haque, Fazlul & Rahman, Shah & Iqbal, Kazi & Nazma, & Ahmed, Ashfaque. 2013. Loss and gain of the land of Manpura island of Bhola district: An integrated approach using remote sensing and GIS. *Dhaka University Journal of Biological Sciences*.
77. Bangladesh Embassy in Netherlands website, <http://bangladeshembassy.nl/bangladesh-delta-plan-2100/>, accessed on 16 Novemebr.
78. Local Government Division (LGD). 1998. National Policy for Safe Water Supply & Sanitation 1998. Ministry of Local Government, Rural Development, and Cooperatives. Government of the People's Republic of Bangladesh
79. Ministry of Water Resources, 1999. National Water Policy 1999.
80. Local Government Division. 2012. National Hygiene Promotion Strategy for Water Supply and Sanitation in Bangladesh 2012. Ministry of Local Government, Rural Development, and Cooperatives. Government of the People's Republic of Bangladesh
81. General Economics Division (GED), Bangladesh Planning Commission. 2020. Sustainable Development Goals: Bangladesh Progress Report 2020. Ministry of Planning, Government of The People's Republic of Bangladesh.
82. Center for Research Initiative. 2016. Water and Sanitation in Bangladesh: A Clean Future" Published by Centre for research and Information, November 2016
83. Ministry of Health and Family Welfare (MOHFW) Health Bulletin 2016
84. Billah, Md & Kader, Md & Siddiqui, Abdullah & Mahmud, Syed & Khan, Md. 2018. Studies on fisheries status and socio-economic condition of the fishing community in Bhatiary coastal area Chittagong, Bangladesh. *Journal of Entomology and Zoology Studies*. 6. 673-679.)
85. David Eckstein, Marie-Lena Hutfils And Maik Winges. 2018. Global Climate Risk Index 2019: Who Suffers Most from Extreme Weather Events? Weather-Related Loss Events In 2017 And 1998 To 2017, Germanwatch
86. Mani, Muthukumara, Sushenjit Bandyopadhyay, Shun Chonabayashi, Anil Markandya, And Thomas Mosier. 2018. South Asia's Hotspots: The Impact of Temperature and Precipitation

- Changes on Living Standards. South Asia Development Matters. Washington, DC: World Bank
87. General Economics Division (GED), Bangladesh Planning Commission. 2020. Sustainable Development Goals: Bangladesh Progress Report 2020. Ministry of Planning, Government of The People's Republic of Bangladesh.
 88. General Economics Division (GED), Bangladesh Planning Commission. 2020. Sustainable Development Goals: Bangladesh Progress Report 2020. Ministry of Planning, Government of The People's Republic of Bangladesh.
 89. Ministry of Environment, Forest, and Climate Change. 2018. Third National Communication of Bangladesh to the United Nations Framework Convention on Climate Change. Government of the People's Republic of Bangladesh.
 90. Huq, S and Rabbani, G. 2011. Climate Change and Bangladesh: Policy and Institutional Development to reduce vulnerability. *Journal of Bangladesh Studies*. Volume 13, no, pp 1-10]
 91. Ministry of Fisheries and Livestock. 1998. The National Fisheries Policy. Government of Bangladesh
 92. M J Rahman et al, (2020) Hilsa fishery management in Bangladesh. *IOP Conf. Ser.: Earth Environ. Sci.* 414 012018
 93. Partha Pratim Bhattacharjee, 2019. Matsyajibi League: What fishermen get from it? The pro-AL organization holds its 4th council today. *The daily star*, November 19, 2019.
 94. Ahmed, M. K., Halim, S., And Sultana, S. (2012) "Participation of Women in Aquaculture in three Coastal Districts of Bangladesh: Approaches towards Sustainable Livelihood", *World Journal of Agricultural Science*, Vol. 8(3), Pp. 253-268.
 95. Shirajee SS, Salehin MM, and Ahmed N. 2010. The Changing Face of Women for Small-Scale Aquaculture Development In Rural Bangladesh. *Aquaculture Asia Magazine* 15(2):9–16
 96. Debashish KS, Shirin M, Zaman F and Ireland M. 2001. Strategies for Addressing Gender Issues through Aquaculture Programs: Approaches by CARE Bangladesh. In Williams MJ, Nandeesh MC, Corral VP, Tech E and Choo PS, Eds. *International Symposium on Women in Asian Fisheries*. 147–56.
 97. Kruijssen F and Pyburn R. Forthcoming. Value Chain, Social and Gender Analysis of Four Fish Species in Southwestern Bangladesh: A Farm-Level Assessment of Tilapia, Silver Carp, Rohu And Mola. Penang, Malaysia: WorldFish. Program Report.
 98. Belton B, Karim M, Thilsted S, Jahan MK, Collis W and Phillips M. 2011. Review of Aquaculture and Fish Consumption in Bangladesh. *Studies and Reviews*. Dhaka: WorldFish Center. [Http://www.worldfishcenter.org/resource_centre/WF_2970.pdf](http://www.worldfishcenter.org/resource_centre/WF_2970.pdf).
 99. Ministry of Women and Children Affairs (MoWCA). 2013. The National Action Plan to Prevent Violence Against Women and Children 2013-25
 100. Bangladesh Gazette. 16 October, 2014. English Translation of Legal Aid Services Act, 2000, Act No. VI of 2000. Legislative and Parliamentary Affairs Department, Bangladesh Government.
 101. National Legal Aid Services Organization. 2019. Annual Report (2018-19). Law & Justice Division, Ministry of Law, Justice & Parliamentary Affairs.

102. Md. Mostafa Shamsuzzaman , Xu Xiangmin , Ehsanul Karim & Nusrat Jahan Tania. 2017. Review Of Fisheries Legal Framework Of Bangladesh: Towards Policy Implications, Indian Journal Of Geo Marine Sciences Vol. 46 (01), January 2017
103. Islam, Shafi. (2010). Threatened wetlands and ecologically sensitive ecosystems management in Bangladesh. *Frontiers of Earth Science in China*. 4. 438-448. 10.1007/s11707-010-0127-0.
104. M.Mahbubur Rahman, 1986. Small-Scale Fisheries in Bangladesh: Some Socioeconomic Problems and Issues. *Bangladesh J. Agric. Econ.*, IX, 2 (December 1986) 97-110
105. Khan SM, Haq E, Huq S, Rahman AA, Rashid SMA, Ahmed H. 1994. Wetlands of Bangladesh. Bangladesh Centre for Advanced Studies (BCAS) Dhaka
106. Islam, Shafi. (2010). Threatened wetlands and ecologically sensitive ecosystems management in Bangladesh. *Frontiers of Earth Science in China*. 4. 438-448. 10.1007/s11707-010-0127-0.
107. IUCN and BFD. 2016. Bangladesh National Conservation Strategy, Part II: Sectoral Profile. BFD, Ministry of Environment and Forests, Government of the People's Republic of Bangladesh, and IUCN, Bangladesh Country Office, Dhaka, Bangladesh.
108. Macfadyen, G, Hosch, G, Kaysser, N, and Tagziria, L, 2019. The IUU Fishing Index, 2019, Poseidon Aquatic Resource Management Limited and the Global Initiative Against Transnational Organized Crime
109. K.V.Kuperan and K.M. Jahan (2010). Noncompliance a major threat in fisheries management- Experiences from the artisanal coastal fisheries of Bangladesh. Munich Personal RePEc Archive MPRA Paper No. 32330, posted 19 Jul 2011



Social Development and Sustainable Fisheries: Bangladesh

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Bangladesh's small-scale fisheries is going through a phase of multidimensional challenges. There is a lack of grassroot associations and organizations which affiliates fishers and protect their interests. The current study found that one of the root causes of all problems for sustainable and small-scale fisheries in the country stem from a lack of identification and recognition of fishers. Fishers face challenges in accessing loans, subsidies and schemes that are intended to support their lives and livelihoods. Fishing communities are seldom consulted in the decision making process and their participation is minimal in the policy making. In addition to these structural issues, lack of free access to open water bodies—currently under a leasing system controlled by the Ministry of Land—is a detriment to the sector's holistic growth.



ICSF (www.icsf.net) is an international NGO working on issues that concern fishworkers the world over. It is in status with the Economic and Social Council of the UN and is on ILO's special list of Non-Governmental Organizations. It also has Liaison status with the FAO. ICSF works towards the establishment of equitable, gender-just, self-reliant and sustainable fisheries, particularly in the small-scale, artisanal sector.

ICSF draws its mandate from the historic International Conference of Fishworkers and their Supporters (ICFWS), held in Rome in 1984, parallel to the World Conference on Fisheries Management and Development organized by the Food and Agriculture Organization of the United Nations (FAO). As a global network of community organizers, teachers, technicians, researchers and scientists, ICSF's activities encompass monitoring and research, exchange and training, campaigns and action, as well as communications.