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**YPSA**

**Young Power in Social Action**

**An Organization for Sustainable Development**

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## **YPSA (Young Power in Social Action)**

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House # F 10 (P), Road # 13, Block-B, Chandgaon R/A  
Chittagong-4212, Bangladesh. Tel: +88-031-671690

Email: [info@ypsa.org](mailto:info@ypsa.org), [socialchange.ypsa@gmail.com](mailto:socialchange.ypsa@gmail.com)

**[www.ypsa.org](http://www.ypsa.org)**

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As an Editor-in-Chief of the Social Change, I would like to take the opportunity to thank again all contributors, particularly scholars, policy makers, academicians, researchers and development practitioners those who are working in this issue.

I also would like to thank all the writers who contributed to publish this issue by submitting their study based research manuscript and practical experiences which will definitely enrich the quality and archive of intellectual write-ups on contemporary development issues related issue for all the interested scholars, researchers, activists, students and also the GO-NGO-CSO practitioners. Finally, I express my kind gratitude to all the board members for their valuable consent, comments and encouragement for the timely publication of the issues of Social Change so far.

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## **The Primacy of Political Leadership in Public Policy: A Focus on the Role of Prime Minister in Bangladesh**

Md. Shairul Mashreque\*

### **Abstract**

The Prime Minister (PM) as the head of government in a parliamentary democracy enjoys power and influence of infinite degree in the overall institutional set up. Democratic structure of cabinet government based on the supremacy of political leadership represents a manifestation of the collective actions of the ministers with the Prime Minister taking the lead. Absolute and even simple majority in the parliament is crucial for enabling political leadership to reign supreme in every course of action. The key note of the cabinet government is PM. Membership strength of the treasury bench in the parliament accounts much for the growth of 'premier domination' in the context of cabinet dictatorship. Its authoritarian face speaks for itself with deeply embedded institutional paramountcy of the office of PM. The cabinet consisting of PM and his/her ministerial colleagues lies at the apex of central administration. It is the ultimate decision making body in central administration. All ministers except a few chosen from technocrat quota are politicians with seats in the parliament.

### **Introduction**

The very basis of the constitution of Bangladesh is 'the age old concept of parliamentary system' more or less resembling 'the time tested Indian constitution, which itself drew its inspiration from the mother of democracies, *i.e.* the British Westminster style of parliamentary democracy'. But the way the Prime Minister (PM) in Bangladesh conducts himself/herself under the intoxication of unbridled power it seems the PM smacks of a totalitarian dictatorship with the office of PM ruling the roost.

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Professor, (Ex.) Department of Public Administration, Chittagong University, Bangladesh

"Indeed to-day the situation has come to such a pass that for the student of political science and constitutional law, the all powerful office of the Prime Minister of Bangladesh has almost become a riddle, since it has a few parallels worldwide. Even the rules of business have been so carefully drafted and later amended that all power automatically flow into the hands of only one person, *i.e.* the Prime Minister (PM) and none else. To be more explicit, if we try to look through the language of the scriptures not even a leaf of the tree moves without the PM's nod (Huq 2005)

The hallmark of parliamentary government is the Prime Minister (PM). PM is the supreme political executive with centrality of position in overall administration. "The Prime Minister is the keynote of the cabinet arch, central to its life, central to its death" (Jennings, 1968). PM is supposed to make his/her own choice of cabinet colleagues. He/she has the sole authority to distribute portfolios among them. This is a sort of allocation of functions on the basis of capacity, aptitude and experience. The PM may deem it necessary to hold the charge of some ministries that are strategically important. PM directs the ministers to supervise day to day activities of their respective ministries in weekly cabinet meeting. The cabinet secretary convenes cabinet meeting and prepares its proceedings. PM has to co-ordinate the activities of different ministries to avoid inter-ministerial conflict and forge discipline. The PM has supreme control over all executive matters and guides all executive functions of different ministries.

Leadership of the PM is the main focus of cabinet government. Being the head of the cabinet he/she occupies an extraordinary position. "There is a common subordination of other Ministers to the Prime Minister, though each Minister is given the authority to run his/her ministry independently." (Ahmed, 1998). The Prime Minister's key position in the entire executive establishment is based on three major institutional sources: political leadership in the parliament, commanding position in the cabinet secretariat and the exclusiveness of his/ her official status in Prime Minister Secretariat (PMS). His/ Her power of patronage is the main source of leverage over policy decisions. The PM appoints and removes the ministers, reshuffles his / her cabinet and makes government appointments among the chosen

members of the government and the backbenchers. Normally he/she has to depend on enough support from the cabinet members (Sapru, 1994).

### **Premier Domination: the Primacy of Political Leadership**

The office of PM is a real vantage point to ensure interconnections among departmental policies steering policies towards projected political objectives and development goals. The PM in fact 'plays a crucial co-ordinating role having access to all ministers and communication with all departments. In UK Harold Wilson created the policy unit in 1974 that operates as policy analysis unit. It is headed by a political sympathizer of the PM. Other members may include either political appointees or civil servants seconded from department (Wood and Wilson, 1974).

The dominant prime ministerial model is a threat to the deliberative, consensus building style of executive leadership (Kingdom, 1990). In UK in the 1960s controversy arose over the role and authority of the Prime Minister (PM) within the cabinet. It was widely believed that UK government has become presidential in character with each successive prime minister having arrogated to itself the power residing with the cabinet (Ibid; 16). The ascendancy of the office of PM during the incumbency of Margaret Thatcher is worth mentioning. She resorted to the prime ministerial arena than has been the case with many of her predecessors in peacetime. (*Ibid*: 6)

In fact the Prime Minister plays second fiddles to none in governing process and other members of the cabinet 'play varying degree of subordinate role. Nevertheless the assertiveness of premier position converges on three factors: charisma, party position in the parliament and internal and international situation. In India, for example, Jawharlal Nehru, the first prime Minister and a man of mission and vision, used his charisma to build up modern India during post-independence national reconstruction (1947-1962). But the humiliation he suffered during Indo-China war in 1962 rendered him almost powerless. His daughter became a single most powerful person after victory in 1971 Indo-Pak war. His son proved to be very powerful PM assuming the position of a presidential figure (Sapru, 1994). The cabinet government succeeding him after his tragic death was something different significantly. Mentionably, VP Singh, Deve

Gowda and IK Gujral who formed cabinet could not claim to have electoral mandate in favour of their party manifesto affording much less legitimacy compared to their predecessor who had the numerical strength in terms of seats in Loksava.

The dominant PM is likely to curb policy-making influence of bureaucracy. Or, he may seek to harness it. In Bangladesh each successive PM in parliamentary democracy of 'Westminster system' represent the prototype of premier domination.

The first PM after national independence in 1972 became the 'focal point' of decision making. He exerted tremendous influence on the overall governing process not merely on the strength of an overwhelming majority in the parliament; his charisma mattered much. Such manifestation of political leadership in his institution was perhaps of a degree one could not dispute during initial years of national reconstruction in a war ravaged country. The circumstances of time gave him vantage point aplenty for enjoining special privileges enabling him to direct the whole course of action in favour of his cherished ideology and national goals. He happened to introduce a number of measures to reduce policy influence of bureaucracy (Ahmed,1995). Noteworthy among them were the replacement of bureaucrats from senior policy positions in the planning commission (PC), the harbinger socialist planned economy, by professional economists and the appointment of business executives and professionals as heads of different public corporations and public enterprises(ibid:60). The first PM during post-liberation period initiated moves to reform and restructures the civil service. Administrative and Service Reorganization Committee headed by Professor Mujaffar Ahmed Chowdhury was appointed to review the existing administrative structure and suggest measure for 25 organizations. The report of the committee was perhaps influenced by Fulton Report in UK. The committee recommended that the posts from grade2 to grade1 should be called "senior policy and management (Maniruzzaman,1982).

A frantic quest for new state structure was to stamp out the legacies of the colonial and semi-colonial administrative state thus creating a new policy environment suiting the interests of the intermediate

regime. Attempt was made to create the post of junior minister (minister of the state) in between secretary and the minister (Islam,1988).

The penetrating influence of PM during intermediate regime clustered around the dominant role political leadership in the whole range of policy administration with party cadres serving as political watchdogs from the outside. It was dictated by the unflinching loyalty of the elected ministers and backbencher to the Prime Minister as the part icon. They extended influence far to local/field administration through party cadres for implementing decisions 'according to their dictates.'

The ruling party desired such pattern of intervention to establish its hegemony on a solid footing. The office of PM became powerful with the officers like principal secretary, private secretary, political secretary, economic secretary, and investigation director (Rahman, 1980). Most top policy advisors were non-bureaucrats and leaders of 'part-oriented interests groups ' who would provide inputs for policy and programme development in line with party ideology based on four pillars: nationalism, socialism, democracy and secularism. . Such a broad framework of objectives includes almost countless policy options. At times there was considerable flexibility in selecting policies and programmes that might not always mutually consistent and compatible ((ibid: 136).

The enormous concentration of power in the hands of PM during post-liberation period resulted in the alienation of civil bureaucracy. It was not possible to get things done without clearance from the office of PM. Even routine matters were referred to PM for approval (Rashiduzzaman,1980). The inexperienced political appointees who flourished during that period created a buffer between the senior bureaucrats and PM which unnecessarily complicated decision making process (ibid:178)

The Prime Minister's dominant policy role may be found in what one may term as absolutely policy-oriented activism in cooperation with experts specific to a policy issue and those concerned with policy advocacy and representatives of various pressure groups, civil societies and professional bodies. There is further manifestation of

PM domination. This is what one might term as 'inner cabinet' around the PM to maintain secrecy of state policy on strategic issues with the participation of the senior minister, cabinet secretary and PM's Chief Secretary. The parliamentary democracy based on the supremacy of political leadership enables the political executive to assert itself as the policy making center of the political system.

Notwithstanding this institutional omnipotence in the policy role of PM the support of all cabinet colleagues even the junior minister cannot be underrated. Even ministerial policy role within its own jurisdiction has much to be reckoned with. Distribution of portfolio among the ministers is the allocation of policy responsibilities. It covers a large variety of policy sectors and sub-sectors. Such responsibilities are onerous compelling each minister to immerse himself in details (Ibid: 171). A vast number of decisions are of course; made by the individual ministers within the prescriptions of the business rules and these are fully authoritative decisions on behalf of the government. The Prime Minister does fear to veto his colleagues' decisions. Even policy proposals of the cabinet colleagues are hardly rejected by the PM. Things, however, depend much on political maturity of a minister; his personality and wisdom matters much. Who he wishes to decide and what he will refer to the cabinet or the PM- all he is supposed to do in his own right.

Collectively the ministers take the wider view of state policy. The Minister as political executive may initiate new policy moves placing draft policy proposals or proposals for policy change /shift in the cabinet committee. Either department minister may turn out to do it or the cabinet committee may discuss new policy agenda to take a collective view on any policy sectors in response to demand for

## **Reasons for Premier Preponderance**

One may assign several reasons for monopolization of power by the prime Minister in parliamentary democracy especially in Bangladesh.

First, the nature of premier dictatorship lies in the system theoretically devoid of check and balance. The architect of the Bangladesh constitution gave PM a vantage point aplenty in shaping the direction of control in a manner he/she likes. 'The office of the

prime minister is vested with all the powers available minus its original beauty-that is without its inherent 'checks and balances'. The constitutional provision regarding parliamentary democracy and party discipline aimed to create a unique system of dictatorship by the prime minister (Islam, 2006). Conversely, the high office of the president is simultaneously emasculated beyond imagination, making it just a mockery of sorts (Huq, 2005).

Second, personality factor matters a much. This universal phenomenon. The PM like Bangabandhu was a man possessed of charismatic personality. He could command high respect from his party men and cabinet colleagues. Post-liberation construction required such personality and Pandit Jawaharlal exhibited such personal quality during post-partition period.

Third, two third or three fourth seats in the parliament indicating an absolute majority provides enough room for cabinet dictatorship with PM dictating terms and conditions and manipulating things in a manner he/she likes. Already the experience with strong cabinet government and extremely weak opposition was unsatisfactory. Misgovernance has taken a heavy toll all to the wrath and suspicion of the people.

Fourth, absence of democratic culture within the party. Authoritarian predisposition is deeply ingrained in the political culture of the South Asian countries. Party chief and those in the commanding key party positions falter the practice of democracy within the party. The choice of party chief is reflected in the selection of the key position holders. There is irregularity in the holding of council meetings. The ordinary party members and party workers continue to suffer from hurt burning and frustration. All big guns in the party excreting policy influences do not pay heed to the grievances of the ranks and files in the party. The party high-ups only gratify coterie interests. The party chief would like to hold the position till death. He/she and his/her sycophants would not like to create a second string for the sake of sustainability. There is no democratic arrangement to elect party chief.

Fifth, dynastic politics. This has happened to be legacy of the traditional political culture somewhat reflecting the phenomenon of the South-Asian political culture. Ascriptive consideration comes first with the rule of succession determined by traditional values. All

the same dynastic politics continues to deter institutionalization of democracy. The criterion does not account for the development of the civic culture. The approach is parochial with the notion of perennial domination of the of the some ruling families.

Sixth, politicization. Politicization of administration is rampant in South-Asian context, especially in Bangladesh. It tends to weaken the base of democratic governance. The influence of PM has become a matter of infinite degree under the whirlpool of politicization. It gives an outlet for depersonalization of politics in Bangladesh with inefficient sycophants hovering around the office of PM.

Seventh, Ministerial inefficiency and corruption. It goes without saying that most ministers especially in Bangladesh make fool of themselves having a little knowledge about the management of the affairs that they are supposed to do. It accounts much for their docility with the office of PM taking hand in their respective affairs. Any efficient minister with a strong personality would not the office of PM to dictate terms and conditions in his own arena. All the same rampant corruption has its negative impact on the governing process. Corruption tends to ruin the image of the minister as a person and as an institution. Since corruption has reigned supreme in most ministries misgovernance thrives compelling the PM to intervene in the affairs of the ministries soaked with malfeasance.

Since the prime minister of Bangladesh heads the cabinet, and that is an integral part of the parliamentary system, s/he must be prevented from choosing members of the cabinet from outside the Jatiya Sangsad. For the purpose, Article 56 (2) of the Constitution should be amended. Article 70 of the Constitution should be partly amended for the purpose. This was intended to prevent floor-crossing of the members on flimsy grounds with a view to stabilising the government and to that extent this Article played a stabilising role. It has however been used by successive prime ministers as a positive threat to the conscientious members, making them and their free will hostage to a constitutional provision.

## **The Office of Prime Minister (PM)**

The marked distinction of the office of PM reflecting the potential of

prime ministerial direction of policy and administration existed even after the resurgence of parliamentary democracy in 1991. The presidential style of domination of the two successive female PMs bears a testimony to primordial authoritarian attitude opposed to democratic culture in cabinet government. Both female PMs enjoyed a near monopoly of power. Even the sitting PM too does have such monopoly.

The party government under premier leadership has to maintain such domination even at the cost of efficiency to appease the party men. In fact PM runs the show in absolute terms with bureaucracy at his/her beck and call. One potent factor propelling the PM to control bureaucracy is the fear of policy failure and policy sabotage by some high officials covertly opposed to his / her political ideology.

The ethos of governance in parliamentary democracy proclaims the primacy of cabinet in policy determination. Its authority in decision making emanates from its electoral mandates. "Numerous observers reject the prime ministerial thesis, emphasizing the collective role of the cabinet" (Wood and Wilson, 1984). Nevertheless the reality of decision making process in Bangladesh now and then establishes the prime ministerial thesis revealing the nucleus of prime ministerial secretariat in the final approval of any policy proposals or matters. Leadership position in the party is the main source of premier domination.

Both Khaleda Zia, the ex-PM and SK. Hasina., the present PM, contributed to the exclusiveness and enhancement of PM office with a vast array of officials and advisors. This is because PM "requires briefing about policy options experts producing through policy analyses" (ibid:1984)

The office of PM consists of PM and a lot of key personnel like PS-1 to PM, PS-2 to PM, APS-1 to PM, APS-2 to PM, Protocol officer-1 to PM, Protocol officer-2 to PM, 3 assignment officers, MS, AMS, 3 APC. Besides, PM is flanked by several advisors including Advisor (economic affairs), Advisor (political affairs) and advisor (international advisors). Special assistants in the office are appointed from among the trusted party colleagues.

The burden on the office of PM is so great one can hardly imagine. The volume of function/assignment is vast. Even an expert could not hope to surmise the complexity of such function taken on by PM to meet the challenges of new millennium. decisions have so far been taken on multifarious issues where PM might have his/her own interest and values. The prime Minister as an institution is thus overwhelmed by legislative and executive action in connection with vital policy matters; the amount aggravating the complexity of the function of PM office. Even pretty matters concern this office.

This pattern related to the haphazard development of organizational contours in central administration. It becomes acute when interdepartmental conflicts creep into overall set up or when roles are ill-defined and organizational policy matters in a ministry are not properly handled due to inefficiency of the minister. thing is that new ministry, new departments and ne attached offices take a long time to take shape and develop and political consideration dictates otherwise the process of its functioning with internal policies, implementation decisions and clientele principle. The crisis is reported to be complicated by the advent of enormous projects and resultant necessity of organizing new offices. The issue of creating new offices is also fraught with political expediency.

During the incumbency of Begum Khaleda Zia as Prime Minister (2001 to 2006) there were more than 50 minister/deputy minister/ state ministers. They looked to PM for final decision; none dared to take decisions unless PM permitted him to do so. During the meeting of the cabinet committee held in 31st August, 2002 the issue of prime ministerial workload was discussed (Prathom Alo, 2003). The meeting observed that delay in decision making and decision implementation was caused by the need for prior permission of PM office and the need for final approval whatsoever. The meeting clearly pointed out that the PM was occupied with policy making functions on various important subjects in domestic and international spheres. The meeting decided to direct the cabinet secretary to identify those matters that required no action of PM. (ibid). The Rules of Business specifies 21 areas within the functional jurisdiction of PM. It provides for the leverage of the PM office on any matter of course within the limit set by the Rules of Business (GOB, 2000).

In practice centralization of administration runs parallel with the centralization of power in the office of the Prime Minister. Prime ministerial secretariat is a practical reference for such centralization. This likened to the presidential secretariat introduced by the then President HM Ershad. PM secretariat consists of chief secretary, secretary, additional secretary, four director generals and PM's personal officials. Two successive PMs retained presidential pattern of centralization with little interests in decentralization either in the form of deconcentration or in the form of delegation even after historic shift to parliamentary democracy. Although SK Hasina during first tenure(1996 to 2001) made amendments in the Rules of Business to make minister the executive head of his /her concerned ministry/department the ministers were reluctant to take financial responsibilities and so the secretary would act as administrative head and principal accounting officer (Prathom Alo, 2003). However the institutional arrangement continued to be that the secretary continued to intimate the minister about possible approval of any agenda of action/programme/project. The minister was to approve decision but in case of any confusion and obscurity he was required to bring it to the notice of PM.

Work procedure in connection with decision making process continues to be cumbersome from bureaucratic ritualistic rings to the office the Prime Minister. Things to be settled at the secretariat level even with complicated work procedure are to be finally settled at PM office via concerned ministry. File processing is lengthy involving several steps. Any policy matters even a trivial issue settled at the ministerial level may be changed second time in the office of PM. As a result file is finally approved with necessary amendment, additions and omissions. In some cases the concerned officials in PM office may think to dispatch any proposal initiated by ministry/department to the cabinet division functioning under PM. In the recent past development projects and even miscellaneous trivial matters that were routine functions were not decided upon without informal permission of PM office. Even now the PM may show concern in such development project and matters that bear strategic and political significance.

To a great extent once policy/programme has been decided in the

ministry/department the question of final approval is left to PM office. There are various tactics the officials in PM office might have deliberately employed to thwart authentication of policies /programmes decided by the ministry about which they might be skeptical: procrastination, imposing unworkable suggestions and other insurmountable obstacles.

It was alleged that PM as the head of the government has been captive in the hands of a host of advisors sitting in the office of PM. Some advisors become so powerful that as if they were running the show forming an inner cabinet. The cabinet minister

## **Conclusion**

Does it hint that accountability and transparency in the parliamentary democracy is more rhetorical than real. Premier absolute domination without the element of transparency might have a disquieting impact on overall process of governance. Indeed, frightening is the fact that his/her injudicious decision bolstered by the supportive roles of the cabinet colleagues and political appointees may undermine the impersonal image of the institution and panders to partisan administration-all at the cost of efficiency. It does mean that the PM and his cabinet associates are motivated by narrow party interests less by common interests undermining responsible governance in democracy thus isolating themselves from the voters.

Now in an era of globalization with the proponents like good governance, sustainability and open market economy a country needs positive political leadership answerable to popular institutions. Positive leadership demands much potency and competence on ruling elite and its advisors. Amidst the challenges of great magnitude prime minister has to efficiently manage things placing value on good governance and even good enough governance. The pm may well precede with politicization mission of course exercising rationality in selecting experts from the persons of his/her liking. This is to ensure smart implementation of public policy in the age of information.

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## **Study of Deprivation on Female Garments Workers in Bangladesh: A Case Study of Chittagong City Corporation**

Suman Chowdhury\*

### **Abstract**

The continuing exploitation of women workers in clothing factories across the world is a damning indictment of the global economic system. In Bangladesh, women workers account for 85% of the total workforce in the garment industry. While some have viewed this as a positive step towards female emancipation, the reality is that women are employed in a highly exploitative context. Women workers remain at the bottom of the supply chain, working long hours for poverty wages and denied basic maternity rights. This study seeks to expose the current condition of female workers' rights in the Bangladeshi garment industry especially in the Chittagong City's various garments. The data have been collected from both primary and secondary sources. A questionnaire was used in the survey. The sample consisted of 120 women workers selected randomly from 7 different garment factories in Chittagong Metropolitan area. The data were analyzed using SPSS and XL, different tabular forms used to analyze the data in this study. The results show that the female workers are mostly employed at the lower category of jobs like operator, finishing helper, polder etc. These jobs are very monotonous in nature. Because of the nature of their jobs, female workers sometimes lose interest in work and become depressed. A large number of female workers received low and irregular wages which create their job dissatisfaction. The study concludes with recommendations on what can be done to ensure enhanced respect for female workers' rights in Bangladesh that will have positive impact into our national economy, the study hope.

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\* Deputy Secretary and Director, (Investment Research and Economic Observatory) Bangladesh Investment Development Authority, Prime Minister Office, Government of Bangladesh.

**Keywords:** Female garments workers, Sexual Harassment, Communication, and Health Hazard.

## Introduction

Ready Made Garment (RMG) industry is the key sector of the Bangladesh's economy in terms of employment, production and foreign exchange earnings (World Bank, 1990). According to the Bangladesh Garment Manufacturers and Exporters Association (BGMEA, 2008), there are at present more than 4000 garment factories contributing about 76 percent of the country's export earnings. This tremendous success is greatly attributable to women workers, who account for the lion share of the total labour force employed in the sector. But women were exploited easily due to lack of technical knowledge and training.

Globalization as manifested in the RMG sector, failed to offer opportunities to the female labour force. Garment industries were exploited them as cheap source of labour (Halim and Kabir, 2005). In the garment factory, most of the female workers age is between 15 to 30 years (Begum, 2008). This very young age is also responsible for various kind of harassment such as harassed by colleagues, by police, by mastans etc. Their wage payment is not regular. Sometimes it was paid after the first week of the month. In the garment industry men and women hold different jobs and consequently are exposed to different types of hazards. Majority of the women work in the low-paid and less skilled jobs, where work hazards are comparatively higher (Paul Majumder, 2003). Women are harassed in the factory, in the street, or in the house. Various factors are responsible for this kind of harassment.

The present study will give a clear understanding of the various factors which creates various kind of harassment faced by female workers in Bangladesh. Threatening situations in the garment industry may arise from following sources (Begum et al, 2010):

- a) Monotonous nature of the job;
- b) Pressure to increase productivity or excessive demand on workers to meet shipping deadlines;
- c) rush to meet the set production target;
- d) Uncongenial working conditions;

- e) late-night overtime work;
- f) Insecure commuting to and from the workplace;
- g) Sexual harassment;
- h) Absence of canteen facility;
- i) Absence of weekly holiday and leave facilities; and
- j) Non-cooperation from family and society, etc.

This study covers the following issues of the female garments workers based on the above mentioned threatening situations:

- a) Wage discrimination;
- b) Sexual harassment;
- c) Absence and weekly holiday;
- d) Late-night overtime work;
- e) Commuting to from the work place;

Bangladesh's garment industry has been at the heart of the country's export boom ever since the first factory opened in 1976. The industry has grown dramatically over the past 35 years, and today accounts for 80% of Bangladesh's total exports. There are now 4,825 garment factories in Bangladesh employing over three million people. Fully 85% of these workers are women. The expansion of the garment industry in Bangladesh was fuelled by the structural economic reforms of the 1980s, which opened up the Bangladeshi economy to foreign investment, deregulation of markets and privatization. The Bangladeshi government established tax holidays and the development of export enclaves enabling businessmen to build or rent bonded warehouses in Dhaka and Chittagong cities. This process was accompanied by a massive increase of capital inflows into the country. Foreign direct investment leapt from a mere \$2.4 million in 1986 to more than \$1,000 million in 2008.<sup>1</sup> Today, one third of foreign direct investment comes from European companies, principally from the UK. Young women are the driving force of the Bangladeshi garment sector.

The garment industry is the most important source of foreign currency. Bangladesh has about 4825 garment factories and 10 million people are dependent directly or indirectly and 80% garments workers are women. The garments sector has become an important institution for reduction of poverty. The workers face many problems

during the working time and outside of the factory. The main problems faced by garments worker are:

- a) Lower wage
- b) No leisure time
- c) Torture (Physically and Mentally)
- d) Sexual harassment
- e) Negative outlook to them of the society

The main objective of the study is to critically evaluate the rights of female garments workers in Chittagong region. The study based on the main objective spells out the following specific objectives:

- a) To clarify the concept of rights of female Garments workers;
- b) To examine the current status of female garment workers regarding their rights; and
- c) To suggest some policy recommendations for the betterment of the current position of the female workers of garments workers in Bangladesh.

## **Materials and Methods**

The Chittagong metropolitan City was selected purposively as study area and seven garments factories were selected for study considering the purpose of the researcher. In this study, both quantitative and qualitative methods were used in order to get a reasonably true picture of the entire population. A number of 120 respondents chosen randomly from 7 selected garments factories of Chittagong area. The respondents were chosen randomly based on the location and access to those garments.

Data were collected from both primary and secondary sources. A semi-structured questionnaire was administrated to collect primary data considering the objectives of the study. The questionnaire consists of maximum close-ended and a little bit open ended questions, which was distributed among the female garment workers. The respondents were personally questioned and the questionnaires were filled in by the interviewer based on the response of the respondents. The data were collected during the period from November to December, 2017. The secondary sources are books,

journals, articles, newspapers, and internet and so on. This study also reviewed some printed materials and web sources of the sample garments factories.

Tabular method was used for a substantial part of data analysis. Relatively simple statistical techniques such as SPSS, XL data analysis tools and percentage and arithmetic mean or average were taken into account to analyze the data.

## **Results and Discussion**

The Constitution of Bangladesh has recognized fundamental rights of women workers at work places including necessary social protection (Articles, 28, 29, 34, 38, 14, 15 and 20(1), (The Constitution of Bangladesh). Bangladesh Constitution provides that the state shall not discriminate against any citizen on the grounds of religion, race, caste or place of birth and women shall have equal rights with men in all spheres of the state or public life (Article 28).

Bangladesh as a state is responsible for its citizens to ensure the right to work that is the right to guaranteed employment at a reasonable wage having regard to the quantity and quality of works, and reasonable rest, recreation and leisure (Article 15). Bangladesh Constitution recognizes that everyone shall be paid for work on the basis of the principle from each according to his abilities (Article 20). In addition, the fundamental rights guaranteed in Chapter III of Bangladesh Constitution, especially relevant to workers' rights, prohibits all forms of forced labour and makes it a punishable offence (Article 34) and guarantees the right to freedom of association and to form trade unions (Article 38).

Bangladesh Labour Act, 2006 has included a large number of labour rights for protection of women workers. BLA has various positive points relating to labour rights, but due to its various limitations, absence of adequate penalty in statutory law for employers and lack of proper code of conduct by the garment authorities, there is scope of violation of labor rights in some areas. Right to Occupational Safety and Health BLA, 2006 prescribes provisions relating to occupational hygiene, occupational diseases, safety measures, industrial accidents, protection of women and young persons in

dangerous occupations and also covers conditions of work, working hours, welfare facilities, holidays, leave etc. (Sections 11, 51, 52, 53, 56, 57, 58, 61, 62, 91, 92, 93,94 and, 109, BLA, 2006). Most of the provisions lack in standard values and are not specific rather general in nature. In terms of occupational safety and health issues, the status of Bangladesh is very poor and women workers are extremely vulnerable in this regard.

Bangladesh has ratified International Labor Organization (ILO) conventions 87 and 98 on freedom of association and collective bargaining, and is required to protect the rights contained in them. At the international level, Bangladesh has also ratified the UN Convention on the Elimination of all forms of Discrimination against Women (CEDAW), as well as different ILO Convention. According to the UN Guiding Principles on Business and Human Rights, factory owners and the companies which buy their products also have responsibilities to prevent human rights violations occurring in the garment factories, and should take remedial action should abuses occur. All businesses, regardless of their size or where they are based, should "avoid causing or contributing to adverse human rights impacts through their own activities, and address such impacts when they occur." They should also "seek to prevent or mitigate adverse human rights impacts that are directly linked to their operations, products or services by their business relationships, even if they have not contributed to those impacts." Many national and international companies with business activities in Bangladesh are failing to meet these responsibilities.

The reality is that, despite such legal framework, women workers perform poorly paid jobs, face severe labor rights violations and often do not enjoy their legal entitlements. Maternity leave is rarely provided; overtime is compulsory and excessively long working days in addition to the burden of domestic responsibilities. Over the years, hazardous working conditions have resulted in the deaths of many workers through factory fires and building collapses. Right to receive fair minimum wage is one of the human rights for all working men and women at workplaces. In reality, majority of women workers are deprived from this right for various reasons.

Labour Laws, which supposed to protect the fundamental rights of women workers, including the right to maternity leave and Bangladesh has ratified the UN Convention on the limitation of All Forms of Discrimination Against Women (CEDAW), as well as ILO Convention 111 on Discrimination in Employment and Occupation, but the reality is that, despite such legislation, women workers' rights are ignored. Women workers perform poorly paid jobs, face severe labour rights violations and do not enjoy their legal entitlements. Statutory maternity rights are rarely provided, overtime is compulsory and excessively long working days add to the burden of domestic responsibilities, denying women any rest periods or time with their children.

### **Wage Discrimination**

Wage is not sufficient for female workers to meet their daily basic need. Factory owner does not follow the government prescription regarding the salary. Human Rights watch report has sketched that most of the worker like operator, folder sewing technician, Helper, most of categorized workers basic salary is 5000 tk to 6000 tk. After doing the overtime work they get 8500tk-9000tk per months. Mentionable that some interviewer said they get overtime 32 to 42 taka per hour based on the skill of the worker. Just have a look for the salary structure of the government.

This study had 120 interviews with the female workers (operator, folder, and helper) of the sample garments, among them 84 wome which is 70 percent of the total interviewee said that the salary given by the different companies is not sufficient for their family maintenance. The factory does not maintain standard salary structured by the government. (Table-1). The wage discrimination among the different categories like supervisor, Human resource officer and Quality controller 10 gets high salary in comparison with the lower level workers. Supervisor gets 18000 tk, HR officer 16000tk, and Quality controller 15000tk. But they said, they are not satisfied by the existing salary of the company, if they get higher salary, they will switch over another company.

Different company provides different types of salary structure as they need but that is lower than the government structured salary (Shown in Table-1). The main problem is that the salary is given in the middle of the month that is very hamper for the worker to paid house

rent and food, education expenses for their children. some factories give salary in the third week of the month (66.66%) worker said wage related discrimination in relation to giving salary to the worker. Workers in almost all of the factories complained that managers did not pay wages or benefits in full or on time. This included pay for overtime, maternity benefits, the Eid holiday bonus, and compensation for working during vacations.

**Table 1: Satisfaction on the wage provided by the different garments factories.**

Satisfied on the wage provided by company	Frequency	Percentage
Agree	38	31.70
Partial Agree	54	45
Disagree	23	19.20
Strongly Disagree	5	4.20
Total	120	100

**Sexual Harassment**

Sexual harassment is an important source of mental stress for female workers. The incidence of sexual harassment ranges from insults directed at a person's gender, suggestive comments, or language, and demeaning remarks to unwelcome touching and grabbing and other physical assaults. These types of sexual harassment were under reported since female workers were very shy to disclose any information on this subject. The survey showed that only 2 percent of female workers encountered with sexual harassment in the factory. But case studies disclose the fact that sexual harassment is largely prevalent among the young garment workers. However, sexual harassment is not limited in the workplace. It extends to home too. The police, who could have protected them from this harassment, were themselves involved in harassing the women garment workers (Begum *et al.*, 2010).

The female worker could not want to say regarding sexual related question due to their personal problem, such as threat of quit from

the job. Social problem also cause of another problem not to raise voice against the sexual harassment in the garments factory. If we want to analysis the data of the table we find that 25 female workers out of 120 workers of different garments factory of the Chittagong metropolitan city. They have said their personal anonymity they are being tortured in the factory that is 20.83 percent of total population. Among them 16.66 percent women worker get sexually intimate proposal from the higher management and sexual harassment form fellow male worker is 11.66 percent. They do not dare to do such incident for the causing of losing their job. Huge number of the female worker couldn't relax to say in this regard that is 50.83 percent of the total population ( Table 2). They shy to say something in this regard. Though sexual harassment is very prevalent in the garments factory, they are used to tolerate this situation for their safety. They are keeping silent in this matter due to another mental harassment in and out of the factory. Most of female worker unmarried in the factory within the age limit 20 -30 years. So they keep mum in this matter due create less possibility to marriage in future. In the case of BNWLA vs Bangladesh, High Court Division (HCD) declared, 'sexual harassment' is a crime which includes verbal abuse, sexual overtures, showing obscene pictures and other unwelcome physical, verbal conduct of sexual nature, insinuating comments, making love.

**Table 2. Sexual harassment in the factory by senior management and fellow male worker.**

Type of Sexual Harassment	Number of respondents	Percentage
Sexual harassment in the factory	25	20.83
Sexual intimate proposal from the higher Management	20	16.66
Sexual harassment form the fellow male workers	14	11.66
No comment	61	50.83
Total	120	100

The sexual harassment is a punishable offence if any willful acts like words, gestures, assault etc. outrage or insult the 'modesty of any women (Huda et al., 2003). 'Insulting the modesty' of any women is clearly vague as the meaning of the word 'modesty' can be interpreted in multifarious ways. Does the modesty of a female worker get insulted if repeated sexual jokes are made in her presence by her male colleagues or does it require actual physical assault? It is not made clear under which circumstances her modesty is insulted and she is able to get legal recourse. When it comes to physical assault or force what kind of physical assault is to outrage a woman is not clear?

The Government of Bangladesh attempted to bring it under the purview of law through the enactment of the Prevention of Women and Children Repression Act (PWCRA), 2000 and also amended it in 2003. Section 10 of this Act states that, 'If any person in order to satisfy his sexual urges illegally touches any part of a woman's or child's body with any part of his body or object or outrage the modesty of any woman would be accused of sexual oppression and the act would be punishable with rigorous imprisonment extending for ten but not less than three years, with additional fine.' (Mia *et al.* 1990)

### **Absence and Weekly Holiday**

In this survey it is revealed that almost 100 percent female works enjoy their weekly holiday the frequency of which is 119 out of 120. It is only Friday of the week. But Bangladesh government has declared the two days holiday (Friday & Saturday). Most of the female worker said if the shipment is high then they pressure to do the extra work in the factory for daily overtime basis but the overtime per hour. Most of the worker said they enter into the factory 7.00 am to 5.00 pm is regular working hour. Now BGMEA promulgate the rules no worker should not be stay at work in the factory over 6.30 pm. So any worker can do overtime 2 hours only. I find in the survey there is no unique allowance for the overtime among the garments factories. They are giving to the worker 20tk to 30 tk per day basis overtime. The interviewee said they couldn't accustom to fit the market price of house rent, food and other daily basic need.

It is found in the survey that 12.50 percent worker sale their holiday into daily basis allowance (15 respondent out of 120). According to the Bangladesh Labour Law- 2006, worker will enjoy weekly holiday. But 74 respondents said they get the leave according to the labour Low that is 61.7 percent of the total population. But the survey also revealed that earned leave is one day add to leave bank of the worker one day out of eleven day. Most of the female worker don't have any idea regarding earn leave. Most of garment factory declared that if any worker works at a stress one year they gift a necklace of gold. So they are working with taking any leave for the incremental activates of the factories. In the Human Resource department can't add their leave properly not for giving them extra money to the worker. Another finding is that if they do any bargaining in this regard they would have possibility to quit the job. It is interesting to see that even they don't get any appointment letter for this consequence they out form the factory by taking only putting signature in blank paper by the authority. They said us not mentioning their name to the authority.

**Table 3. Enjoyment of different pattern of holiday and late night work in the factories**

Types of leave enjoyment	Frequency	Percentage
Enjoy holiday	71	59.16
Work in holiday	17	14.16
Sale holiday in busy shipment	15	12.50
Work in late night work	17	14.16
<b>Total</b>	<b>120</b>	<b>100</b>

The Table shows that most of the female workers 59.16 percent try to stay at home due to getting low salary in the factory form maintaining their family life. Only 14.16 percent are wanted to work in the holiday. When busy shipment in the factory, research revealed 12.50 percent of the female worker do working overtime basis for money. The major problem seen in the late night working, the respondents said if they work at late night family life has been hampered suppose said quit the job, such job no need, most of the case husband beaten their wife for late night work in the garments factory.

For an example, very early in the morning, a female worker's husband beating her under the factory for late night overtime working. (Table 3) shown only 14.16 percent women work late night over time by pressure by authority. So it is revealed in the research, Most of the female worker those who are unmarried reluctant to work at late night in the factory.

### ***Discussion***

The garment workers socio- economic conditions are very low and rights in the factory are not ensured. They are working for 7.00 am to 5.00 pm at a stretch but there are monotonous job with very poor salary. This study very closely interviewed 120 women of the different garments factory of Chittagong city at their home and factory. At the home they live in dirty and dingy environment because those low income worker can't afford basic need of their life and capable to give their children a healthy and secure life.

It is very interesting that they don't bother about their rights in the readymade garments sector. Even then they always feel insecurity in the job, because job threat is very prevalent there, no appointment letter given at the time of appointment. Some female worker said to me that while interview. Some of the worker threat to put signature in the blank page to leave the job forms the factory. Only it is possible their education level is very low, most of the female worker hard to complete primary level education. It is good sign to watch that some of the women working in the garment factories in senior management by secondary level education.

The survey found and learned from the research that different types of harassment exist in the garments factory. Sexual harassment is very common and mental harassment also occurred in the garments factory. They shared in the interview verbal abuse is very common but in it interesting that they don't mind in these types of insulting incidents. The study also found that physical abuse including sexually intimate relation, but they can't disclose it to the public or any researcher due to social insecurity and possibility to quit from the job. Most of unmarried female garment workers to feel shy to disclose the sexually intimate experience due to less possibility to marriage with good groom in future.

They are not bother other things of the life, they fetch up their life with the boundary of 5500 tk to 7000tk wage rang. This study revealed that it is the vicious cycle, the garment workers children will be garments workers- it seems disgraceful.

### **Key Recommendations**

- a) The Bangladesh government should carry out effective and impartial investigations into all workers' allegations of mistreatment, including beatings, threats, and other abuses, and prosecutes those responsible.
- b) The Bangladesh government should revise the labor law to ensure it is in line with international labor standards. Amendments made to date fall short of International Labour Organization's conventions ratified by Bangladesh, including Convention No.87 on freedom of association and Convention No. 98 on the right to organize and bargain collectively.
- c) Companies sourcing from Bangladesh factories should institute regular factory inspections to ensure that factories comply with companies' codes of conduct and the Bangladesh Labor Law.
- f) Ensure that workers' rights to form unions and collectively bargain are protected.
- i) Encourage members to drop pending unwarranted criminal charges against labor activists and workers who have sought to organize unions.
- j) Collaborate with the International Labor Organization to educate factory owners in the benefits of having independent trade unions and improved labor relations.

### **Conclusion**

Bangladesh is very densely populated country. They work in the factory very early in the morning to 8 pm at night with numerable low salary for month long working. After that they can't treated as human being. The scenario is not fruitful for the company owner and the workers. The major concerning issue is to give them late salary. No company maintains the rule of labour law and BGMEA regulation. It is clearly mention the section of labour law salary will be given to the every worker with in first week or 8 days of the

month. So they get their salary in middle week or last week. It create great havoc of their daily life such as paying house rent and payment of debt in the grocery shop to fulfill their need. In this sector government should intervene to create congenial environment in the readymade garment sector.

The employers must be followed the particular wage related section of Bangladesh Labour Law. Government should intervene in this sector and penalize the respective company. The employers must use all of the facilities provided by the government for the betterment of the workers. However; the employers can implement some measures themselves without any co-operation from the government. The majority of women workers have no option but to send their children to stay with their parents in rural areas, depriving them of the right to breastfeed and of the enjoyment of bringing up their own children. Women workers entitled to give maternity leave with payment in the Bangladesh Labour Law-2006, but most of the female workers don't have idea of legal rights regarding maternity provision of the existing law. Most of the cases employers and Doctor's certificates needed in order to claim those rights. The majority end up being fired by their employers when they become pregnant, or sent on leave without payment. As a result, many women are forced to work during the final stages of pregnancy in order to make ends meet, jeopardizing the health of both mother and child. In this sector Ministry of Labour and Employment oversee the matter as if the female worker gets friendly environment to enhance their production. Women workers face various crises in the RMG sector.

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## **Ensuring Inclusion of Persons with Disabilities through Financial Inclusion: An Experimental Study on Sitakund Upazila**

Mohammed Arifur Rahman\*

### **Abstract**

The purpose of the study is to investigate how the financial inclusion program of YPSA is facilitating inclusion of Persons with Disabilities (PwDs), after all mainstream on development. The study is based on primary data sources through Key Informant Interviews (KIIs), Case Study, Observation and Questionnaire survey methods. A total 250 households from Persons with Disabilities were purposively sampled for interviewing at the field level. Meaningful data were interpreted by IBM SPSS Statistics software was used for descriptive statistics and Microsoft Excel 2013 was also used to prepare graphical presentation. The study reveals that total seven types of disabilities have been identified here, among them 66% are physical disability followed by the visually impaired. About 60% PwDs did not received any government allowance and unluckily 78% PwDs did not have Government certification as a PwDs. Besides, significant portions were aside from the social safety net programs of government. It is shocking that 25.2% PwDs are the main earning members in their family. In this circumstances, nearly 78.8% PwDs would prefer to have financial assistance through loan disbursement to start their own business and other income generating activities. However, nearly 30% PwDs were received loan from government and non-government organizations. The aforementioned program for PwDs has different moods and criterion which made accessible to the targeted groups. Aftermath, the PwDs are being benefited and improving their life and livelihood which is well-being for his family and contributing community development process.

So, the study suggested that Government and Non-government agencies should be provided assistances in different forms as well as provide soft loan with flexible terms and conditions for PwDs income generating. These efforts will be accelerated the meaningful inclusion of PwDs.

**Keywords:** Inclusion, Person with Disabilities, Financial Inclusion, Sitakund

## **Background and Statement of the Study**

Globally disability has gained recognition as a development issue. Person with Disability (PwDs) is a person having physical, intellectual, sensory or mental impairment which substantially limits one or more of the major life activities of that person (The Persons with Disabilities Act, 2006). Approximately one in seven of the world's population over one billion people are Persons with Disabilities. Some estimates suggested that 80% of persons with disabilities live in developing countries (Braithwaite and Mont, 2008). In 2008, Bangladesh signed and ratified the UN convention on the Rights of Persons with Disabilities (CRPD) as one of the significant convention followed by the adoption of 'Rights and Protection of Persons with Disabilities Act 2013'. The Act is meant to guarantee educational, physical and mental improvement of persons with disabilities and to support their participation in social and state activities by removing all sorts of discrimination Risk and humanitarian emergency issues (Hyder, 2015). However, inclusive development is a pro-poor approach that equally values and incorporates the contributions of all stakeholders - including marginalized groups - in addressing development issues. Basically, promotes the capacities and equal opportunities and rights of all people, regardless of their social condition, gender, age, physical or mental condition, ethnicity, religion, sexual orientation, etc. in sustainable harmony with the environment" (Handicap International, 2006). In its situation, YPSA has started the 'Inclusion of PwDs on Inclusive Finance' approach to incorporate the potentiality of PwDs in main stream of development. This approach is ensure the inclusion of PwDs in sustainable development. This approach was supported by Palli Karma Sahayak Foundation (PKSF) since 2015 at Sitakund

Upazila of Chittagong district in Bangladesh. This research paper has mentined how inclusive financial program is being inclusion of PwDs in development.

### **Rationality and Objectives of the Study**

Bangladesh is classified among the Next Eleven emerging market middle income economies and a Frontier market <sup>2</sup>. The GDP growth rate reached 7.1 percent, the highest rate in the past decade<sup>3</sup>. Still the growth is not inclusive with the economic condition of the underprivileged groups. One of the typical reasons for poverty is being financially excluded. Though there are about 34% of people who are enjoying all kinds of services from savings to net banking, but still around 66 % of people lack access to even basic financial services like deposit and savings accounts, payment services, loans, and insurance <sup>4</sup>. The scenario is more vulnerable in hard to reach area as like Sitakund Upazila. Though Bangladesh Bank, the central bank of Bangladesh has maintained a strong focus on financial inclusion. In 7th Five Year Plan and the Strategic Plan (2015-2019) indicate the importance of financial inclusion as a primary goal for the central bank. The specialty of inclusive financing is that financial services are at the doorsteps of households without insisting on any minimum balance or deposits. However, a substantial section of the rural people, mainly the weaker, poor, PWDs and below poverty line groups continue to remain excluded from even the most basic opportunities and services provided by the financial sector. Now, there is a need to bring people under financial inclusive program. In this context, the study is to investigate the ensuring inclusion of Persons with Disabilities through financial inclusion. The study also focused on the types of PwDs and available financial services for PwDs. In addition, how YPSA's financial services is being improving the socioeconomic and political status of PwDs in Sitakund Upazila, Chittagram.

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<sup>2</sup>. A frontier market is a type of developing country which is more developed than the least developing countries, but too small to be generally considered an emerging market.

<sup>3</sup>. <http://www.worldbank.org/en/publication/global-economic-prospects> (Viewed July 2019)

<sup>4</sup>. InterMedia Bangladesh FII Tracker survey Wave 4 (N=6,000, 15+), August-September 2001

Methods of the Study

The study was conducted in the Sitakund Upazila. Number of PwDs list was collected from the department of Social Welfare office in Sitakund, 2017 there are total 4,506 persons with disabilities in Sitakund, which is higher than the other Upazila of Bangladesh. Basically, the study was based on the quantitative somewhat qualitative method. Mostly data were collected from primary sources. Primary data were collected through Key Informant Interview (KII), Case Study, Participant Observation and Questionnaire survey. Total 250 households were selected for questionnaire survey at the field level. Secondary data were fairly used for identification of problem, checking authenticity of study as well as comparing the findings with this study. In conducting the survey, purposive sampling method was followed. Relevant data were edited, classified and tabulated on the basis of sequential manner. Quantitative data were analyzed through various types of statistical tools and techniques especially used the Statistical Package for the Social Science (SPSS, version: 16).

Findings and Discussion

Types of Persons with Disability (PwDs)

The government of Bangladesh adopted the Act 'Rights & Protection of Persons with Disabilities Act, 2013 (MoSWR, 2013). This Act mentioned that twelve types of disabilities are available among the people in Bangladesh. But the study detected seven types of disabilities in Sitakund Upazila (figure 1).

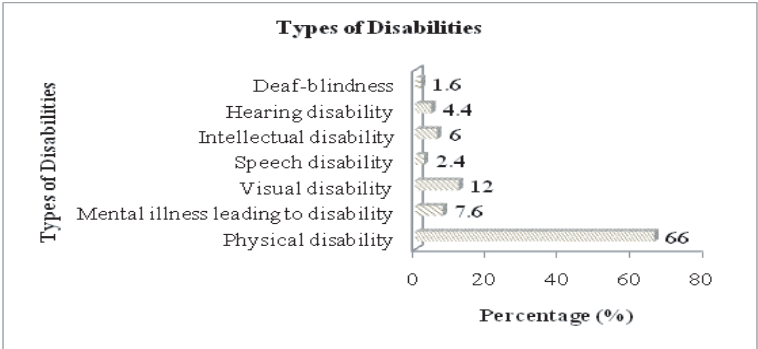
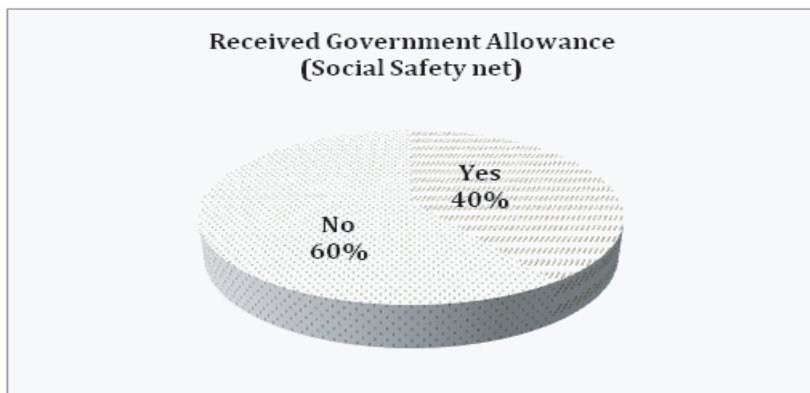


Figure 1: Types of Disabilities

Among seven categories 66% had physical disability while only 1.6% respondents were deaf-blind. Nearly 7.6% respondents had disability occurred from mental illness, 12% respondents were visually impaired, 6% respondents had intellectual disability and 2.4% had speech disability.

### **Received Government Allowance (Social Safety Net)**

The government of Bangladesh has taken more than 145 social safety net programs for its citizens (MoSW, 2015). Maximum PwDs are not concerned or aware about these programs. Because lack of dissemination of legal authority, lack of awareness and illiteracy of PwDs is the prime causes to the untouched of rural or marginal PwDs in our country. In this point of view, PwDs are so deprived of their civilian rights everywhere.

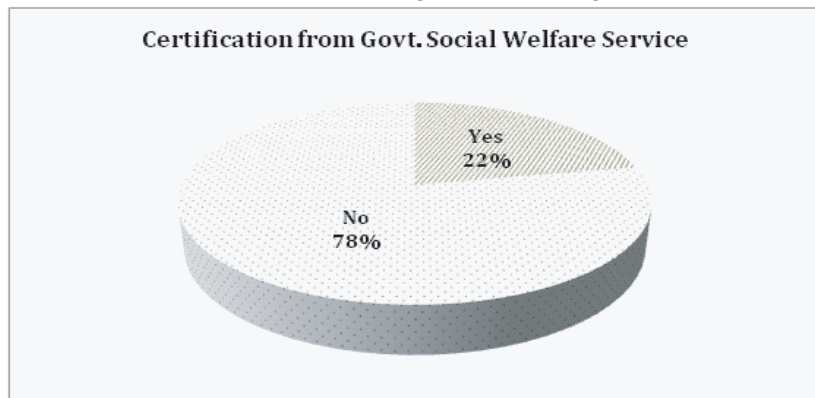


**Figure 2:** Received Government Allowance (Social Safety net)

About 40% PwDs received the government allowance, but 60% of the PwDs did not receive any government allowance from the governmental bodies. In this area, most of the PwDs were unaware about the social safety net programs by the government. Moreover, due to the physical disability and mobility problem they could not receive a government allowance. Government authority should be more concern to find out the PwDs and to give them certification with the justification of their disabilities. This certification would help them to get priority in every sector, such as relief or allowance, education, job and so on.

### Certification from Govt. Social Welfare Service

Certification from govt. social welfare service is totally disappointed scenario having a certificate from Government agencies, by which PwDs can claim the services from government (figure 4).



**Figure 3:** Certification from Govt. Social Welfare Service.

Only 22% PwDs getting certification from govt. social welfare service. Because most of the PwDs were unaware about the initiatives taken by govt. social welfare service for their betterment, so that they did not get certifications from social welfare service in this area.

### Earning status of PwDs in their family

**Table 1:** Earning Status Of Pwds In Their Family

	Frequency	Percent
Main Earning Member	63	25.2
General Member	55	22.0
No Involvement	132	52.8
<b>Total</b>	<b>250</b>	<b>100.0</b>

According to the household survey, it was found that 25% PwDs were responsible or main earning members in their family (table 1). Although nearly 52% had no economic involvement in the family due to their physical condition, movement problem, illiteracy, student, housewife and so on.

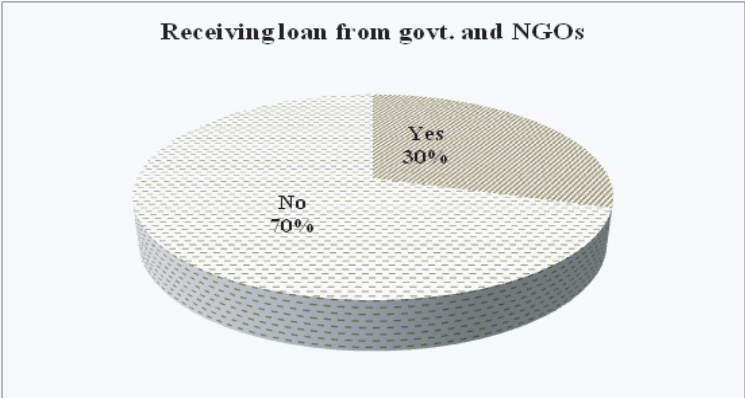
**Types of Assistance Needed for Better Life**

In survey period, PwDs talked about the assistance they needed for their better life. So they need financial assistance to be independent. Almost 78.8% PwDs told they would prefer to have financial assistance through loan disbursement to start their own business and 12.8% PwDs preferred monthly assistance such as disability allowance, relief, VGF card, old aged allowance and widow allowance on a regular basis (table 2).

**Table 2:** Types of Assistance Needed For Better Life

Types of assistance	Frequency	Percent
Monthly Assistance	32	12.8
Not Applicable	21	8.4
Financial Assistance through Loan Disbursement	197	78.8
Total	250	100.0

***Available financial services for PwDs in Sitakunda Upazila***  
**Received Loan from Govt. and NGOs by PwDs**



**Figure 4:** Received loan from Govt. and NGOs

Nearly 30% PwDs are received loan from Govt. and NGOs authorities while 70.4% didn't received any loan. However, maximum PwDs are unaware about the activities or initiatives taken for the improvement of their life and livelihood.

### **YPSA's financial products / services for PwDs**

The study revealed that YPSA's has provided financial support to PwDs in following sectors as;

- a. Agricultural sector;** this sector includes poultry, cattle rearing and fattening, goat rearing, vegetable gardening and paddy farming etc.
- b. Non-agriculture sector;** this sector comprises sewing, bamboo and cane products, cottage or small or petty business, grocery business and so on.
- c. Technical sector;** this sector involves a mobile servicing, packaging, make paper bag, computer training, parlor business, metallic workshop business and so on.

However, before offering on the above sectors to PwDs, YPSA has been carefully gathered the perception of PwDs through formal and non-formal ways, such as need assessment survey, day long workshop and opening sharing workshop and so on.

### **Moods and criterion for YPSA financial inclusion services**

The study found that there are specific loan package for PwDs with minimum service charge, namely '*Inclusive Finance Product*'. There are some criterion for getting these loan which are more flexible for PwDs on the basis of situation and vulnerability.

1. All PwDs be a member of DPO and Savings group.
2. All loan money are fully covered by Risk fund (like as Insurance).
3. If the borrower or family headed of borrower is death than the borrower or his family immediately get support five thousand BDT for funeral work.
4. Every PwDs have to be deposited at least five BDT or more in a week as savings.
5. Yearly profit rate is 6% on average balance money. It is not permissible to withdraw deposited money within one year (flexible for PwDs).
6. If any member wants to withdraw the saving than he/she might be take approval from a weekly meeting of DPO/Savings group (it is flexible for PwDs).

### **Why this program is special and inclusive for the PWDs?**

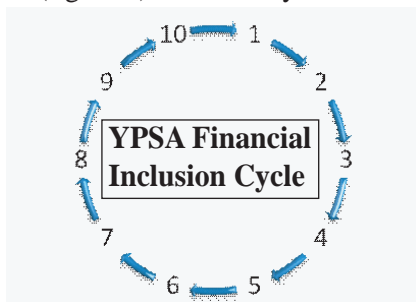
YPSA has followed some privileges and moods only for PwDs such as

1. YPSA has provided Income Generating Activity (IGA) with vocational training as per their condition and need.
2. YPSA provides leadership, life skilled, entrepreneurship, financial knowledge and marketing training to all PwDs before and after received the loan.
3. YPSA has provided special training / orientation to PwDs for accessible communication.
4. YPSA has provided assistive devices like, white canes, cognitive aids, wheel chair and walkers etc.
5. Owing to their physical disabilities, the weekly sitting is not mandatory for PwDs. Even though, YPSA staffs is facilities to collect monthly installment and disbursement of loan from door to door service.
6. They have no enrollment and loan fee for being a member or borrower of DPO or saving group.
7. YPSA has made special type of saving/ credit book for PwDs which is more accessible for them and it is free for PwDs.
8. All training materials/ contents are accessible to PwDs because these contents are forms of digital contents. Every PwDs can use this digital contents through their feature and smart phone.
9. PwDs has received medical and therapeutic facilities from YPSA health and physio therapy center in a minimum cost or free.
10. Along with loan, the potential PwDs are received grant support 5 to 10 thousand BDT as a seed money for being a small entrepreneur.
11. YPSA, also provide some awareness sessions on rights and dignity and facilitating of enrollment at census and survey, collects PWDs certificate and different safety net supports from government.

These privileges are made this program exceptional and accessible to PwDs

## **Stages of the inclusion of Persons with Disabilities (PwDs) with Inclusive Finance by YPSA**

YPSA is the first and foremost organization who has innovated and follows a rigorous cycle to the inclusion of PwDs with financial inclusion program (figure 5). These ways are as follows,



**Figure 5: Steps of the inclusion of Persons with Disabilities (PwDs) with Inclusive Finance**

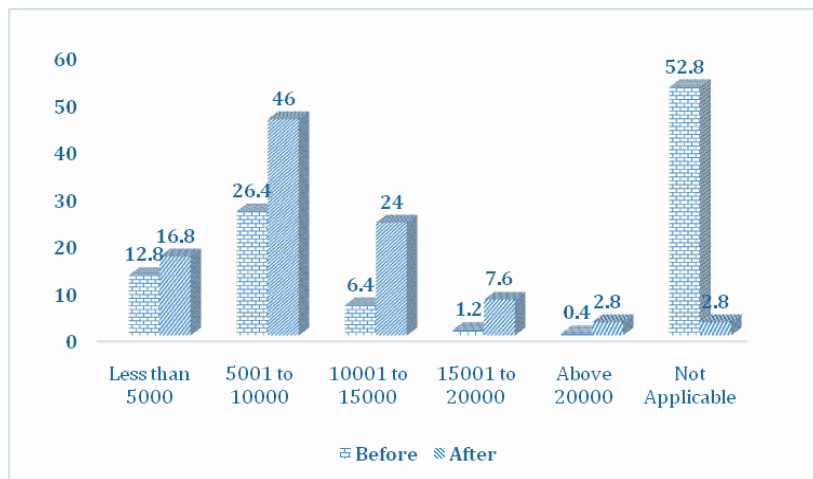
**The steps of the inclusion of PwDs on Inclusive Finance, such as**

1. Selection of PwDs.
2. Motivation.
3. Inclusion in group of existing YPSA group member on DPO (provide support and rights).
4. Own saving /little saving.
5. Training (Leadership and Capacity Building training).
6. Seed money (provide for PwDs those who are financially poor and potential).
7. Inclusion with main stream (those who are spontaneously agreeing to involve this program)
8. On side supervision.
9. Marketing support and linkage.
10. Refinancing.

## **Comparison status of socioeconomic condition before and after financial inclusion of PwDs**

During the survey, total 250 PwDs are opined the situation of their socioeconomic status before and after financial inclusion. They are argued that after inclusion on inclusive finance program, the family

monthly income are increased as well as improved their life and livelihood (figure 6).



**Figure 6:** Comparison status of socioeconomic condition before and after financial inclusion of PwDs

They also expressed that before inclusion with inclusive finance program, PwDs were unskilled, unemployed, unaware, maximum PwDs are engaged begging and depend on other family members. But after inclusion with inclusive finance program, they are engaging eleven types of Income Generating Activities (IGAs) and improving their life styles. The activities are;

1. Cattle rearing and fattening.
2. Agriculture and homestead gardening.
3. Poultry farm.
4. Grocery and small business.
5. Making and buying bazar beg.
6. Fish farming.
7. Cottage business.
8. Sewing.
9. Making and buying bamboo/cane made fancy goods.
10. Tea stall.
11. Pharmacy and so on.

Besides, they are included as a member of local arbitration body and they are participating in local planning body in Union

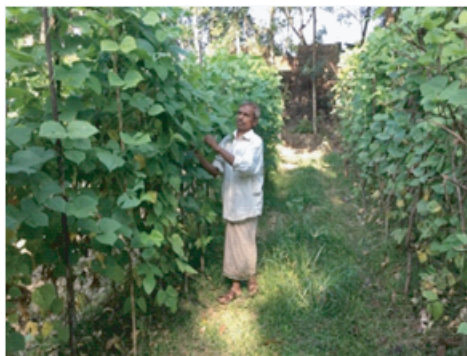
Parishad office. Nowadays, they easily enjoy sociocultural program where ensured their rights and dignity. At that project period of time, it is noticed that PwDs are successfully gear up on economically, socially, culturally and politically as well as they considered as an active member of local influential bodies.

*"In the year 2017, me and my husband (Mr. Rafique) as a physical disability started manufacturing and marketing of bamboo and cane products by getting help of YPSA inclusive finance program. Through this business we earn 8 to 10 thousand BDT per month. This source of money is working as a powerful force on changing our socio-economic conditions. In the future, we are thinking of further expanding our business with more financial support and capacities development training from YPSA inclusive financial Program".*

*"Mr. Rafique on behalf of Jahanara Begum, Speech Disability, Sitakund Upazila, Chittogram.*

For justify the how the YPSA financial program is improving the lifestyle of PwDs and being included main stream of development. Here this research has presented a case study of Mr. Abul Kalam.

*Abul Kalam, living in Baraiyadha union of Sitakunda upazila of Chittagong, has been physically handicapped since his early days. He grew up in ignorance and careless. Currently, he is 58 years old and family members are 06. Abul Kalam does not have the*



*courage to do any work outside if he has the desire. Even if he has a desire to do business, no one is willing to cooperate with him. Certainly, Abul Kalam's life has positive changed in 2015. That time he became a member of the disabled organization which was run by YPSA. Later on he became aware of the rights of people with*



*disabilities and informed on income generating activities of Persons with Disabilities (PWDs) through YPSA. That time Abul Kalam was involved in the financial inclusion program of YPSA. He received training on income-generating*

*activities (vegetable cultivation, cattle fattening) from financial inclusion program of YPSA. After the training, he took a loan of 20,000 BDT on easy terms from YPSA. With that money, he started cultivating vegetables and cattle's rearing. He was more beneficial to cultivate vegetables. Aftermath he is repaying the loan and borrowing some more money from YPSA. With the extra loan money, he started seasonal vegetables (bean) cultivation. He benefited a lot in the cultivation of this seasonal vegetable and he bought a cultivated land. Now his cows have given a child cattle. He is now meeting the self-demand and selling extra milk to market and earning money. In a nutshell, YPSA's financial inclusion program has increased the living standard of Abul Kalam. And his sons are studying well and the family is doing well too.*

## Conclusion

Disability is a vital issue with respect to human rights because a Person with Disabilities is often deprived of the benefits of national development. While basic rights of disabled people are well established in the most of the welfare countries. In Bangladesh, PwDs' social status is inaccessible due to their economic condition because there is limited employment opportunity for them and they cannot contribute to their family as well as national development. Consequently, they are considered as a burden in their family and society. Although they want to take part in the development of his/her family and the society. So they desire to get training, assistance (finance support) and another opportunity to become skilled and efficient for particular things. As well as the inclusion of PwDs in mainstream of development will gear up the process of

being the middle income countries and success of government vision 2021. Finally, it will feed the SDGs aim as 'living no one behind'.

## Recommendations

Persons with Disabilities are not burden but they are resource because they are our kinship, neighbors or relatives. Cordial or willing assistance, friendly cooperation, mental supports have been accelerated the accessible life and livelihood of PwDs at everywhere in Bangladesh. The study has been provided following policy guidelines to ensure the sustainable livelihood and inclusive development for Persons with Disabilities.

- 1 Diffusion the program, whereas Sitakund program area is very little geographical location. So, Government and related agencies should wider the Inclusive finance program through their financial operation.
- 1 To adopt accessible education, government should provide PwDs friendly education related materials and techniques lead to the educated with empowerment for all.
- 1 To ensure legal assistances, Govt. and NGOs representatives should be aware of PwDs through advocacy meeting, personal contract, broadcasting or publishing booklets, leaflet etc. about their legal rights and also to register the names of PwDs in Upazila social welfare office and others safety net programs for providing help for the actual and needy PwDs.
- 1 Government should consider the case of PwDs while distributing VGF card, VGD Card and Khas land because most of PwDs are landless (<0.50 acre), according to baseline study to 2017 and should offer different grants those are provided by social elite persons, government related agencies and international aids to PwDs.
- 1 Government and NGOs representative should provide need-based loan for PwDs to generate their income activities, particularly cattle rearing, poultry business, tailoring or dressmaking, agriculture and small business (settlement cum shop) purposes.

## **Acknowledgement**

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## **Ward Shabha: A New Dimension for Boosting up Womens' Empowerment in Grass Root Levels**

Shosunth Chandra Sarker\*

### **Abstract**

Women's absolute segregation from decision making process in any sphere of the society or the state has been a globally practised phenomenon and the picture of womens' detachment from exercising power has more or less been same everywhere around the world in general and the developing or the poorer countries in particular. Since the very formation of UNO, special importance was put to include women in all the development activities specially in the grass root levels and the actors of globalization and democracy, like World Bank (WB) and International Monetary Fund (IMF), set it almost as the precondition to ensure women's participation in the development projects in the local levels for gaining financial benefits, and loan, and as such the countries worldwide, the developing countries like Bangladesh in particular keep a special look to strengthen the local government structure through ensuring active participation of women undertaking various pragmatic initiatives and 'Ward Shabha' (WS) has been the latest edition in the list that has been introduced through the 'Local Government (Union Parishad) Act, 2009, aiming to expand the local administration and development activities accessible towards the extremely grassroot mass and more specially to the marginalized people who have always been unfortunately deprived of getting access into the distribution and allocation of state resources. The key focus behind the introduction of 'Ward Shabha' thus is therefore to boost up the spirit of peoples' empowerment through decentralization and 'Ward Shabha' thus is expected to contribute significantly to reach the government services as near as possible to the doors of the people living in the remote areas keeping women's' better involvement in the process in mind.

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\* Assistant Professor, Rajdhani Mohila College, Dhaka, Bangladesh.

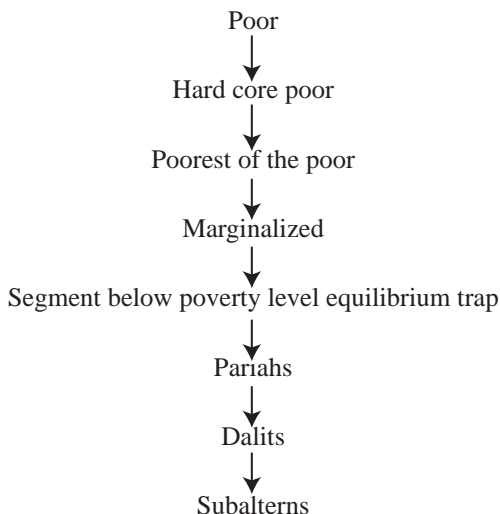
## Background of the Study

In the recent past, it has widely been emphasized and also accepted in many cases that the matter which can make development faster, accountable, transparent and spread uniformly at the way through the country is none other than local governance (Khatun, 2013). The key principle is that men should be given the opportunity to think for himself, work for himself and even make mistakes for himself and it might be thought that this opportunity helps him to build self-awareness to see his own problems and to find his own ways and means to solve there, at the same time it helps in an analysis of the society and situation in which he lives and to define his own role in relation to them, and it is to be aimed to help individuals and groups to achieve these objectives (Jahangir, 2013). According to UN declaration, "the term local self-government refers to a political sub-division of a nation or a state which is constituted by law and which has substantial control of local affairs including the power to impose taxes or exact labour for prescribed purposes the governing body of such an entity is elected of otherwise locally selected" (Siddiqui, ed. 1995). Decentralization is thus a shift from national to local, centre to periphery, international to indigenous, global to glocal (Choudhury, 2017). Decentralization makes functional relation of centre with periphery or local tier as intergovernmental partnership coequals, (Rhodes, 1981). It is also said that these two are interdependent government organizations (Rhodes, 1986). And the proposals mentioned in the 'Ward Shabha' through strengthening the process of decentralization have, nevertheless widened development process including for both men and women.

A 'Ward Shabha' could be an ideal avenue of ensuring good governance in the lowest level of the public administration, there is a rising concern about the effectiveness of the platform as evident in numbers of recent studies (Blair, 2012, Democracy Watch, 2014). The main duty of the 'Ward Shabha' is to review all the development activities in the ward and it is possible to inform people about the actual scenario including the government allocation to the UPs through 'Ward Shabha' (Ahmed *et al.*, 2014).

The main focus of 'Ward Shabha' thus is to make the local people connected with the initiatives undertaken for them who are used to remain into darkness about the facilities they legally possess from the society and the government and the relevancy of 'Ward Shabha' is thus more significant

from women's point of view as they are always the most ignorantly marginalized class of the society. And thus the shed of light through 'Ward Shabha' is to concentrate on them who are:



(Source: Hasanuzzaman Choudhury, 2017)

### **Evolution of Local Government and Women's Poor Representation**

Local government is the oldest form of government and it has been practised either in urban or rural areas in one form or in other in the sub-continental regions. In the modern time, however, local government began to flourish during the British regime with the promulgation of number of acts began with the "Village Chowkidari Act, 1870" (Elliot, 1966). Notwithstanding that, Lord Ripon's resolution declared on 18 May, 1882 (Rahman, 2000). laid the foundation of the local government in the rural areas in British India and based on Ripon's Resolution "The Bengal Self Local Act" was passed in 1885 (Elliot, 1966), and the resolution had three tiers-District Board, local Board and Union Committee. Since then Union body has an active functioning tier of local government throughout the Indian subcontinent including Bangladesh.

The history of UP is through much older but it always lacks the active representation of women in the administrative body. To uplift the condition the government of Bangladesh has introduced several reforms in

government mainly local government system to foster peoples' participation to ensure good governance (Sarker 2006). After independence various initiatives have been undertaken to promote Local Governance in Bangladesh as mentioned in the constitutions of Bangladesh regarding women's participation in Local Government. As article 28(2) of the constitution states that women shall have equal rights with men in all spheres of the State and of public life. To bring into reality the constitutional requirements, several local government laws were passed. Including among Union Parishad (Ordinance No. LI of 1983) provided for three women member in the Parishad. The Local Government (Union Parishad) (Amendment) Act, 1993 has reserve three seats for women members. But the overall performance of women's participation was extremely marginal. The following two figures will reveal it.

**Table 1: Scenario of women representation in Union Parishad**

Election Year	Number of UP	Women Candidate	Elected women Chairman
1973	4352	-	1
1977	4352	-	4
1984	4400	-	4+2=6
1988	4401	79	1(1%) About
1992 1993	4450	115	13+11=24

**Source: Election Commission Report 2003**

And the situation demanded more pragmatic steps to strengthen the Local Government with more participatory for women and Local Government (UP) Act 1997 was a significant inclusion for boosting up women's participation in UP where direct elections for women was included and advancement to some extent could be detected as revealed in table 2 as followed.

**Table 2: Scenario of women's participation in general and reserved seats in 1997, and 2003 in UP.**

Post	1997 Election			2003 Election		
	Candidate	Winner	Winning Percentage	Candidate	Winner	Winning Percentage
General Member	456	110	24.12	617	85	13.78
Reserved seats	44969	12828	28.5	39419	12669	32.1

**Source: Election Commission Report 2003**

And with this continuous efforts to strengthen the Local Government, the provision of WS has been introduced at the Union Parishad Level through the Local Government (Union Parishad) Act 2009, where special emphasis was given to ensure greater participation of women in the grass root levels. Prepared based both on primary (direct observation) and secondary data (books, journals, articles, websites) this article is divided into three sections. The first section includes the objectives of Ward Shabha, as mentioned in Local Government (UP) Act, 2009, and the second section is the deliberation of relatively an ideal WS where women have considerable access to participate. And the third section of the paper will make an effort to sum up about the effectiveness of WS to encourage women to be more participatory followed by some recommendations based on our observation of a WS with which we have prepared our study.

### **Ward Shabha: A New Dimension of UP**

The emergence of Ward Shabha in the Local Government Structure has been the initial outcome of the Ward Development Committee under the "Local Governance Support Project Learning and Innovation Component" (LGSP-LTC). During the care taker government under Fakruddin Ahmed, the local Government Committee was formed and the committee chaired by AMM Sawkat Ali recommended the Ward Shabha to be formed in each of the nine Ward of the UP and prepared a draft act for UP which got approved, and the then care taker government promulgated a UP law in the form of ordinance where 'Ward Shabha' was included. The later elected government led by Sheikh Hasina did not ratify the ordinance and passed the act known as Local Government (UP) Act 2009 where Ward Shabha got an elaborate structural frame work and succeeds to gain significant public

attention as a new body of expanding the local government in a more comprehensive way.

### **Objectives of Ward Shabha**

In the section 2 of the Local Government (UP) Act, 2009 the details of the Ward Shabha including its formation structure, activities power, duties and responsibilities are mentioned which are as followed.

A Ward Shabha shall consist of the persons, registered on the voter list of the respective ward. Open meeting at ward-level.

### **Open meeting at ward level**

- (1) Each of the Ward Shabha in a UP shall organize, within its jurisdiction, at least 2 (two) ward meetings in a year, one of which shall be called the annual meeting.
- (2) The ward meeting quorum shall be constituted by the presence of one twentieth (5%) of the total voters of the respective ward; but no quorum is needed for the adjourned meeting which shall be organized at same time and same place after seven days.
- (3) The Union Parishad shall circulate a public notice properly, in an easily understood and accessible way, at least seven days before the date of the proposed ward meeting; a similar public notice shall also be issued in the case of adjourned ward meetings.
- (4) The UP Chairman shall confirm about organize ward Shabha meetings and the respective ward members shall preside over and conduct the meetings.
- (5) The female member of the reserved seat of the respective ward shall be the adviser of the ward Shabha.
- (6) In the ward meeting and local issues, including overall development activities, shall be reviewed; in the annual ward meeting, the respective ward member shall submit the annual report of the previous year and inform participants about all the ongoing development activities of the ward including financial affairs. The respective ward member and the Union Parishad Chairman shall justify the reasons, if any adopted decision has not been implemented.

### **Authority and Activities of Ward Shabhas**

- 1) The Ward Shabha shall have the following authority, activities, and rights according to the Local Government (Union Parishad) Act 2009 and procedures specified under the rules:

- (a) Facilitate in the collection and circulation of information needed for the purpose of preparing the Union Parishad's development plans. These plans may be for five years and/or annual.
- (b) Prepare and transfer final lists of beneficiaries under government schemes based on specific indicators.
- (c) Preparation of the final prioritization lists of beneficiaries of various government programs (e.g. VGD, VGF, Old Age Program, Widow Allowance Program, etc.) on the basis of specified indicators. Finalized lists should be handed over to the Union Parishad and the lists have to be prepared based on consultations in the WS meeting.
- (d) Providing all necessary support at the local level for effective implementation of development programs.
- (e) Encourage local communities and assist them in the implementation of voluntary labor-based local development and service-oriented programs.
- (f) Advise the UP in order to select project locations or area for street lighting, safe drinking water facilities and other public health units, irrigation facilities, and other welfare programs.
- (g) Develop public awareness with regard to: cleanliness and hygiene, environment conservation, tree plantation, environmental protection and other social misdeeds. Including corruption, social harmony and good relationships among people of a different caste and/or profession, building organizations and organizing various sports and cultural functions;
- (h) Encourage, supervise and assist the beneficiary class or group, and those associated with various development programs in the ward;
- (i) Review the list of persons, who are included in various welfare programs of the government (i.e. widow allowance, maternity allowance etc.);
- (j) Preservation of various information regarding estimates of schemes to be implemented in different areas of the ward;
- (k) Provide detailed information about schemes and services under implementation;
- (l) Get informed about the justification for decisions taken by the Union Parishad regarding the ward;
- (m) Over seeing the progress of schemes taken in the WS and seeking reasons why decisions are not translated into actions;

- (n) Being involved in social awareness building activities such as health, sanitation, dowry, child marriage prevention, drug addiction etc.
  - (o) Identify shortcomings in services related to the supply of safe water, street lighting and other services in different areas of the ward and take necessary corrective measures;
  - (p) Facilitate parent-teacher relationships in various educational institutions of the ward;
  - (r) Enliven birth and death registration programs;
  - (s) Provide necessary assistance in self-employment and other economic activities;
  - (t) Execute other responsibilities as requested by the Government or the Union Parishad.
- 2) The Ward Shabha shall review various reports obtained in its general and special meetings. It will keep the public informed about various development budgets, work plans, item wise allocations of funds, estimates for preparation, expenditure for purchasing material for the work already implemented and for ongoing work, etc.
  - 3) Presentation and discussion of the audit report shall take place in the ward meeting and feedback provided to the Union Parishad for consideration.
  - 4) The Union Parishad secretary shall remain present in the ward meeting and prepare the resolution, take notes of the decisions taken, and present implementation progress in the next Union Parishad and ward meeting.
  - 5) The Ward Shabha may form one or more sub-committees for performing any general or special tasks; however, the number of sub-committee members shall not exceed 10 (ten), including 3 (three) must be women.
  - 6) Ward meeting decisions shall be taken based on the majority; however, whenever possible, decisions should be taken on the basis of a general consensus and with full participation of the female attendance.
  - 7) The Ward Shabha shall request application through notification from the beneficiaries and present the application received in the ward

meeting for scrutiny after proper investigation; after the scrutiny in the meeting, the final prioritization list of the beneficiaries shall be prepared based on the specified indicators and that shall be submitted to Union Parishad for approval.

- 8) It should be noted that, the Union Parishad may not be allowed to change the prioritization list prepared and submitted by the Ward Shabha unless any irregularity is proved.

### **Responsibility of Ward Shabhas**

#### **(1) The Ward Shabha shall fulfill the following responsibilities:-**

- 1 Provide information about development and welfare programs of the ward;
- 1 Participate activities related to the following: agriculture, fisheries, poultry and cattle farming, health and family planning, education, public health, communications, youth development, etc.;
- 1 Collect necessary socio-economic data including birth and death registration;
- 1 Participate in tree plantation & environmental improvement and the maintenance of a hygienic and clean environment
- 1 Create public awareness about social crimes, including women & child oppression, women & child trafficking, dowry, child marriage, acid throwing and corruption;
- 1 Maintain law & order and social harmony;
- 1 Encourage people to pay back various loans, as well as paying taxes, fees, rates, etc.;
- 1 Assist the Union Parishad in revenue collection through the mobilization and development of local resources;
- 1 Assist in the implementation of development and other social development programs involving voluntary labor. Also assist in the formation of local organizations;
- 1 Identify necessary measures on an emergency basis in the event of epidemics and natural disasters.

The Ward member should submit reports to the Union Parishad about the activities and responsibilities of Ward Shabha.

The Ward Shabha apart from its regular meetings may request the Union Parishad to call special meetings if need be Any expenditure without getting

the approved by the Ward Meeting will be treated as personal liabilities (The Local Government Act, 2009).

## **Study Findings**

This section of the paper illustrates the key findings that have come out from our analysis of the WS activities and the attempts to have an informative deliberation of those findings.

### **Analysis**

The Ward Shabha meeting was held on 22 July, 2018 at Shohagpur village mostly known as Bidhobapalli where the park army in assistance with Md. Kamruzzaman, the chief organizer of Al-Badar in greater Mymensingh killed had at least 164 member on 25 July, 1971 one by one and not a single male person was alive in that village (The Daily Star, 2015: 01). It was under ward 9 of 6 No, Kakorkandi Union, Nalitabari Upazilla in Sherpur district. Started at the yard of a local participant named Sohel Rana, the meeting was presided over by the ward member Amir Hossain. The chairman of UP, Shahidullah Talukdar Mukul was the chief guest in the meeting. The meeting began with an enthusiastic mood with the participations of significant number participants specially women as among 105 participants 45 were women. The meeting was conducted by the ward member Amir Hossain and Union Secretary Abdur Barek took all the necessary notes of the meetings that would be kept recorded as UP official documents.

Initially, the UP chairman taking the concern of the meeting president Amir Hossain, delivered an introductory speech regarding the various development activities in the WS and then informed the participants about the meeting agenda that was the analysis of the project planning of the fiscal year of 2018-2019 under LGSP, sponsored by WB and asked people to express their consent on the issues that should be included as priority base in planning. Most participants focused on increasing allocations in educational sector and take more inspiring initiatives to send children to schools particularly to girls including increasing sports facilities, arranging cultural programs and providing tiffin box to the students, enhancing infrastructural development including among, study related furniture's like chair, table, bench, board, etc.

Suklanabal, the advisor of ward no 9 showed her satisfaction for providing the maternity-allowance of 800 take per month for nearly two years but again appealed to the UP Chairman to include more women in the list and increase the amount of money. The UP chairman, in reply assured the participants to try utmost to increase allocation in conversation with the higher authorities. Again, in question of the UP chairman in the meeting regarding the development of communication, most participants expressed their high satisfaction remarking that the infrastructural development over the last 5 years have been outstanding and they can now reach to the Upazilla Sadar with in 15 minutes and all sorts of vehicles are transportable on the roads of the WS.

In terms of the necessary initiatives to be taken immediately, most of the participants mainly women participants spoke about the dire need of a secondary high school for girls in the Union. As there is though a college in that Union but, girls have to undergo difficulties in different degrees for the want of a separate girls school for them. The UP chairman in reply expressed his strong vigor and eagerness to take the necessary steps to establish a girls school there and tried to talk with the honorable minister of agriculture, Begum Motia Chowdhury who is the MP of the Constituency and Upazilla Chairman about that and asked everyone to appeal untidily to the Minister as there has been a possibility of her visit of the Union in the next month and asked the ward member to form a committee who would work to raise public consensus about the establishment of a girls college.

Regarding the distribution of widow allowance all of the beneficiaries expressed their satisfaction to get their desired allocation but some of them asked the UP chairman to increase the amount of their aid. The UP Chairman in reply explained the cause of scarcity of allocation for them from the centre but assured to talk with the higher authorities including Upazilla Chairman, and the honorable Minister to allot increasing amount of resources for them. Again about 10 to 15 women showed their depression for not being included in the beneficiary list of widow allowance and the UP chairman asked the UP secretary to file their name in the record and take the necessary measures to include their name in the update about it in the next Ward Shabha meeting. Apart from that, the selection process of the beneficiaries of VGD, VGF, old age allowance were also discussed in the WS meeting.

The UP chairman then asked the two advisors Suresha Devi and Tamal Akter and the elderly Person of the area Jalaluddin, to express their views on the overall perspectives of the ward and by hearing their comments, the chairman told the UP secretary to take notes of the following issues.

- n Increase sanitation facilities in schools with special emphasis on girls students.
- n Arrange pure drinking water for both students and common people.
- n Increase more facilities and ensure the presence of doctors, nurses in the community clinic.
- n Raising awareness among people to come out from the practice of child marriage, committing violence against women and controlling population
- n Settle disputes in the village courts.
- n Adopting more empirical measure to generate employment.
- n Taking strict measures against those who carry drug and raise more awareness among young people to avoid drug;
- n And arranging cultural activities and promoting the talented boys and girls in the higher levels.

### **Face to face interviews**

To have a better conceptualization of women's real participation, in the WS meeting a face to face interview was conducted through a semi-structured questionnaire and the participants in the interview were UP chairman, UP Secretary, WS advisor on female seat, WS member and two female members. The interview was conducted at the house of WS member Amir Hossain, on the same date day at 6.pm and the exposed matters in the interview are as followed:

### **Meeting Topic**

To answer the question what was the main agenda of today's meeting? The UP chairman said, various issued were discussed but the main topic was the project planning under LGSP, sponsored by the WB.

### **Meeting Participation**

In answer to the question, "Was the participation of female members satisfactory?" Sukunabal the female advisor of the ward responded with satisfaction adding that. "The ratio of participants of male and female was 60:45 which was of course satisfactory in terms of our country."

### **Importance of Women**

To answer the question, "Does the meeting take women's view into well consideration?" Tarul Akter advisor of reserve seat responded with satisfaction and Suresha Devi, another advisor of reserve seat added that women usually feel comfortable to attend the meeting and share their views and the village court contribute significantly to settle disputes specially the traditional crisis women face in domestic life.

### **Audit Report**

Regarding the question about whether regular audit has been done or not. The up chairman replied positively and asked the UP Secretary Abdul Barek to tell about the date of the last audit, "It was conducted on May, 2018 by a CA firm under WB." said the UP Secretary.

### **Main problem for women**

To answer the question, "What is the main difficulty of girls in the ward?" the Ward member said, "We need a separate school for girls," Joining the ward member, UP chairman said that they preferred to establish a college and established Boruazani Shaheed Muktizoddha College. Girls are now getting higher education with boys in co-education schools but they hope to establish a girls school in the near future.

### **Allocations for the widow in Bidhoba Palli**

And lastly in answer to the question of the unfortunate widow "How do you serve the widow of Bidhoba Palli"?. the UP chairman said, "Almost all of them are included into the widow allowance list." "They also get benefits from different projects and special houses with necessary facilities have been built for each of the widow of the "Bidhoba Palli," the chairman added. Fatema Begum one of the beneficiaries of the Bidhoba Polli added that they are getting monthly 2000 taka from Trust Bank under Muktijoddha Ministry and 500 taka from BRAC, an NGO under the UP supervision.

### **Evaluation of the WS meeting on A Large Scale**

The functioning of the ward shabha and all other performances related to them during the last five years (2011-2016) were not very encouraging (Ahmed, 2016). While analysing the root causes of the implementation of WS concept, Tofael Ahemd states that in some of the meeting women participate in relatively large number due to encouragement from non-government organizations (NGO) with special projects at grass root level in

different areas of the country. In non-project areas without NGO support meetings are not normally held (Ibid, 2016: 165). Again, regarding women's depressed participation in local government structure Shantanu Majumdar States , "poor and destitute women's find no scope for them to participate (Majumdar, 2015: 214).

There is however no denying of the fact, that peoples' overall participation in WS are still absolutely depressing let alone women. But after having a participation in the WS meeting directly and getting the views of the interviews, we come to develop some significant matters lied inherent for making the WS concept more fruitful and beneficial for the rural community, specially for women which can be inspiring for the WS around the country.

Firstly the role of UP chairman has extremely been crucial as far as the aims and objectives of the WS are concerned. The rural women who are usually conservative and do not like to come out in public gatherings can be inspired more to join WS meeting to express their views whenever they feel comfortable with the atmosphere and find themselves evaluated.

Secondly, the success of WS relies mostly on the spontaneous participation of the rural people who are somehow beneficiaries of the meeting and if, women can express their views freely and deliberately and if they are being rightly included in the distributions and allocations of state resources in various schemes like VGD, VGF, old age allowance, widow allowance etc, they use to join the WS activities on their own accord.

Thirdly, getting access to participate in the WS activities rural women avail the opportunities of village court and beg justice for the violence and discrimination committed towards them which ultimately contribute to boost up their self confidence and overall it causes a positive impact to uplift women's status in the society.

The study thus encourages us on the bright possibilities of establishing WS as a very effective local body for ensuring people's active participation in the development activities and of course influencing the authorities to be more accountable and perform their task with integrity and transparency as the practice of being authoritarian gets more easier whenever the rulers succeed to make people excluded from the decision making process. And thus, if, these democratic practices of the WS that we have come across

from our understanding of Ward Shabha meeting in Kakarkandi Union, Ward No. 9 can be properly practised and implemented, WS is expected to be a new hope of enhancing women's participation in local governance around the country.

### **Conclusion**

To sum up over the last few decades the actors of development led by WB and IMF have almost successfully proved that the power of authority has to be decentralized and more pragmatic initiatives have been obligatory to include the local people into the local development activities as the local needs, problems, and the expected solutions are felt and understood better by the local people than by the central government and emphasis to a high extent has been given to get women integrated in all forms of activities in the grass roots levels. Decentralization has thus become a conjunctive process with so many categories of both normative and empirical atmosphere and environmental reality with concurrent operation of cognition and cognizance that keeps social contour of both geography and demography in consummate consonance making governance process possible (Chowdhury, 2017: 22). The major issue that the development thinker now emphasize much is people's access to participate in the social system as the United Nation Office of the High Commissioner for Human Right (OHCHR) states, "socially and politically excluded people are more likely to become poor and the poor are political mobilization" (OITCHR, 2002).

The focus is thus to involve people as largely as possible to uplift peoples real state in general and women's empowerment in particular and WS is no doubt, a new dimension through which people living in the grass root levels can be encouraged as the active participatories in all forms of development and different donor institutions like International Development Agency (IDA) of WB put it a precondition to strengthen local government for any kind of foreign aid.

Above all, the WS has now therefore been the demand of time and it has obviously had a vast scope to enhance women's participation and to make it a successful and effective one, scholars and related institution have provided various recommendations.

However, as far as the specific needs for women are concerned the following recommendations should be prioritized to see women more participatory in the WS:

- | Encouraging women to participate more in the local govt. elections.
- | Focusing on resource mobilization at the local level to decrease UP's dependence on the centre.
- | Increasing the number of women participants in the rural village court to ensure proper justice for women.
- | Allow women to speak freely and their views have to be prioritized in the decision making process.
- | Keep it free from parochial political considerations and ensure easy access to all classes of people as we come to find in our study of the WS in "Bidhobapoli".
- | And above all the outlook of people towards women have to be developed and to boost up confidence that women are capable of doing any task.
- | Ending Notes:
- | VGD = Vulnerable Group Development
- | VGF = Vulnerable Group Feeding.

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## Public Interest Litigation in Bangladesh: A Long Way to Go

Md. Rafiqul Islam Hossaini \* and Mohammad Shoeb Mahmud \*\*

### Abstract

'Public Interest Litigation' can be defined from the term itself; it means a litigation which is filed by a person in the interest of the public at large. Therefore, Public Interest Litigation means, a litigation for the protection of public interest. This power has been given to the public by the court through judicial activism. However, for this litigation the litigant has to satisfy the court that he has initiated the litigation not for his own personal interest rather for the interest of the public at large. Public Interest Litigation refers to such kind of activist jurisprudence that allows a person without being personally aggrieved to pursue the court for a public reason for appropriate remedy. In Bangladesh Public Interest Litigation is a post-democratic or post 1991 phenomenon and its emergence or much labour birth was largely influenced by the political change. The constitutional provision that backs up the Public Interest Litigation in Bangladesh is Article 102 of the Constitution of the Peoples' Republic of Bangladesh. Public Interest Litigation in Bangladesh has not achieved the expected success due to lack of fine tuning process and the lack of expected judicial activism. Furthermore, the 'non-enforceable' Fundamental Principles of State Policy in the constitution is also a bar in respect of the smooth functioning of Public Interest Litigation. In Bangladesh Public Interest Litigation can be used as a tool for social transformation and as such it has a long way to go in future.

**Keywords:** Public Interest Litigation, Constitutional Law, Judicial Activism, Bangladesh.

**Introduction:** Anglo Saxon system of jurisprudence is the base of the court system of the People's Republic of Bangladesh.

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\* Lecturer, Department of Law, World University of Bangladesh, Dhaka

\*\* Assistant Professor, Department of Law, World University of Bangladesh, Dhaka

Under this system a person having sufficient interest or locus standi in the subject matter of the suit may come to the appropriate court of justice, having appropriate jurisdiction to try the suit, for appropriate remedy. The theory of laissez faire is the base of this strict rule of locus standi or sufficient interest. Under this theory the state has little to no concern about the welfare of the citizen of the state rather its main function is to maintain internal rule and order and to defend the state from external aggression. However, in a welfare state the government should be always ready to protect the rights of the citizen. Therefore, if there is any infringement of any right of any person or a group of person then that infringement shall come under the review of judicial consideration by the victim himself or by a public spirited person. This is the concept of public interest litigation that any infringement of right can be challenged by a person who is not directly connected with this matter.

### **Origin of the Public Interest Litigation**

The American concept of public interest litigation and the class actions of the 1960s are the initial inspiration of Public Interest Litigation. Such kind of litigation is called as 'Public Interest Law' in the USA and is called as 'Public Interest Litigation' in the Indian Subcontinent. The USA is the real pioneer in the path of Public Interest Litigation which influenced some Public Interest Litigation activist worldwide to work for Public Interest Litigation in the 1960s and 1970s. The pioneer US case in the field of emergence of Public Interest Litigation is *Brown V. Board of Education*.<sup>3</sup>

### **Definition of Public Interest Litigation**

'Public Interest Litigation' can be defined from the term itself; it means a litigation which is filed by a person in the interest of the public at large. However, 'public interest' is defined by Stroud's judicial dictionary<sup>4</sup> as, 'a matter of public or general interest does not mean that which is interesting as gratifying curiosity or a love of information or amusement; but that in which a class of the community have a pecuniary interest, or some interest by which their legal rights or liabilities are affected.'

'Public Interest Litigation' is defined by Bhagwati J. in the case of *People's Union of Democratic Rights V. Union*<sup>5</sup> of India as, 'Public interest litigation is essentially a co-operative effort on the part of the petitioner, the State or

3. 347 U.S. 483 (1954)

4. Vol. 4, 4th Edition

5. AIR 1982 SC 1473

public authority and the Court to secure observance of the constitutional or legal rights, benefits and privileges conferred upon the vulnerable section of the community and to reach social justice to them'. Moreover, Kirpal J. in the case of *People's Union of Democratic Rights V. Ministry of Home Affairs*<sup>6</sup> said, 'As I understand the phrase "Public Interest Litigation", it means nothing more than what it states namely it is a litigation in the interest of the public. Public interest litigation is not that type of litigation which is meant to satisfy the curiosity of the people, but it is a litigation which is instituted with a desire that the court would be able to give effective relief to the whole or section of the society'.

'Public Interest Litigation' is known as 'Public Interest Law' in the USA and American Bar Association defines 'Public Interest Litigation' as, 'Legal service provided without fee or at a substantially reduced fee which falls into one or more of the following areas: (1) Poverty Law; (2) Civil Rights Law; (3) Public Rights Law; (4) Charitable Organization Representation; (5) Administration of Justice.'

Therefore, Public Interest Litigation means, a litigation for the protection of public interest. This power has been given to the public by the court through judicial activism. However, for this litigation the litigant has to satisfy the court that he has initiated the litigation not for his own personal interest rather for the interest of the public at large. Public Interest Litigation refers to such kind of activist jurisprudence that allows a person without being personally aggrieved to pursue the court for a public reason for appropriate remedy.

In this regard the *Malaysian case of Mohamed bin Ismail v Tan Sri Haji Othman Saat* states, '...if they (public authorities) transgress any law or constitutional directive, then any public-spirited citizen, even if he has no greater interest than a person having regard for the due observation of the law, may move the court and the court may grant him appropriate legal remedy in its discretion.'<sup>7</sup>

### **Public Interest Litigation in Bangladesh**

In Bangladesh Public Interest Litigation is a post-democratic or post 1991 phenomenon and its emergence or much labour birth was largely influenced by the political change.

6. AIR 1985 Delhi 268

7. [1982] 2MLJ 133 at 136, per Wan Yahya J.

The reason behind the delayed implementation of Public Interest Litigation in Bangladesh are the unwillingness of judges to break away from colonial legal thinking and the unwillingness of broad interpretation of constitutional textualism.

The case of *Kazi Mukhlesur Rahman V. Bangladesh (the Berubari case)* in 1974 was an early decision of Bangladesh Supreme Court which had strong Public Interest Litigation flavour and was very close in establishing a judicial review in public interest. However, in 1991 the Bangladesh Supreme Court rejected the possibility of Public Interest Litigation in the case of *Bangladesh Sangbadpatra Parishad V. Bangladesh (the Sangbadpatra case)* as unlike Indian constitution Bangladesh constitution requires a 'person aggrieved' test for constitutional remedy under Article 102 of the constitution. The Sangbadpatra case states, "In our Constitution the petitioner seeking enforcement of a fundamental right... must be a 'person aggrieved'... The emergence in India of pro bono publico litigation...has been facilitated by the absence of any Constitutional provision as to who can apply for a writ."

The Public Interest Litigation won its jurisprudential battle and was finally accepted in 1996 by the case of *Dr. Mohiuddin Farooque V. Bangladesh (the FAP 20 case)*. In this case an organization namely Bangladesh Environmental Lawyer's Association (BELA) was granted locus standi to challenge an ongoing flood control project. Moreover, in this case Justice Kamal made a much-awaited statement: "[W]hen a public injury or public wrong or an infraction of a fundamental right affecting an indeterminate number of people is involved...any member of the public, being a citizen...or an indigenous association...has the right to invoke the [Court's] jurisdiction."

### **'Public Interest' in Public Interest Litigations**

The Public Interest Litigation shall be filed in 'Public Interest'. Therefore, in an ideal Public Interest Litigation three stages are involved:

- a) Public interest shall be given priority over special interest.
- b) The judge shall decide the public interest by exercising his/her discretionary power.
- c) The judge shall exercise his or her discretionary power judiciously as opposed to whimsically or arbitrarily.

## **The Constitutional Backing of Public Interest Litigation**

The constitutional provision that backs up the Public Interest Litigation in Bangladesh is Article 102 of the Constitution of the Peoples' Republic of Bangladesh. For any breach of fundamental rights under Part III of Bangladesh Constitution, Article 102 of the Constitution allows the court to pass an order requiring the government to do what is required by law and not to do what is no required by law. In this regard an "aggrieved person" can go to the court for effective remedy under Article 102 of the Constitution. However this "aggrieved person" test has been gradually relaxed by the apex court itself and now any person or any development organization may go to the court for effective remedy on behalf of the affected people of the society.

### **When Public Interest Litigation can be filed**

**In Bangladesh Public Interest Litigation can be filed in the following grounds:**

1. Public Interest Litigation is filed for the benefit of the society as a whole or a segment of the society. Therefore, for Public Interest Litigation there must be a public cause as opposed to a private cause. However, public cause includes several situations:
  - a) Where the entire public or entire community is affected by the matter in question.
  - b) Where a vulnerable segment of the society is involved by the matter in question.
  - c) Where one or more individuals are affected by the matter in question but its nature is so gross or serious that the conscience of the whole community is shocked.
2. For Public Interest Litigation any individual or organization may approach the court in good faith. This includes sou motu (on his own motion) activity of the judges because the judge himself is a conscious citizen of the state.
3. In Public Interest Litigation the court follows the non-adversarial system of litigation as opposed to adversarial system of litigation.

### **Court's activism and flexibility in Public Interest Litigation:**

The Public Interest Litigation requires the activism and flexibility of the court in three phases:

1. The liberal interpretation of the 'person aggrieved' test for ensuring locus standi (right to sue) of the petitioner.
2. During the process of adjudication the court shall ignore the procedural rigidity and formalities.
3. In providing relief the court shall go beyond the traditional techniques and grant innovative and appropriate remedies.

### **Boundary of Public Interest Litigation**

Public Interest Litigation shall operate within a boundary. There shall be a limit that Public Interest Litigation cannot cross. In respect of deciding the boundary of Public Interest Litigation the following conditions may be mentioned:

1. Unless certain basic requirements are fulfilled the court cannot proceed with a Public Interest Litigation:
  - a) There must be a non-performance or violation of constitutional or legal duties.
  - b) The court shall be reluctant to perform an act that the judicial mechanism is not designed to perform.
  - c) The court shall proceed only if it is possible to provide effective remedy through judicial process.
  - d) If there is an alternative remedy the court may not entertain a petition unless the alternative remedy is not efficacious. However, the court is not absolutely barred from entertaining a petition even if there is an efficacious alternative remedy.
2. The court must follow the constitutionally allocated responsibility. Therefore, in Public Interest Litigation matters the court cannot do a lot of things:
  - a) To shape public policy the court cannot dictate or force the executive.
  - b) To initiate legislation the court cannot force or compel the legislature.
  - c) The administrative cannot be usurped by the court.
  - d) The court cannot order for a parallel investigation when the administration already dealing with the matter unless the court is satisfied that the administration is not functioning properly.
3. The court must be satisfied that the petitioner is approaching the court with bona fide (good faith) intention.

## **Value of Public Interest Litigation**

Public Interest Litigation carries significant values. The values of Public Interest Litigation may be summarized as follows:

- a) Through Public Interest Litigation the weaker sections of the society can be ensured with effective judicial protection.
- b) Public Interest Litigation can ensure accountability of the government.
- c) Public Interest Litigation can ensure transparency in the decision making process of the government.
- d) Democracy deficits can be remedied by Public Interest Litigation.
- e) Public Interest Litigation can promote efficiency in the judicial institutions.
- f) Representation of the defused interests can be allowed by Public Interest Litigation.
- g) Access to justice can be ensured by Public Interest Litigation.
- h) Public Interest Litigation can allow participative justice.
- i) Public Interest Litigation can allow the government to enforce legal norms.
- j) Public Interest Litigation protects democratic governance and rule of law.

## **Remedies in Public Interest Litigation**

In Public Interest Litigation remedies can be provided in any of the following situations:

1. The court may use epistolary jurisdiction to provide effective remedy in a Public Interest Litigation. In this regard the court may treat letters or telegrams as a writ petition and initiate a Public Interest Litigation. However, there is no bar to treat letters and telegrams as writ petition.
2. The court may act *sou motu* to initiate a Public Interest Litigation. The word *sou motu* is opposed to 'on the application of any party' as it means 'on his own motion'.
3. In a Public Interest Litigation the court can appoint commission for carrying out investigation and presenting reports and recommendations to the court.
4. In Public Interest Litigation the court can enlist some volunteers to aid the court. Most popular method in this regard is the appointment of 'amicus curiae' or 'friend of the court'.

5. In a Public Interest Litigation the court may order for continuous supervision and monitoring over the administrative organs of the state.
6. In a Public Interest Litigation the court may award compensation to the victim for wrong done to him. In respect of awarding compensation Justice MM Hoque states, 'Since the court exercise its Special Original Jurisdiction and since this Court has got extraordinary and inherent jurisdiction to pass any order as it deems fit and proper, we are of the view that this Court has power to award simple cost of the case as well as monetary compensation considering the facts and circumstances of each case'.<sup>8</sup> However, the court may award compensation in two stages. Firstly, the court may award an amount of compensation as soon as the rule is issued as an interim relief till the case is finally disposed off. Secondly, the court may finally determine the amount of compensation and grant it to the victim at the time of disposal of the suit.

### **Recommendations**

Regarding Public Interest Litigation the following recommendations can be given:

1. There is a tendency among lawyers to file a writ petition in the name of Public Interest Litigation to achieve easy popularity. Therefore, Public Interest Litigation shall be filed in respect of a really serious matter.
2. Sou motu activity of the judges in respect of Public Interest Litigation matter shall be exercised cautiously as this principle is against the principle of 'natural justice' as the principle of natural justice states, 'no one can be a judge in his own case'. Though this point can be contravened by the statement that the Public Interest Litigation is not initiated for the interest of the judge himself rather it is filed in the interest of the public.
3. Public Interest Litigation cannot be filed to pressurize the executive and legislature to compel them to do or monitor their day to day activities. Therefore, separation of powers as a constitutional principle shall also be maintained.
4. The Public Interest Litigation should not be limited to the High Court Division itself rather it should also be initiated in the District level.

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8. *Bilkis Akhter V Bangladesh and Others* 17 BLD (1997) 395 at 407

In this regard a successful claim was initiated and won in the case of *KM Zabir V Amanullah and Others*.<sup>9</sup>

5. Most of the Public Interest Litigations in Bangladesh are filed on the basis of the reports of the newspaper. Therefore, the authenticity of the reports of the newspaper should be tested in a cautious manner.
6. In Bangladesh there is no permanent Writ Bench in the High Court Division. As the Public Interest Litigation is significantly involved with the discretionary power of the judges; therefore, there should be a permanent bench of the High Court Division that shall deal with the Public Interest Litigation matters only.
7. In the Public Interest Litigations when the orders of the court is made there is no proper monitoring and supervision mechanism. Therefore, the court shall enforce a proper monitoring and supervision mechanism in respect of Public Interest Litigation matters.

## Conclusion

In Conclusion it can be said that the future of Public Interest Litigations in Bangladesh is very bright. However, Public Interest Litigation cannot work in isolation rather it is a part of legal aid and public interest law. Moreover, the Public Interest Litigation in Bangladesh has not achieved the expected success due to lack of fine tuning process and the lack of expected judicial activism. Furthermore, the 'non-enforceable' Fundamental Principles of State Policy in the constitution is also a bar in respect of the smooth functioning of Public Interest Litigation. Therefore, the liberal interpretation of the Fundamental Principles of State Policy with the Fundamental Rights as mentioned in the constitution is a need of the timer and the Public Interest Litigation can be used as a tool for social transformation and as such it has a long way to go in future.

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## **Present status of Impacts of climate change and adaptations in Bangladesh coastal areas**

Hafez Ahmad\* and Shakila Islam Jhara\*

### **Abstract**

Climate is changing from its very beginning, but the impacts are becoming noticeable over last several decades. Coastal zone of Bangladesh is geomorphologically and hydrologically dominated by the Ganges Brahmaputra Meghna (GBM) river system and Bay of Bengal. This zone is being continually attacked by cyclones, sea level rise, storm surge which have caused terrible impacts on this low lying coastal area. Due to climate change and geographic location, coastal areas of Bangladesh are highly vulnerable to natural disasters. Climate change will create an additional stress and have direct a negative consequence coastal ecosystems, biodiversity livelihood, and economy and food security. This study aims to identify Background of present status of climate change and its impacts of regional scale, rationality of coastal risks assessment, environmental impacts, risks potentials, quantifying vulnerability, climate change adaptation strategies and coping mechanisms. Several studies are initiated to find out suitable adaptation measures and coping mechanisms that have the potential to help coastal communities adapt to climate changes.

**Keywords:** coastal zone; Bay of Bengal; Bangladesh; climate change; disaster;

### **Introduction**

700km long coastal region of Bangladesh covers about 20% of total land area. the population of coast will be growing to about 41.8 million in 2015 and 57.9 million in 2050 (Minar and Hossain, 2013). Coastal zone of Bangladesh consists of 19 coastal districts that are Jessore, Narail, Gopalganj, Shariatpur, Chandpur, Satkhira, Khulna, Bagerhat, Pirozpur, Jhalakati, Barguna, Barisal, Patuakhali, Bhola, Lakshmipur, Noakhali, Feni, Chittagong, and Cox's Bazar(PDO-ICZMP. 2003).

Depending on geographic features, coastal zone of Bangladesh consists of three parts, a. The eastern zone, b. The central zone, c. Western zone. The western region known as Ganges tidal plain, comprises the semi-active delta and is criss-crossed by numerous channels and creeks. The central region is the most active and continuous processes of accretion and erosion. Meghna river estuary lies here in this zone. The eastern region is covered by hilly area that is more stable (Thomas and Wratten, 1992).



**Figure 1:** Coastal Zone of Bangladesh

The Coastal Zone of Bangladesh is known as zone of vulnerabilities and prone to various natural disasters. A number of developing countries have been experiencing climatic hazards, and some unavoidable risks can lead to more loss of life and property damage. coastal region of Bangladesh are facing continuously cyclones associated with storm surge, sea level rise ,water logging, and salinity intrusion , coastal flooding (Rakib et al. 2019).

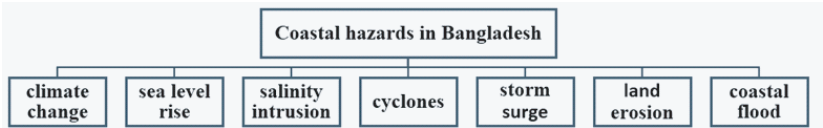
## Methods and Materials

This study was based of secondary information. To collect secondary data, an intensive literature review related to the climate change, its impact, current journal of climatic condition of Bangladesh, coastal government surveys, agriculture statistics issues in Bangladesh context were conducted through an online and offline .in addition, relevant policy documents and government reports were also collected from government agencies through

personal contacts .the secondary data and graphic illustrations also was collected from original researchers with permission and open sources software python, R and ArcGIS, MS Excel are used for data analysis and visualization. For data analyses, the "content analysis" method was used. This method is a research tool for interpreting and coding textual material (e.g. documents, books, oral communication, interviews, and graphics) to elicit meaningful information over different themes.

**Present state of impacts of Climate change**

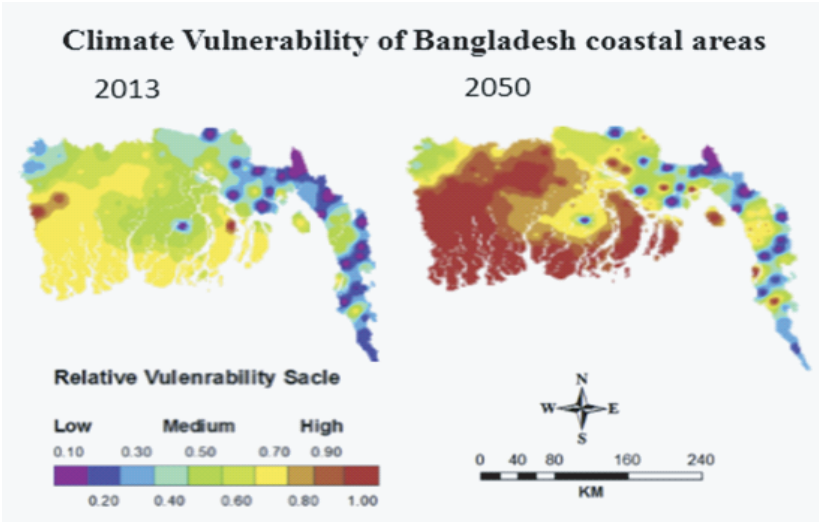
Bangladesh is the second most vulnerable country to climate change among the 27 most vulnerable countries due to its dense population in the coastal zone and low economic condition(Parry *et al.*, 2007). Coastal risks are mainly climate change, sea level rise, salinity intrusion, cyclone, storm surge, land erosion and coastal flooding. Most of them driven by climate change.



**Figure 2:** Major Coastal Risks in Bangladesh

Climate change can bring a significant coastal hazards in low lying countries .Bangladesh is one of the countries most likely to suffer adverse impacts from anthropogenic climate change. Although Bangladesh emits less than 0.1% of global greenhouse gas emissions (CCC, 2001). It is one of major coastal risks in Bangladesh because it is associated with other natural hazards in a complex way. The climatic conditions of Bangladesh are influenced by a number of global and regional scale factors. These factors include geographical location, the effect of North-South continental scale atmospheric pressure, the influence of the jet stream stretched from South East Asia to Northern Africa on the monsoon wind system, changes in the solar albedo due to land use, land cover change in the region and its impacts on wind pattern, and fluctuations in the terrestrial and sea surface temperature(Kabir *et al.*, 2016). This is of great concern, since the location and geography of Bangladesh makes it not only particularly susceptible to the effects of climate change, but also extremely hard to protect(Karim and Mimura, 2008). The future vulnerability in the coastal region of Bangladesh will be significantly higher than present condition(Uddin *et al.*, 2018).

Natural disasters such as cyclone, storm surge, floods, and drought will be more frequent and intense in the future. The climate vulnerability will be enhanced in the coastal region of Bangladesh due to geographic settings, dense population, and poverty.



**Figure 3:** 2013 and Future (2050) Climate Vulnerability in Coastal Areas of Bangladesh (Uddin *et al.*, 2018)

**Sea level rise**

Sea level rise (SLR ) along the coastline of Bangladesh is one of the major threats which may intensify the vulnerability of global climate change. SLR will cause significant impacts on wetlands and its biodiversity; water resources; agriculture, fisheries, and aquaculture; public health; displacement and migration; displacement and migration, assets (Castro Ortiz 1994; Kibria, 2016). A study showed that In the South West region at Hiron point the mean annual change in water level has been found as 5.5 mm/year .Maximum rise in the water level is observed in the South East region at the Maheshkhali which is 7.4 mm/year followed by 7.04 mm/year in the Sandwip and 5.05 mm/year in the Cox's Bazar(Nishat and Mukherjee, 2013b) .A 1m rise in sea level would submerge a full 18 % of the total land area in Bangladesh (Minar and Hossain, 2013). A research showed that deeply flooded area (depth above 100 cm, duration more than 9 months) would increase by 29% (from the base year 2000) due to 88 cm SLR by

2100 (CEGIS, 2006). In the southern region of Bangladesh it is projected that a 65 cm sea level rise by 2080s, will result in loss of 40% of the productive land. About 20 million people of the coastal area have already been affected by salinity (CCC, 2009).

### **Salinity intrusion**

Salinity intrusion in the coastal aquifer is the biggest challenge to ensure potable water at the household level. Increased salinity from saltwater intrusion poses an imminent threat to livelihoods and public health through its impacts on agriculture, aquaculture, infrastructure, coastal ecosystems, and the availability of freshwater for household and commercial use (Hussain 2008). The total amount of salinity affected land in Bangladesh was 83.3 million hectares in 1973, which had been increased up to 102 million hectares in 2000 and the amount has raised to 105.6 million hectares in 2009 and continuing to increase (Mahmuduzzaman et al. 2014). With the increasing impacts of climate change, salinity intrusion gradually is going towards inland water.

### **Coastal flooding**

Coastal flood can be caused by tropical cyclone and tsunami (UNDRO. 1980). the intensity of coastal flooding depends on height of SLR, tidal level and storm surge. Bangladesh is one of the most flood prone countries in the world due to its unique geographical location, topography and exposure to tropical cyclones. With 50% of the land less than 8 meters above sea level, and a coastline of some 600km, coastal flooding is a common problem. About 45.5 million people are exposed to severe and moderate floods like river flood, flash flood and tidal flood. Floods of 1974, 1987, 1988 and 1998 caused death of 30,000, 1657, 2379 and 1000 lives respectively and damaged crops and infrastructures (CCC, 2009).

### **Cyclones**

Cyclone causes significant loss of lives and damage to properties, coastal infrastructures, ecosystems, and economy of Bangladesh. Coastal zone is subject to disastrous cyclone almost every year. Bangladesh is especially vulnerable to tropical cyclones with around 718,000 deaths from them in the past 50 years. The Bay of Bengal is vulnerable to cyclones predominantly in the pre-monsoon months of April-May and the post-monsoon months of October- December (Sarker, 2018). A study predicted

intensified tropical cyclones and associated storm surges with an increase in Sea surface temperature (Emanuel, 2005) .

### **Storm surge**

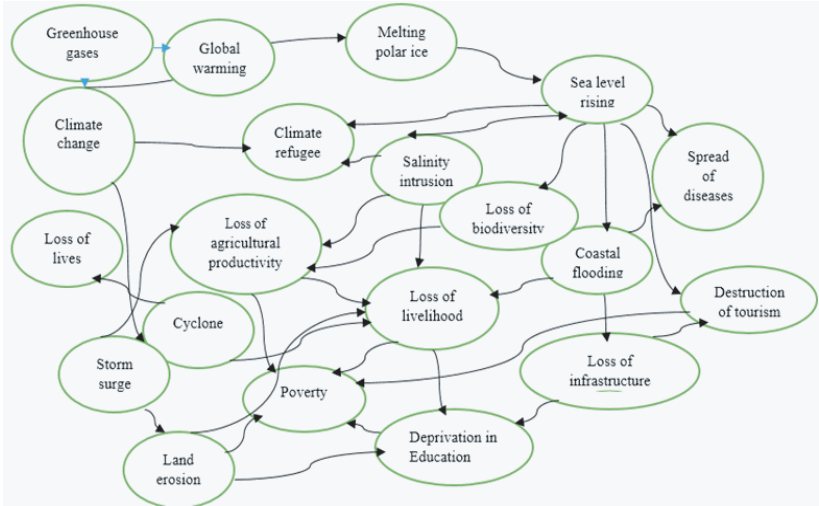
Storm surges associated with severe tropical cyclones constitute the world's worst coastal marine hazard which can cause heavy loss of life and property, damage to the coastal structures and losses of agriculture in affected countries. The western coastal zone is particularly vulnerable to surge flooding due to its low-lying land and very poor defenses against surge waves (Karim and Mimura, 2008). The Bay of Bengal is the area of the world having the highest potential for massive loss of life from a storm surge associated with a tropical cyclone. The frequency of the storms is greater towards the southern parts of Bangladesh, and they occur in Chittagong, Noakhali, Barisal, Patuakhali, and Khulna and in some inland areas in Comilla, Faridpur, and Dhaka.(Jakobsen *et al.*, 2006).

### **Land erosion of Coastal areas**

Erosion alone has rendered millions of people homeless and has become a major social hazard. People, who live adjacent to riverbank, become victim of erosion and be forced to change their livelihood and community(Nishat and Mukherjee, 2013a). Erosion of coast in the central coastal part is horrible because it is the most morphologically active area in Bangladesh coastal zone .se level rise , storm surge , coastal flooding , high flow of GBM are the main driving force of this area. Coastal area along Meghna river estuary is one of the most morphological dynamic areas in the world. A GIS based study showed that A total of 1183 km<sup>2</sup> of land has eroded with rate 118.3 km<sup>2</sup> /year from 1995 -2005 and 1194 km<sup>2</sup> from 2005 to 2015 around central part of Bangladesh coastal zone .Major erosions occurred in the areas of Meghna estuary and along the coasts of major islands such as the eastern coast of Bhola, the northern coast of Hatiya and the south-western coast of Sandwip (Ahmed *et al.*, 2018).

### **Chain analysis of impacts of climate change in Bangladesh**

Event-Consequence Chain is a popular tool for analyzing consequences, root causes, and consecutive events of a potential hazard, called "the casual anatomy of hazard".



**Figure 4:** Events chain analysis of coastal risk, Bangladesh

The chain begins with emission of greenhouse gases that causes climate change and global warming. The consequences of coastal starts from here. Global warming causes SLR, on the other hand, climate change driven events also generate cyclone with storm surge , both create coastal hazards. There is a strong relationship among, climate change SLR, coastal flooding, disease outbreaks, loss of agricultural production, and unemployment (Colwell and Huq 2001; Kibria 2016; Begum and Fleming 1997; Taylor et al., n.d.; Researcher 2014). A number of climatic risks have been associated with the rising sea level, increase in the magnitude of cyclones, changes in the pattern of rainfall, and increases in drought, coastal ooding, sea-surface temperature, and salinity (N. Ahmed 2013).Coastal livelihoods are greatly aected by climate change driven extreme events through loss of agricultural production, livestock, and natural resources extraction.Due to the loss of production, coastal businessmen and traders will be aected in ways that disrupt their businesses, capital, and income. Nowadays, coastal people are gradually losing their household assets and social capital owing to those disasters (Rakib et al. 2019). Coastal resources highly endangered by the climate change include land and water resource as well as the mangroves forests (Development, South, & Region, 2000). SLR will have adverse impacts on the forest (Sundarbans) in two ways, one is directly through enhanced inundation and another is indirectly by enhancing saline intrusion

in river systems(Minar, Hossain, and Science 2013). The biodiversity of Sundarbans will be abridged by this way. The hazards creates other consequences the chain is endless, the ultimate result of those risks are poverty, loss of lives, climate refugee and loss of land. Long-term impacts from a rise in sea level and global temperature could displace millions of people(USAID 2016).

### **Adaptation against coastal risks and coping mechanisms**

Adaptation to climate change is now important in the coastal zone of Bangladesh .Climate change adaptation is understood as consisting of initiatives and measures to reduce the vulnerability of natural and human systems against actual or expected climate change effects(Rajib Shaw , Fuad Mallick 2013). Coastal areas of Bangladesh mainly are affected by several vulnerability factors due to climate change. There are mainly unemployment, housing problems, shortage of drinking water, frequent cyclone and flood, lack of education, low wage rate. The potential impacts of climate change can be reduced adaptation and coping with environment. Individuals and societies will adapt and have been adapting to climate change over the course of human history. Some adaptation by individuals is undertaken in response to climate threats and other adaptation by government(Conway et al. 2015). Coastal areas of Bangladesh have a great potentiality of the climate resilient alternative and disaster adaptive livelihood activities(Amin et al. 2018) .Some adaptation strategies are blowing for the coastal zone that can be taken for Bangladesh. There are 3 adaptive options : those are retreat , accommodation and protection(Minar, Hossain, and Science 2013).Constructions of embankments, mangrove plantation along coastline are also option of adaptation. Mangrove can provide both mitigation, through the sequestration of carbon, and adaptation, through stabilizing shoreline erosion, reducing storm surges, and preventing inland soil salinization(Chow 2018).As people remain vulnerable to various kinds of critical factor, they could build their own coping strategies and mechanisms to deal with those. Individual, groups, or communities who remain successful in devising strategies of coping with vulnerabilities, gradually build "interfaces of resilience"(CEGIS-RTI 2004).Coastal people of Bangladesh can adapt or copy with extreme climate disasters in following ways (table 1). These mechanisms is adopted from analysis of previous published national and international published journals.

**Table:** coping mechanism to major Bangladesh coastal vulnerabilities (modified (Fakhruddin and Rahman 2014))

No.	Vulnerability factors	coping mechanisms
1	Lack of employment opportunities	Livestock rearing, Credits from NGOs, change of occupation etc.
2	Lack of safe drinking water	harvest rain water, boil pond water, drink surface water, saline water from innovative tool by solar evaporating etc.
3	Low wage rate	Limit family consumption/expenses, seek credit loan, mortgage/sell assets, out-migration etc.
4	Lack of cash /savings	rely on middlemen/broker, seek NGO support, seek support from the relatives, rear livestock etc.
5	Cyclone	Take shelter in cyclone shelters with live livestock,
6	Hosing problems	Floating night over, migrate out, slum dwelling, share space
7	Lack of skills	work long hours, seek Govt./NGO support, listen to radio/TV/Media, work for credit, food for work etc.
8	Flood/tidal flood	Raise protective embankments, shift to crops that grow in different seasons

## Conclusion

Due to climate change, sea-level rise and other extreme weather events, coastal areas are continuously being affected by natural hazards in different ways. Climate change driven Coastal hazards and their impacts lead to inevitable threat, and continued loss of life and property. Western and central coastal zone of Bangladesh are highly susceptible to the risks. Adaptation and coping with nature might be practical solution of climate change affected coastal communities of Bangladesh. The natural and traditional adaptation practices should be evaluated scientifically through habitat research, interaction with communities and in-depth analysis in the workshops and seminars involving stakeholders for a sustainable national and regional policy for coastal zone management(Ataur Rahman and Rahman 2015). Further research to build the optimistic model for proper coastal risks assessment by different scenarios is needed.

## Recommendations

1. identification of coastal vulnerabilities and suitable adaptation issues and options.
2. building coastal risks assessment monitoring technology and database for identifying more associated risks
3. prioritizing community based coastal adaptation methods by understanding their needs and vulnerabilities.
4. adoption of sustainable coastal resources management policy and guideline.
5. creating green belt by mangrove plantation along central and western coastal zone
6. Using floating platforms such as rafts in order to produce seedlings at multi peak and longer coastal flooding
7. giving emphasis on cooperation between international and national level.

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## **Nutritional Benefits and Economic Importance of Homestead Pond Fish Culture in the rural area of Sitakund, Bangladesh**

Md. Mohasin Meah \* and Priyata Talukder\*\*

### **Abstract**

Homestead ponds filled with fish play important roles for the development of rural health and economy. Previous research showed that fishes from homestead ponds fulfill 25-50% of the nutrition requirement and helped for the 15% of economic development for the poor people of Bangladesh. This study investigated on this issue in Bangladesh by doing a survey over 20 ponds of different areas of Sitakunda. This study aims that homestead ponds may work as nutritional and economic source for the rural people. The study reported on pond size, diet system, fish production and economic evaluation. The result showed that people eat more fish from their own pond (64.15%) than the local market (35.85%). It is also clear from the result that their nutritional demand is fulfilled where average daily consumption is 98.25gm. They produce 132.30 kg fish yearly on average and earn money by selling the surplus portion. These results suggest that people should increase fish production in the ponds adjacent to their homes.

### **Introduction**

"Mache vat e Bangali" is a well-known Bangla proverb for the Bangladeshi people. Bangladesh is full of water sources abundant with fish. Fish is an important element of animal protein and so it plays a key role for fulfilling the nutritional demand of rural people. The small indigenous species (SIS) (Mola, Puti, Koi) have very high levels of essential micronutrients like vitamin A, iron, and minerals. Besides, aquaculture is a profitable business than any other agriculture. Hence, it helps in the rural economy. Bangladesh is self-sufficient in fish production. The total yearly production of fish is 41.43MT.

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\* Fisheries Officer, Young Power in Social Action.

\*\* Department of Public Health, Asian University for Women, Chattogram, Bangladesh

In the fiscal year 2017-18 and people of Bangladesh consume on average 62 gm of fish daily where as the requirement is 60gm (BBS). Previously, a study was done in Bangladesh in these issues. Reaching out over 900,000 households in Bangladesh the study shows that fishes from homestead pond helped for the nutrient requirement and produced a substantial surplus that can be sold (de Pee *et al.*, 2015). In general, aquaculture has the potential to reduce poverty directly or indirectly through establishing and strengthening food consumption linkages but also through "income linkages," and "employment linkages" in Bangladesh (Belton *et al.*, 2012). Reducing poverty in low-income countries through smallholder development remains compelling where the majority of people live in rural areas, and agriculture remains the largest single source of employment. Bangladesh has placed emphasis on diversified food production, employment and income generation activities at the farm level similar to many other countries in order to achieve food security in its Poverty Reduction Strategy (Bangladesh Planning Commission, 2005; Murshed-E-Jahan *et al.*, 2010). Aquaculture are largely determined by the availability and access to assets and thus, the capacity of poor people to benefit from aquaculture occurs mostly through indirect food consumption linkages (Roos *et al.*, 2007; Belton & Little, 2011; Belton *et al.*, 2016; Bogard *et al.*, 2017). The reliability and generalizability of research aiming to clarify the outcomes of aquaculture on poverty have often been compromised because they are based on case studies and/or limited in geographical scope, and are designed with variable degrees of methodological rigour (Bene *et al.*, 2016). Attempts have been made in Bangladesh to promote vegetable cultivation alone and integrated with other farming components (such as pond and livestock) to meet the gap between supply and demand, and improve households food and nutrition security as well as increase income (Weinberger and Genova, 2005). Another case study in Bangladesh showed that "ponds play a crucial role in providing household income and fish for consumption, contributing 15% of total household income and 25-50% of total fish consumption (Belton and Azad 2012)". Based on the previous results, in our statistical research we predicted that fishes from adjacent ponds helps for fulfilling the demand of nutrition and for the economic development of rural people .

Materials and Method

Procedure

For this survey 20 ponds were taken under observation from different areas of Sitakunda like Sayedpur, Muradpur, Guliakhali. For the survey, approximately one month was utilized in rural areas of Sitakunda, Chattogram, Bangladesh. Different questions were asked about the pond, dietary system, fish production and economic aspect. Questions were asked randomly from the beneficiary's of YPSA Fisheries and Livestock Unit and all of them were responded to the survey.

Measures

For measurement, the survey was made of different questions like how many days they eat fish in a week (never, 2-3, 4-5, more than 5). Another question was about how much (gm) fish they eat daily. For the fish production, there was also question about whether they sell fish or not (never=0, sometimes=1, frequently=2). 'Yes/' 'No' question was designed to know about the lactating mother and child member where no=0, yes=1. Survey was also done to find out how many days they eat fish from the pond and how many days they eat fish from the local market. We also wanted to know about the amount of fish that they produce in their pond and they sell in the local market.

Results

Descriptive Statistics

Table-1 shows the variables that were collected from the survey. This table also includes average, minimum and maximum value of the variables. According to the survey most of the people get the required fish nutrition from their own pond (on average 11.49). Additionally, the total amount of homestead consumption (1297. 059) is greater than the local market consumption (702.941). Moreover, all the people sell the extra portion of their fish production.

Table 1: Descriptive Statistics Fish Production and Consumption

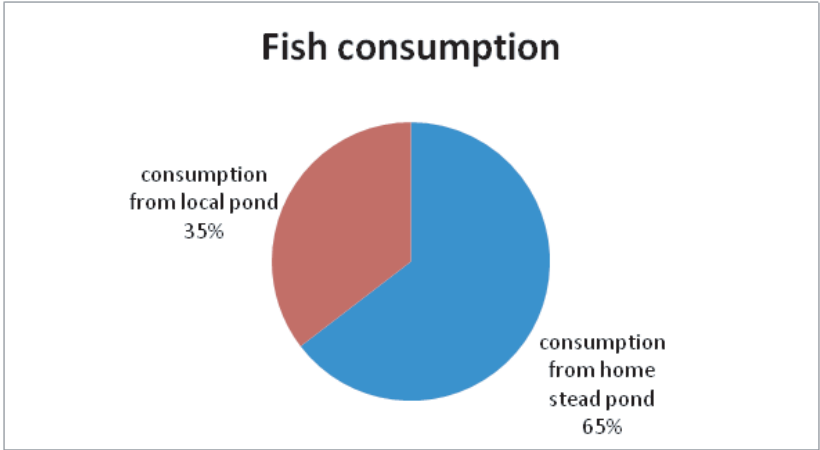
Variable	Average (kg)	Minimum (kg)	Maximum (kg)
Yearly consumption	17.68	8.54	24.00
Yearly production	132.30	21.00	220.00
Yearly sell	115.06	8.10	198.88

Table 2 expressed the details of pond size , daily to year consumption of fish from the experimental ponds according to the homestead area and local market. The consumption rate expressed the yearly selling and production amount of cultured fish in the upazila .

**Table 2 : Pond size and Fish Consumption According to the Pond**

Sn	Name of Pond Owner	pond size (decimal)	daily consumption (gm)	weekly consumption (gm)	yearly consumption (kg)	Consumption (gm)				Consumption %	
						home stead pond	local market	Yearly Sell (kg)	Yearly Production (kg)	home stead pond %	local market %
1	Sajeda	32	100	400	19.2	9.60	9.60	180.80	200.00	50.00	50.00
2	Nurnahar	20	95	285	13.6	9.12	4.48	116.40	130.00	67.06	32.94
3	Johora	8	90	180	8.54	4.27	4.27	81.46	90.00	50.00	50.00
4	Saheda	10	100	300	14.4	9.60	4.80	80.60	95.00	66.67	33.33
5	Motahara	14	80	400	19.2	11.52	7.68	110.80	130.00	60.00	40.00
6	Lucky	30	110	440	21.12	21.12	0.00	198.88	220.00	100.00	0.00
7	Shilpi	15	70	350	16.8	6.72	10.08	153.20	170.00	40.00	60.00
8	Hasina	8	100	300	14.4	14.40	0.00	90.60	105.00	100.00	0.00
9	Jasmin	12	95	380	18.24	13.68	4.56	121.76	140.00	75.00	25.00
10	Halima	8	120	360	17.28	11.52	5.76	92.72	110.00	66.67	33.33
11	Aysha	25	90	450	21.6	8.64	12.96	8.10	21.06	40.00	60.00
12	Tamanna	10	100	400	19.2	19.20	0.00	75.80	95.00	100.00	0.00
13	Khaleda	12	110	440	21.12	10.56	10.56	108.88	130.00	50.00	50.00
14	Aklima	25	100	300	14.4	9.60	4.80	135.60	150.00	66.67	33.33
15	Moriom	15	95	475	22.8	13.68	9.12	127.20	150.00	60.00	40.00
16	Asma	13	120	360	17.28	5.76	11.52	122.72	140.00	33.33	66.67
17	Fatema	15	100	400	19.2	9.60	9.60	160.80	180.00	50.00	50.00
18	Jahanara	10	110	330	15.84	10.56	5.28	74.16	90.00	66.67	33.33
19	Lutfur Nahar	30	100	500	24	19.20	4.80	176.00	200.00	80.00	20.00
20	Shirin	17	80	320	15.36	11.52	3.84	84.64	100.00	75.00	25.00
Total		329			353.58	229.87	123.71	2301.12	2646.06	1297.06	702.94
Average		16.45	98.25	368.50	17.68	11.49	6.19	115.06	132.30	64.85	35.15

From the study, it is found that consumption rate of upazila inhabitants are basically higher in local market rather than production from local fish pond ( Figure 1).

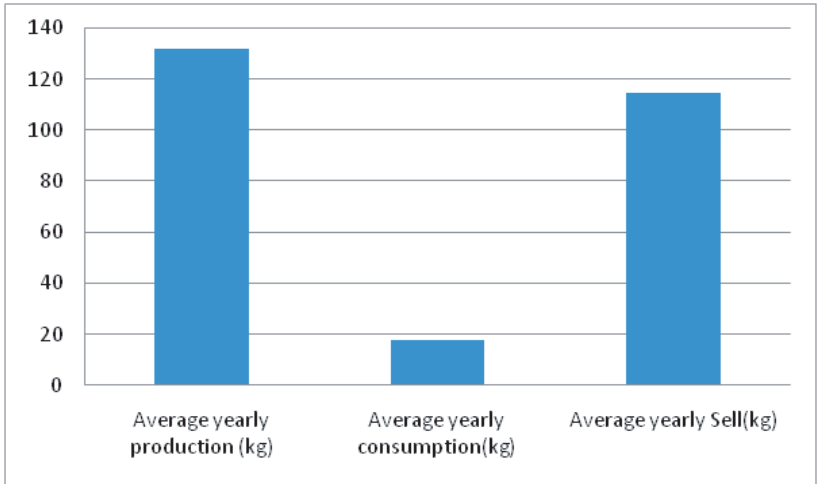


**Figure 1:** Percentage of homestead consumption and local market consumption

**Relationship between homestead pond and nutritional demand and economic development**

The hypothesis of the study that is homestead pond may help for fulfilling the demand of nutrition and for the economic development of rural people was tested by dividing the data set into two categories. As reported in figure 1, one category was consumption from homestead pond and another category was local market. The response showed that homestead pond consumption is higher than the local market consumption. Hence, we can assume that village people mostly fulfill their nutritional demand from their own pond. On the other hand, the yearly production is much higher than the yearly consumption. Hence, it is very clear that the rest amount of fish people can sell and earn. However, the overall result shows strong support for the study.

**Figure 2:** The relation between yearly consumption and yearly production



**Discussion**

Overall, the result of the survey mostly supports the paper's hypothesis. Findings show that people eat more fish from their own pond .However the previous studies of Bangladesh showed that people consume 25-50% Of fish from their pond.

One limitation is that the survey was done only from 20 ponds. In addition, it is based on only one upazilla. This survey does not show any data from the other villages or other districts of Bangladesh. Another limitation is the sample of only 20 families. An assumption cannot be generalized only surveying a small group of people. However, the results of the survey have a lot of variation. For example, the consumption from local pond is 64.85% and the consumption from local market is 35.15%. Hence, the difference is very clear between these two categories. That's why it mostly presents strong support for the hypothesis.

Despite these limitations this survey triggers toward the further survey about nutrition and economic development. It provides an idea to the other researchers working on the same experiment. Besides, the results can make people concerned about the matter by letting them know the actual scenario or statistics. Hence, it shows the importance on increasing fish production in the homestead ponds.

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Pictures



## **Powers of the Prime Minister in Bangladesh: A Critical Study**

Amdadul Haque\*

### **Abstract**

In Westminster parliamentary system of government, the Prime Minister (PM) plays a dominant role. The PM performs many significant functions in this political system. S/he is the head and spokesperson of the government. Here, the head of state (i.e. the monarch or president) usually holds a largely ceremonial position. Political Scientists term the PM's position in parliamentary government in many ways like Lord Morley describes the PM as "primes inter pares" (first among equals) and Sir William Vernon terms him "inter stellas luna minors" (moon among the stars). Harold J. Laski regards him as "the pivot of the whole system of Government". Ivor Jennings makes a comparison of the PM with "the sun around which the planets revolve." Viewed in this context, the PM in Bangladesh does not correspond to 'Primus inter Pares' and 'inter stellas luna minors'. The Bangladesh PM has turned out to be more than first among equals and virtually a sun around which other minor planets revolve. In this regard, s/he is termed as "elected authoritarian", "presidential prime minister" and "elective dictator". Against this backdrop, this paper critically examines the powers of the PM in Bangladesh. In the context, it is argued that the PM of Bangladesh exercises too much formal and informal powers resulting in the diminution of accountability of the democratic government.

### **Introduction**

A parliamentary form of government is called responsible or cabinet form of government, because the cabinet enjoys the real powers of the government and it is under the control of the parliament. There are 51 nations and states governed or ruled by a parliamentary system of government.<sup>1</sup> The PM is the heart in this system of government. Here the PM is the head of government, chairman of the cabinet and leader of the parliament.

\* Lecturer, Department of Political Science, Bangabandhu Sheikh Mujibur Rahman Science & Technology University, Gopalganj.

But these powers vary from country to country on the basis of customs and traditions of the powers used by the PM. As head of the government, the PM is ultimately responsible for the policies and decisions of the government to the parliament. "The keystone of the cabinet arch is the prime Minister. He is central to its formation, central to life and central to death (Laski, 1968)". As chairman of the cabinet, he brings policies and issues into discussion of cabinet meetings and seeks mandate of the ministers and finally ensures influence of passing. The PM is said to be first among equals (*primes inter pares*) (Jones, 1985), which is meant to describe the PM's position in contrast to the other ministers of state. "First among equals implies an equal status among the ministers and that he is simply the 'first' and represents the ministers and therefore the government and the country (Burge, 2009)." However, the PM in reality is far more powerful than this implies. As a result, the powers of the PMs become matter of concerns to the political scientists (i.e. G.W. Jones and Anthony S. King). According to them, too much power in the hands of the PM leads him/her to be autocrat. Power usually corrupts people. Lord Acton said "Power tends to corrupt, absolute power corrupts absolutely." Echoing this, it can be said that absolute power can make the PM an absolute dictator. Enjoying such wide and arbitrary powers by the PM is neither good for the country nor healthy for democracy. On the other hand, some comparative political analysts argue that to keep democracy sustained and to retain democratic regimes in countries, the PM needs much power in the face of fear of no confidence and dissolution of parliament, cabinet and government.

The PM of Bangladesh is so powerful that hardly any country can be found in the world which has a parliamentary system of government of this sort. Even the British or the Indian PM does not enjoy such powers. S/he is the head of Government, the leader of Parliament, and the chief of his own party. S/he is not the "first among equals" as we see in the Cabinet of the British parliamentary system. No Minister or Member of Parliament (MP) can go beyond his wish or control. In the backdrop of above discussion, one pertinently raises the questions: Why does the PM exercise such unlimited powers? Is it a necessary evil? What impact does it make on the political institutions of Bangladesh?

For the convenience of our analysis, the article is divided into five sections. The first section explores the evolution of the powers of the PM in Bangladesh. The second section places the position of the PM in parliamentary government compared it with presidential form of government. The third section analyses the exercise of the powers by the

PM of Bangladesh. The fourth section critically examines the development of authoritarian tendency of the PM and discusses the impact of the powers exercised by the PM of Bangladesh on the political institutions such as parliament, parliamentary committees and political parties followed by a conclusion.

## **Evolution of the Powers of the PM in Bangladesh**

The PM of Bangladesh has long been having the unlimited executive powers. The Chief Executive of the government has always been the 'king pin' of the system. As history bears witnesses, Bangladesh achieved freedom from the internal colonial rule of (West) Pakistan in 1971 through a heroic armed struggle for liberation. The principles of the struggle for emancipation of the people of Bangladesh were based on modern linguistic territorial nationalism and democracy. The new-born country began its journey as an independent and sovereign nation with a parliamentary-cabinet type of government under the Constitution of 1972. The status of the Parliament in the 1972 Constitution was 'dominant executive and dormant legislature' (Khan, 2006). Here absolute powers of the PM were of unusual height due to the popularity of Sheikh Mujibur Rahman, his party AL was the single majority in the parliament (the AL got 292 of the 300 seats and all the 15 seats reserved for the women in the elections of 1973) (Abul, 1980), PM was head of the party, parliament and government and there was no formidable opposition in parliament (only two opposition leaders) (Abul, 1980). However, Sheikh Mujibur Rahman gave up the position of the party chief in 1974 to AHM Kamruzzaman (Jahan, 2015). In January 1975, the parliament by the vote of an overwhelming majority of the then ruling party, the Awami League (AL), opted for one-party rule through the 4th Amendment of the constitution headed by an all powerful presidency. This amendment made the president having supremacy over executive, judiciary and legislature. He also remained as the head of the state. In August 1975, Sheikh Mujibur Rahman was tragically assassinated along with most of the members of his family by a group of disgruntled army officers. Then, military rule with insignificant variation continued from 1975 to 1990. Following the overthrow of the Ershad regime, national elections were held in early 1991 in which the Bangladesh Nationalist Party (BNP) won, paving the way for the resurrection of the parliamentary form of government under the Constitution (Twelfth Amendment of 1991). This amendment makes the PM as executive head and the President,

constitutional head. Henceforth, all executive powers of the Republic are exercised by the PM in the name of the President and his cabinet is collectively responsible to the Jatiya Sangsad or parliament. The PM remains as the party chairman also. The powers of the President were being enjoyed from 1975 to 1991 handed over to the hands of the PM. The Bangladesh Constitution gives some powers to the President (discussed in Section four). But such powers are nominal in nature. "The President, like the Crown of Britain, holds dignity and grace, not power". (Shelley, 2014) The 15th Amendment of the Constitution vests the powers of holding new elections in the incumbent government (the PM as head of the government). Through the 16th Amendment of the Constitution, the impeachment of judges comes in the hands of the parliamentarians where the PM has ultimate authority (Munirul, 2014). After the restoration of democracy in Bangladesh, the powers of the PM have been criticized by civil society, intellectuals and academia. They argue that the PM in Bangladesh enjoys absolute powers that make him/her "autocrat" and "presidential prime minister (Salahuddin and Sumaiya, 2014)." They regard such powers of the PM as obstacle to democratization in the country.

## **Position of the PM in Parliamentary Government**

Two systems of governments are mostly evident all over the world i.e. presidential systems and parliamentary systems. The former is based on the Presidential leadership as chief executive and that of the latter is the prime ministerial leadership. In order to understand the position of the PM in parliamentary government, it is important to clarify the key features of these systems.

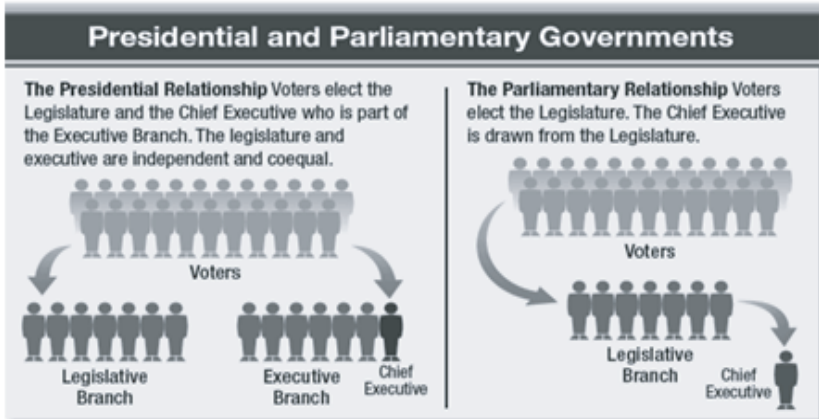
The Presidential system provides for the direct election of the chief executive who becomes both head of state and head of government. This single person is elected by universal suffrage (sometimes through Electoral College) to execute laws made by the legislature. Thus this system is characterized by a strict separation of powers. Presidents are elected for a fixed term and have security of tenure during that term, outside of the exceptional atmospheres that might warrant impeachment. The president appoints members of the cabinet, who act as his agents rather than shareholders of executive authority. Most analyses of presidential executives are focused on the USA (Bara and Renington, 2009).

In parliamentary systems, the executive is drawn from the party or coalition of parties that holds a majority of seats in the legislature through elections.

The executive is collective (a cabinet) and holds office on the basis of support in the legislature. Thus the personnel of the legislature and executive overlap, and there are no separate elections for executive office. The government's authority and tenure are fully dependent upon parliamentary confidence. If the government loses that confidence, a new executive must be formed, either from existing parties within the legislature or through new general elections. The timing of elections is normally flexible within parliamentary systems, and called by the leader of the majority party or coalition of parties. A PM leads the executive and appoints the members of the cabinet, although cabinet members are his/her colleagues with their own power base in the party. The PM will be head of the government but the Head of the State will normally be held by a monarch or a titular president (Bara and Renington, 2009).

In parliamentary systems, the PM is termed as the first among equals (MPs are elected through universal suffrage and the PM himself becomes a MP first). This system firmly recognizes that "as long as the prime minister's image is good, 'so, too, the image of the government and the country. When the image of the PM suffers, the government's image, and the country's, also suffers"(Baru, 2014).

**Figure 1:** Election of the Chief Executive in Presidential and Parliamentary System (Eddie, 2014).



**Exercise of Powers by the PM and its Impact**

In the parliamentary system, the PM holds the pivotal position and in fact s/he is more powerful than others. The personality of the PM determines the nature of the authority that s/he is likely to exercise. S/he performs many

significant functions in the political system and exercises vast powers to his advantage. The powers and functions of the PM include.

- o The first minister or head of the government
- o The chairman of the Cabinet
- o The leader of the government team
- o The minister for the civil service
- o The holder of great powers of patronage
- o Coordinator of government policy and ideology
- o The overseer of the work of cabinet colleagues
- o The leader of the major political party in the House of Commons (parliament)
- o The chief spokesman for the party and the government in parliament
- o The chief government and party spokesman in the country
- o Representative of the country abroad and a national figurehead at home (Eddie, 2014)

The powers and functions of the British and Indian PM and that of Bangladesh PM are theoretically same. But they differ in terms of the culture of exercising powers, norms and traditions of the country. In Britain, the PM is assisted by the Deputy PM and in India, the Deputy PM is not technically a constitutional office but this post is sometimes allocated in times of national emergency. Lal Krishna Advani (2002- 2004) was the last Deputy PM in India. But this post is neither in the constitution nor in use as Bangladesh. After the Elections of 7th Parliament, the post of the Deputy PM was seriously discussed but it did not translate into reality. In both India and Britain, the chief of the party becomes a different person and sometimes the PM himself/herself (but s/he cannot avoid the decisions of the party regarding any policy or decision), for example, Theresa May and Amit Shah (Andrew, 2014). The PM in Bangladesh becomes the chief of the party which has been retained since 1990. Intra-party democracy is largely absent in political parties. In Britain and India parliamentarians of the ruling party may criticize the policies of the government and sometimes give votes against party policy. It strengthens accountability and transparency of the government. Such as, British parliamentarians vigorously opposed military intervention in Syria to the Government. In Bangladesh, parliamentarians hardly criticize the policies of the ruling party because of Article 70 of the Constitution. As a consequence, the accountability of the government is not ensured. In Britain and India, the monarch and the President have some powers which often they perform by the advices of the PM and themselves.

Same powers exist constitutionally to the President of Bangladesh. But the President performs everything by the advice of the PM. As a result the PM exercises the powers of the president also. The Leader of the House of Commons in Britain is a government minister whose main role is organizing government business in the Commons. Andrea Leadsom is the current Leader of the House of Commons. It decreases absolute powers and dominance of the PM in parliament. It simultaneously empowers parliament and ensures checks and balances among the organs. The leader of the parliament in Bangladesh is the PM himself/herself. MPs ask no question to the PM. This silence of the MPs gives the legitimacy of absolute powers to the PM. However, absolute powers and dominance of the PM results in development of authoritarian tendency in his or her style of governance leading to the diminution of accountability in democratic institutions. In the following two sections I will elaborately discuss these two ingredients (Ahmed, 2012).

## **Impact of the PM's Exercise of Unlimited Power**

### **Development of Authoritarian Tendency**

It becomes evident that third world parliamentary democracies are transforming into presidential in nature with authoritarian character of the PM i.e. Iraq, Malaysia, Thailand, Singapore, Pakistan and Bangladesh. Here, the PM enjoys more powers than the constitutionally given powers and suffocates all the voices of the state machinery. In these countries, accountability of the cabinet of the government cannot be properly ensured through parliament. The chief executive personalizes state's powers and plays a dominant role in all affairs. As a result he is not treated in these nations as 'first among equals' rather a 'strong presidential PM' or 'elective dictator.' The powers of the PM in Bangladesh are discussed in the constitution.

- 1 Calling sessions of the parliament through advice to the President and dissolution of it
- 1 The executive powers of the Republic are exercised by or on the authority of the PM.
- 1 Head of the cabinet and to its formation, life and death of it.
- 1 Determining Ministers, Ministers of State and Deputy Ministers and reshuffling them.

But in reality, the PM enjoys many powers than the constitutionally given

powers which has developed authoritarian tendency in the political system. Entrenched patron-client political culture deepens the notion of prime ministerial dictatorship in Bangladesh. The constitution of Bangladesh has given some powers to the President such as appointment of the PM and the Chief Justice without advice of the PM. He also appoints the Election Commission, office of the Comptroller and Auditor-General, Public Service Commission and so on by the advice of the PM. The president in Bangladesh is a nominal executive and exercises power same as India and Britain. British Queen and Indian President enjoy constitutional powers without interference of the PM. In these states, presidential powers are enjoyed with a long democratic tradition. But in Bangladesh, the constitutional powers of the president are intensely interrupted by the PM. The Constitution has given the power to select the Chief Justice to the hand of the President. But this selection is finalized by the PM which is an extra-constitutional power to the PM. In Britain and India, the head of the state submits for the consideration of the cabinet any matter relating to domestic and foreign policy. In Bangladesh, this obligation has become only a constitutional nicety. It provides the PM passing any bill whatever he wishes (Rahman, 2008).

In Bangladesh, the leadership powers are not distributed among different persons as in the UK and India. It results in concentration of powers in the PM as the leader of the party, head of the government and leader of the House. PM (Sheikh Hasina) held four ministries whereas Khaleda Zia retained eight portfolios. These powers also enlarge the hands of the PM. On the other hand, leaders cannot criticize the leadership of the PM or the party leader in public places or in the parliament. Many political leaders were expelled from both political parties, i.e. the AL and the BNP, for reforms in party chief and internal matters of the party during the military backed caretaker government. Such actions were aimed at splitting the party. In both mainstream parties, one person becomes the party chief in turn. However, keeping party leadership and portfolios together increase the powers of the PM (Salahuddin and Sumaya, 2012).

In Britain, leader of the parliament is a different person. As Rt Hon William Hague is the present leader of the House of Commons. In India, leader in Lok Sabha is Narendra Modi (the PM) and leader in Rajya Sabha is Arun Jaitley. There is less probability for the British and Indian PM to be autocrat because of the proper checks and balances of the activities of the executive

branch in the parliament. Here, executive branch faces many challenges in parliament to pass bills and other government decisions. Challenges come from both the opposition and own parliamentarians. But in Bangladesh, leader of the parliament is the PM himself/herself. Here, checks and balances are dormant and the government does not face remarkable impediments from the opposition (i.e. the main opposition party mostly remains absent in parliament) and own parliamentarians (having barriers on the activities of the MPs, Article 70). As a result, decisions of the executive are easily passed in the parliament. Through this mechanism, the PM's powers increase which turn into autocracy.

In fact the PM in Bangladesh has become too powerful to be called to account by any formal political institution but by the people in the next elections. The PM's office remains immune from oversight by any parliamentary committee. S/he never attends any meeting of standing committees on vital ministries. As a result, it lacks accountability of the PM and makes committees dysfunctional. In Britain and India, the PM gives schedule to the parliamentary committees over executive tasks. On the one hand, it ensures accountability of the PM and on the other, it empowers parliamentary committees. If parliamentary committees do not function properly, the PM does not have any bar on his/her activities (Wintour and Mason, 2014).

Article 70 of the Constitution of Bangladesh discourages the role of MPs in ensuring accountability of the PM. This article states that "A person elected as a Member of Parliament at an election at which he was nominated as a candidate by a political party shall vacate his seat if he votes in Parliament against the party." This article is a constraint on the freedom of expression of MPs. Though the article only forbids voting against the party, parliamentarians have been reluctant to even express critical views against any policy of their party for fear of withdrawal of the party whip leading to the loss of their seats. When the PM gives speech, discusses policies of the cabinet or government and tends to be accountable in Parliament, MPs of the ruling party (though the MPs of the opposition party mostly remain absent in parliamentary sessions) just listen and remain properly silent. They do not ask any question regarding the discussion and policies rather they blindly support him/her. In Private Members Day (Thursday), MPs also remain quiet. Moreover the leader of the House expects no questions from MPs. It creates an uneven equation of the separation of powers among

organs and clinches dominant executive. In Britain and India, such provision (Article 70) is absent in the constitution. That is why the PM of both India and Britain faces severe criticisms from both ruling and opposition parties on various domestic and foreign policies of the government in parliament and outside. In Bangladesh, same thing happens in the cabinet where ministers ask no question to the PM regarding any policy. There is no evidence where a Cabinet Minister has taken any dissenting position in the Cabinet and or resigned by disagreeing with any Cabinet decision with the PM. In Britain, cabinet ministers play a crucial role on government policies. If the policies of the PM are imposed, ministers often resign from the Cabinet. Such as, Sayeeda Warsi (Ex-senior Foreign Office minister for faith and communities) resigned from the government in protest of David Cameron's policy on Gaza.<sup>31</sup> However, taciturnity of the MPs and unquestionability of the Cabinet members make the PM adversary towards parliament and develop the sense of absolute powerfulness in Bangladesh. It keeps him/her outside from being accountable (Bara and Penington, 2009).

## **Dysfunctional Political Institutions**

Functional political institutions make democracy functional in a state. That is why most of the democracies insist on setting up political institutions. In this section, political institutions refer to parliament, parliamentary committees and political parties. Here institutions' working capacity highly depend on the eagerness of the PM. Parliament becomes only functional when the PM allows discussion. Parliamentary committees remain busy when the PM alerts all the personnel linked with respective committees. Finally political parties become democratic and function properly if s/he wishes. To what extent is the PM responsible for dysfunctional political institutions, (Jahan and Amundsen, 2012).

In a modern democracy, the primary function of the parliament is to embody the will of the people. It is the supreme political institution through which people seek to realize their aspirations, urges and expectations. But Bangladesh's parliament has been badly failed to embody the will of the people and to perform efficiently of its cardinal functions. The parliament in Bangladesh is entirely dominated by the executive control. In this section executive control refers to the powers of the PM, because she is the leader of the parliament. The PM intentionally tends to retain absence of real

discussion, debate and scrutiny of the proposals put forward by the executive branch of the government in parliament. For instance, any discussion on publicly important issues can be held in parliament only if the leader of the House gives consent to such proposal. In fact, the leader of the House can gag the House from discussing publicly important issues. And over the past two decades since the restoration of parliamentary democracy, this is exactly what largely happened. In this way, the PM makes the parliament an arena institution. "Arena institution indicates a setting in which political actors interact, but little or have no scope to modify legislation presented by the executive, and can therefore be seen as relatively weak bodies." For the sole authority of the PM, the parliament cannot become functional. So, the PM as the leader of the House has supreme authority upon his/her own party which creates no opposition from within (Jahan, 2014).

In a parliamentary system, the opposition (shadow government and shadow cabinet) in parliament is the bona fide responsible for ensuring government's accountability, as the ruling party parliamentarians are expected to support the government. But in Bangladesh since the mid1990s, the opposition has adopted the tactics of boycotting parliamentary meetings rather than to voice their concerns through discussions and debates in the parliament. "Nearly half of the parliamentary working days have been boycotted by the opposition even when both major political parties have rotated in power and also in the opposition." They claim that they had hardly any opportunity to engage in real debate on legislative and national issues. Boycotting parliamentary sittings by the opposition is seen below by a chart.

Parliaments	Percentage of Boycotting
5th parliament	75%
7th parliament	60%
8th parliament	80%
9th parliament	81%

In the absence of the opposition, the ruling party members also lose interest to attend the parliament, which frequently faced a quorum crisis and mostly tended to rubber stamp the decisions and actions of the government. However, continuous boycotts of the parliament by the opposition create no check upon the functions of the PM which establishes absolute power of the PM (Liton, 2013).

In Bangladesh, leadership in the political parties is mostly centralized by the chief of the party. For example, both Sheikh Hasina and Khaleda Zia have been the uncontested leaders of their respective party since the early 1980s. These two leaders represent two distinct political cultures. I argue that the powers of Khaleda and Hasina have a practical necessity to keep their party's unity intact. Practice of democracy is absent in party affairs. Selection of party leaders depends on the will of the party chief. Selection of candidates for the national elections is vested in the hands of the party chief. Finally, party programmes and policies are taken by the party chief without wide discussion and debate. Basically, the party chief can do or undo everything because of his unopposed authority in party. This unopposed authority of the party chief generates authoritarian behavior which impacts even on the party, parliament and cabinet. Even nobody raises any question about the tenure of the party chief. Also Party constitution does not deal with the question of tenure. In Britain, the PM as party chief has to retain support of the party in order to succeed in parliament, cabinet and other government ministries. Here, leader of the party goes through party constitution. If the party chief violates party constitution, party leaders, MPs and ministers impose pressures upon him/her.

## **Conclusion**

It appears from the above analyses that the PM in Bangladesh enjoys unlimited power. Since the restoration of democracy, the party won parliamentary elections formed the government and the PM has taken an all powerful position in the political system. The PM retains this position for his/her formal and informal powers with no bar on the exercise of powers. S/he tends to dominate all organs of the state solemnly for the survival of political regime and implements own policy decisions. Absence of the oppositions in the parliament, no question of the MPs regarding policies and decisions of the government or article 70 of the constitution, centralization of powers i.e. party chief, leader of the party in power and chairman of the cabinet and imbalance of powers between the PM and the president play effective role in generating absolute powers of the PM. These result developing authoritarian tendency, accountability deficits and dysfunctional political institutions i.e. political parties, parliament and parliamentary committees. The powers of the Bangladesh PM do not match with those in Britain and India. As a result the PM in Bangladesh cannot be termed as first among equals with respect to global parliamentary democracies. S/he

can be best termed as "elected authoritarian", "presidential prime minister" and "elective dictator".

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# Peception of Farmer's for impact of Climate Change on Crop Production and Adpatation Practices in South-Eastern Coast of Bangladesh

Prabal Barua\* and Syed Hafizur Rahman\*\*

## Abstract

Coastal people of Bangladesh have been experiencing from lower crop productivity and fewer cropping intensity becasue of different climatic vulnerabilities. The research work was carried out in Banskhalı upazila of Chattogram district and Teknaf of Cox's Bazar district to assess the impact of climate change on crop production process and to suggest suitable coping strategies and adaptation options for advancing the coastal agriculture for increased agricultural production. To attain the objectives of the research, the author were collected randomly 240 sampled respondents using pre-tested interview schedule. Participants stated that the current climate in the study area behaving differently than in the past on a number of climate risk factors like increased temperature, frequent drought, changes in seasonal rainfall pattern, long dry spells, increase of soil salinity, increase of tidal surges affecting crop production. The study showed that the main reasons of yield reduction (20-40 % yield loss) in *T.Aman* crop are erratic rainfall, increased intensity and frequency of drought, salinity, floods, cyclone, use of local varieties, increased incidences of pests & diseases etc in the context of climate change. Average yield level of HYV Boro is being affected (20-40 % yield loss) by high temperature and salinity and that of *T.Aus/Aus* crop is being affected (20-40 % yield loss) by tidal surge. Vegetables, pulses and oilseed crops are being affected (40-60 % yield loss) by soil wetness, excessive rainfall and water-logging in the selected areas. Sorjan system of cropping, rice-fish dual culture, utilization of bunds as vegetables/spices production in gher areas, floating bed agriculture and homestead gardening with introduction of salt-tolerant & drought tolerant crop varieties have been identified as potential adaptation options for development of coastal agriculture for increased agricultural production in attaining food security.

**Key word:** climate change, crop production, adaptability, food security.

\* PhD Fellow, Department of Environemntal Sciences, Jahangirnagar University, Bangladesh.

\*\* Professor, Department of Environemntal Sciences, Jahangirnagar University, Bangladesh.

## Introduction

Climate change is considered as the most critical global challenge of the century. It is predicted that global temperatures will increase further between 1.4 and 5.80 C by 2100. Sea level rise, polar ice melting, glacier melting, extreme weather events such as storms, floods, droughts and heat waves, changes in morphology, physiology, phenology, reproduction, species distribution, community structure, ecosystem and species evolutionary processes in marine, freshwater and terrestrial biological systems, change in crop production patterns, spread of infectious diseases and pests are some of the incidences likely to happen as a result of climate change (IPCC 2007; Barua et al., 2011; Barua and Rahman, 2017; Barua et al., 2017; Barua and Rahman, 2019)

Impacts of climate change on food production are global concerns, but it represent a particular threat for Bangladesh. Agriculture is already under pressure mainly due to an increase in demand for food, as well as to depletion of land and water resources. The prospect of global climate change makes this problem a priority for Bangladesh. Climate change further threatens food security. Higher temperature and water stress due to heat would result in decline in vegetation and agricultural production.

Bangladesh is predominantly an agricultural country. She is one of the densely populated countries having about 160.0 million of people in its 1, 47,570 square kilometer of area (BBS, 2010). The geographical location and geological setting of Bangladesh renders it one of the most disaster prone countries of the world (FAO, 2006). As a result of its natural set up, the country is highly vulnerable to almost all type of disasters i.e. floods, cyclones, droughts, tidal surges, tornadoes, earthquakes etc (Ali, 1996).

Changing climate is having its impact evident in different parts of Bangladesh, especially in eco- sensitive zones like coastal, drought and flood prone areas. Though the climate change is adversely affecting each and every sector, their impacts are going to be much higher on agriculture sector, worst affecting the agriculture dependent livelihood resources (LACC, 2008). The IPCC estimates that by 2050 rice production in Bangladesh could decline by 8% and wheat by 32% (against a base year of 1990) due to higher temperature and higher CO<sub>2</sub> concentration (IPCC, 2001). As Climate change is going to have worst impact on livelihood, mainly in agriculture sector of Bangladesh (accounting for about 35% of the GDP and engaging more than 63% country population), it is needed that

special and immediate attention be paid to the sector to ensure food security and livelihood to a major portion of national population, which obviously is more vulnerable to adverse impacts of climate change (BBS, 2005). Coastal agriculture is being seriously affected by different levels of climatic risks caused by integrated effects of the following factors: soil salinity, water salinity, sea level rise, tidal surge, cyclone, heavy soils, soil wetness/water stagnancy, fallow /seasonal fallow land, incidence of pests and diseases, poor marketing infrastructure, problem of agro-based industries, poor health, livelihood, fishermen's are jobless, migration to cities, unsafe drinking water, etc. The coastal belt is highly vulnerable due to the climate change. The intensity of disasters like sea level rise, tidal surge, salinity intrusion and cyclone in coastal belt is being increased. The salinity intrusion is a major factor which impedes the crop production at large in the coastal belt. Water and soil salinity is a common hazard in many parts of the coastal zone. Consequently, the crop area is reducing and the cultivation of aus (summer rice), boro (dry season rice and other rabi (dry season) crops are being restricted. There is dearth of research in the field to get the actual scenario of the problems. So, the researcher made an attempt to identify the real consequences of climate change in the coastal saline areas. Considering the above circumstances, the present study entitled "Farmer's Perception towards Impact of Climate Change on Crop Production and Their Adaptation Practices in Selected Coastal Saline Areas of Bangladesh" was undertaken with following objectives.

- n To assess the farmers perception towards magnitude and trends of climate change during past 10 years.
- n To identify and assess the different risk factors with extent and severity of affecting crop production systems in the coastal region.
- n To investigate and explore the extent of adoption of the adaptive technologies to combat the changed climatic effect.

## **Methodology**

### ***Study Area***

In order to study the climate change patterns and effects in coastal saline regions, two upazila namely Teknaf upazila of Cox's Bazar district and Banskhali Upazila of Chattogram district in the south-western region of Bangladesh were selected as the locale of the project.

***Sample size and sampling technique***

Two Union from each Upazila were selected randomly. A list of all farm households of the selected unions were collected from the concerned Upazila Agricultural Extension office with the help of Sub Assistant Agriculture Officers (SAAOs). From the list 240 farmers were selected (60 from each union) as a sample of the project following simple random sampling technique.

***Data collection***

Primary data were collected through a intensive household survey and through the application of different RRA (Rapid Rural Appraisal) tools such as focus group discussion, key informants interview, crop calendar and direct eld observation. Focus group discussions was conducted to crosscheck and generate information on farmers' experiences of climate change, problems in farming practices, their indigenous knowledge systems and the different adaptation measures adopted. Household surveys were conducted with structured interview schedule to gather detailed information on farmers' perception of climate change and on their adaptation measures.

***Analysis of the data***

Data collected from both meteorological stations and household survey was analyzed by using the Statistical Package for Social Science (SPSS) and Microsoft excel. Qualitative information such as farmers' experiences regarding climate change and adaptation measures taken on their farmland collected from key informants interviews and local level institution were analyzed manually, both by the researcher and in conjunction with the villagers, and interpreted in relevant chapters to complement and supplement the quantitative information collected from household interviews and the meteorological stations.

**Results and discussion*****Climate Change Scenario***

Change of climate particularly temperature and rainfall of the study area was examined through analysis of long-term meteorological data base and perception of the local community respondents.

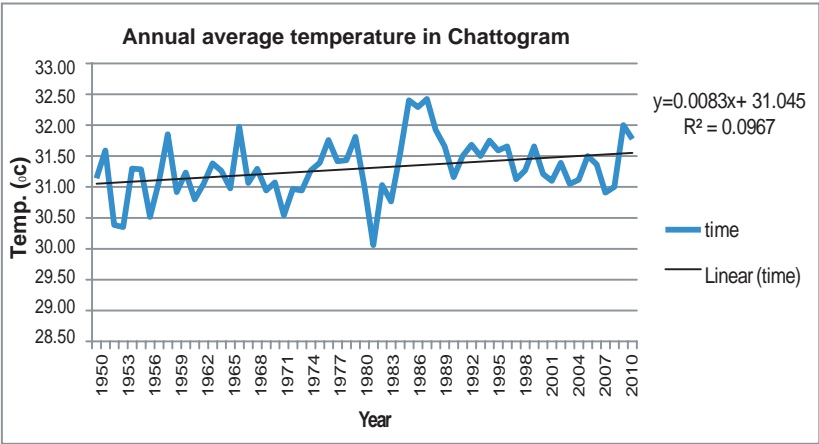
***Evidences from database***

The evidences of climate change over time were documented through

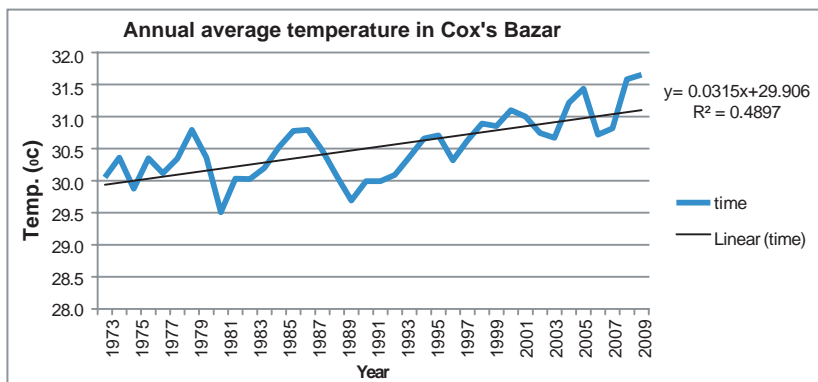
analysis of long-term (1950-2010) climatic data of monthly temperature and rainfall to find out the trend of changes.

***Trend of temperature***

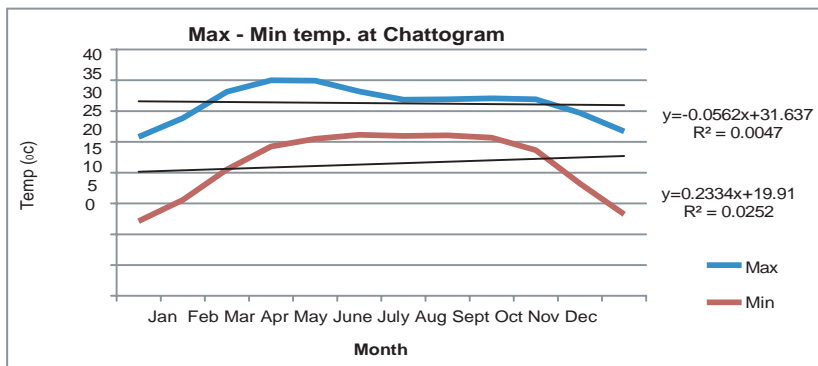
The findings of the long term temperature data showed a steady increasing trend of both maximum and minimum temperatures over time (Figure 01-04). The study revealed that the increase in maximum temperature was more distinct than minimum temperature, while increment rate per year of maximum and minimum temperatures was 0.056 and 0.233°C at Chattogram whereas 0.002 and 0.305 at Cox's Bazar respectively. It was observed that the minimum temperature during winter season had been slightly decreasing (December-January), while it exhibited increasing trend in rest of the months of the years in both locations. These changes of temperature trend indicated that the study location gradually became warmer regardless of seasons. These changes might have influenced the pest and disease infestation as well as productivity of the vegetation both trees and crops of the locality.



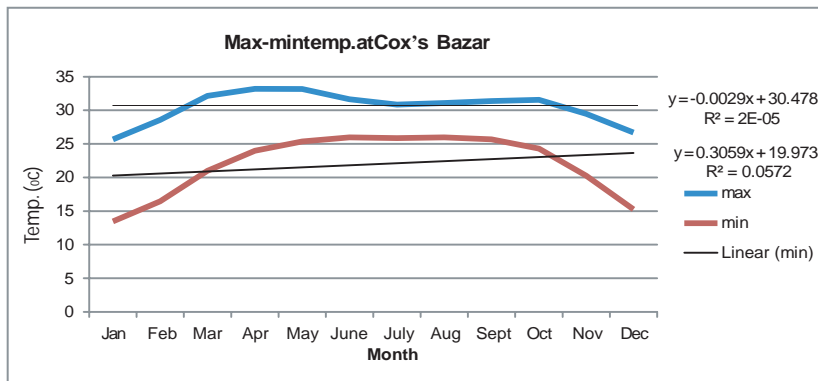
**Figure 1.** Long term (1950-2010) trend of annual average temperature in Chattogram



**Figure 2.** Long term (1950-2010) trend of annual average temperature in Cox's Bazar



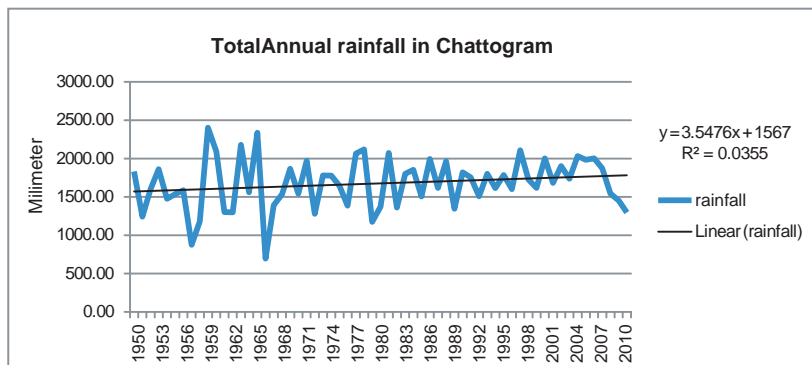
**Figure 3.** Long term (1950-2010) trend of maximum-minimum temperature in Chattogram.



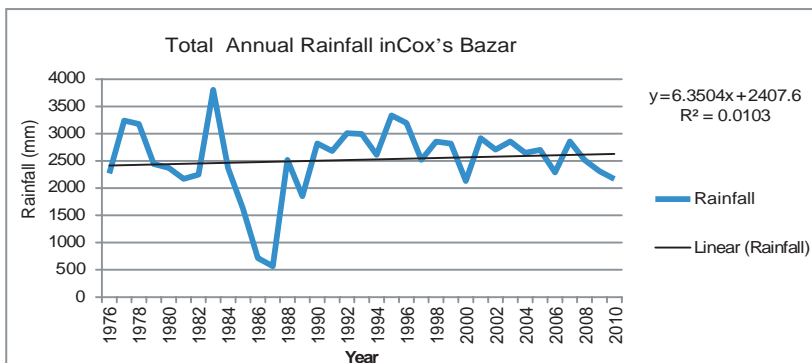
**Figure 4.** Long term (1950-2010) trend of maximum-minimum temperature in Cox's Bazar

### Trend of rainfall and frequency of SPI

The analysis of long-term rainfall database reflected that change of rainfall pattern was not definite over seasons. The trend of annual rainfall indicated an increasing pattern in the study area and the increment rate was 354.7 mm in Chattogram (Figure 5) and 635 mm in Cox's Bazar (Figure 6) per three years. But there was sharp decreasing trend of annual rainfall has been recorded in both locations from 2007 to 2010 indicates that annual rainfall is decreasing in the recent year. This decreasing trend of annual rainfall hampered overall crop production in the selected study areas. Decreasing trend of winter season rainfall is associated with higher rate of increase in minimum temperature (Wang *et al.*, 2009) that might had hampered the growth of the vegetation. Subash and Mohan (2011) reported wide year-to-year variation in the monthly distribution of rainfall in Indo-Gangetic region.



**Figure 5.** Long term (1950-2010) trend of annual total rainfall in Chattogram



**Figure 6.** Long term (1950-2010) trend of annual total rainfall in Cox's Bazar

## Farmer's Perception on Changes in Climatic Variables and Natural Hazards

The perception of the respondents on change of local climate and their important impacts over time (10 years ago) revealed that respondent's perceptions (Table 1) were almost similar to the evidences of climate change recorded from the meteorological database. Regarding the change of temperature over time, almost cent percent respondents opined that temperature had increased which was very consistent with the change of maximum temperature of meteorological database. Regarding rainfall intensity (precipitation), ground water availability and surface water availability almost cent percent respondents opined that the rainfall intensity had decreased over time which was very much consistent with the meteorological evidences. Regarding hotness, coldness, drought, fog and salinity, majority of the respondents opined that the intensity of these climatic variables had increased. Regarding flood and cyclone, majority of the respondents opined that the intensity of these two events became irregular. Though there was no evidence from database on frequency of above mentioned climatic components (hotness, coldness, ground water availability, surface water availability drought, fog, salinity, flood and cyclone) but this was confirmed by the respondents during FGD. However both meteorological database and respondents perception strongly support the change of climate over time and increasing trend of impacts of climate change. This location specific information is also in good agreement with national database (MoEF, 2010).

**Table 01.** Farmer's perception on changes in climatic variables and natural hazards in studied coastal areas.

Climatic parameter	Respondents perception (respondents opinion expressed as percent)				
	Increased	Decreased	Unchanged	Irregular	Total
Temperature	93.33	-	-	6.67	100
Rainfall	-	100.00	-	-	100
Hotness	58.33	8.33	10.00	23.33	100
Coldness	43.33	8.33	16.67	31.67	100
Ground water availability	-	91.67	-	8.33	100
Surface water availability	-	90.00	10.00	-	100
Flood	-	10.00	8.33	81.67	100
Drought	61.67	5.00	23.33	6.67	100
Salinity	81.67	-	18.33	6.67	100
Cyclone	16.67	8.33	13.33	61.67	100
Fog	68.33	8.33	11.67	15.00	100

## Impact of Climatic Vulnerabilities on Crop Production

In order to identify vulnerable climatic variables affecting overall crop production, FGD was conducted with farmers, village leaders and school teacher of the study areas. Results of FGD has been presented in Table 2 and Table 3.

**Table 02.** Impacts of different climatic risk factors on crop production at Teknaf upazila of Cox's Bazar districts

Crop	Climatic risk/ vulnerable factors	Severity of vulnerable factors	Crop yield loss/ yield reduction (%)
T.Aman	Drought, salinity, flood	Moderate	20-40
Wheat	Temperature variation Late winter/short cold period	Severe	40-60 "
Maize	Drought Rainfall variation High wind	Severe Severe Severe	40-60 " "
Potato	Temperature variation Late winter/short cold period Clayey soils Salinity	Severe Severe Severe Moderate	40-60 " " 20-40
Oilseed crops (mustard, ground nut)	Temperature variation Late winter/short cold period Clayey soils Salinity	Severe Severe Severe Moderate Moderate	40-60 " " 20-40
Spice crops (chilli, onion, garlic)	Salinity Pests and diseases Soil wetness	Severe Moderate Moderate	" 40-60 20-40
Jute Sugarcane	Temperature variation High rainfall High wind	Severe  Severe Severe	40-60 " "

Results of FGD showed that the main reasons of yield reduction (20-40 % yield loss) in T.Aman crop are erratic rainfall, increased intensity and frequency of drought, increased salinity, tidal surges, floods, cyclone, use of local varieties, increased incidences of pests & diseases etc in the context of climate change. Similarly, average yield level of HYV Boro is being affected (20-40 % yield loss) by high temperature (causing sterility) and increased salinity and that of T.Aus/Aus crop is being affected (20-40 %

yield loss) by tidal surges. Vegetables, pulses, oilseed crops and fruit crops are being affected (20-40 % yield loss) by drought, increased salinity, soil wetness, excessive rainfall and water-logging and tidal surges in most coastal districts. But the people are to live with these climatic vulnerabilities and risks in the coastal region.

**Table 03.** Impacts of different climatic risk factors on crop production at Banskhal upazila of Chattogram district

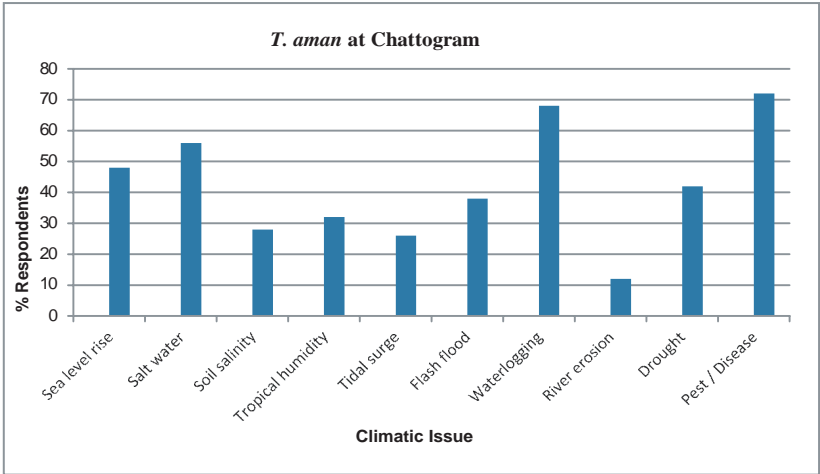
Crop	Climatic risk/ vulnerable factors	Severity of vulnerable factors	Crop yield loss/yield reduction (%)
Irrigated crops HYV boro	Saline ground water	Severe	40-60
	Unavailability of surface water	Severe	„
	Salinity, Pests and diseases	Moderate	20-40 „
T.Aus	Water stagnancy/floods	Moderate	20-40
	Salinity	Moderate	„
	Submergence	Moderate	„
	Pests and diseases	Moderate	„
T.Aman	Floods/water stagnancy	Moderate	20-40
	Drought	Moderate	„
	Changed timing of rainfall	Moderate	„
	Pests and diseases	Moderate	„
Wheat	Temperature variation	Severe	40-60
	Late winter/short cold period	Severe	„
Maize	Drought	Severe	40-60
	Rainfall variation	Severe	„
	High wind	Severe	„
Potato	Temperature variation	Severe	40-60
	Late winter/short cold period	Severe	„
	Clayey soils	Moderate	„
	Pests and diseases	Moderate	„
Pulse crops (khesari, mung bean, soybean, cowpea)	Heavy rain/excess moisture	Moderate	„
	Soil wetness	Moderate	20-40
	Drought	Moderate	„
	Salinity, tidal surges	Moderate	„
	Pests and diseases	Moderate	„
Oilseed crops	Temperature variation	Severe	„
	Late winter/short cold	Severe	40-60

(mustard, sesame, ground nut)	period Clayey soils Salinity	Severe Moderate	„ „
Spice crops (chilli, onion, garlic)	Early rainfall Temperature variation Pests and diseases	Moderate Moderate Moderate	„ 20-40 „
Jute Sugarcane	Temperature variation High rainfall	Severe Severe	60 „
Fruit crops (papaya, banana, water melon)	High wind Salinity High wind Excessive rainfall Pests and diseases	Severe Severe Moderate Moderate Moderate	40-60 „ „ „ 20-40

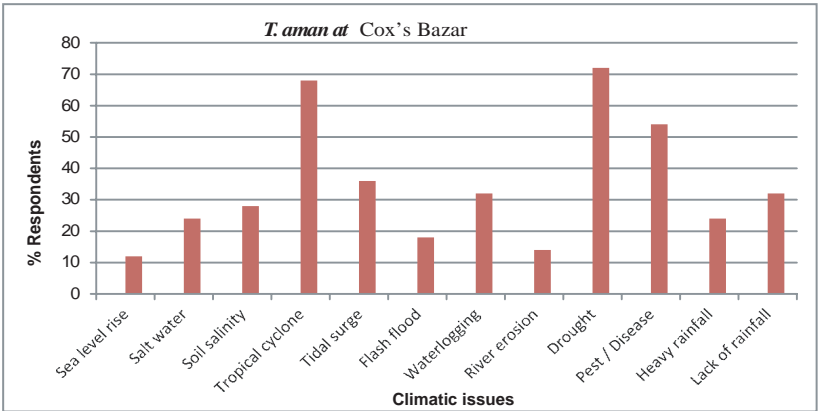
From household survey most vulnerable climatic factors were identified. Respondents perceived that temperature has increased over the years facilitates more pest/ disease infestation in different crops and duration of winter has been shortened affecting the potential growing period of winter crops. Increased intensity of soil salinity was perceived by the farmers as white crust of salts on soil surface and crop burning during drier months in the coastal areas. Presently, farmers are very concerned about climate change issues viz. Erratic rainfall, temperature rise, short winter, intensity of drought, salinity, tidal surges, submergences, cyclone, tornadoes, flash floods, erratic rainfall etc in crop production systems. Based on farmers' perception and farmers' response about climate change, most vulnerable crop specific climatic factors has been identified (Figure 07 -16).

## **T. aman rice**

Data presented in Figure 7 reveals that majority of the respondents in Chattogram districts opined pest and disease infestation, salt water and waterlogging were the major risk factors in T. aman crop. Whereas in Cox's Bazar tropical cyclone, pest and disease infestation and drought were the major risk factors in T.aman crop (Figure 8).



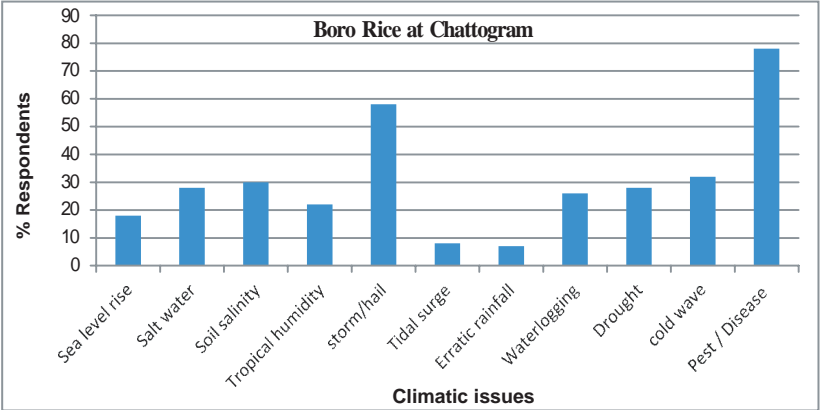
**Figure 7.** Farmers response on long term impacts of climate change affecting T. aman at Chattogram



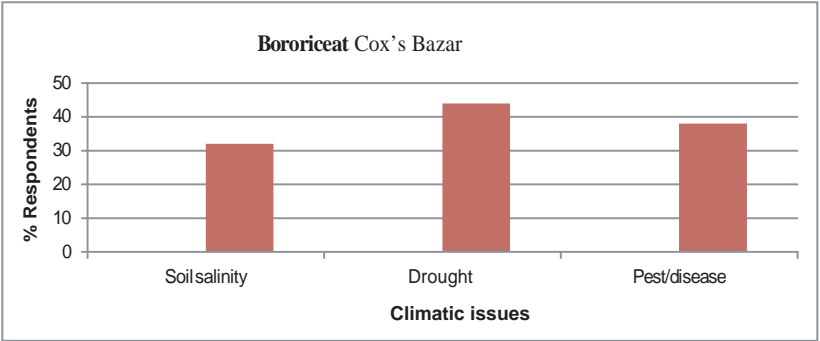
**Figure 8.** Farmers response on long term impacts of climate change affecting T. aman at Cox's Bazar

**Boro rice**

Data presented in Figure 9 reveals that more than half of the respondents in Chattogram opined that disease and pest infestation and storm/hail were the major risk vulnerabilities in boro rice whereas soil salinity, pest and disease attack and drought were the major risk factors in boro rice at Cox's Bazar (Figure 10).



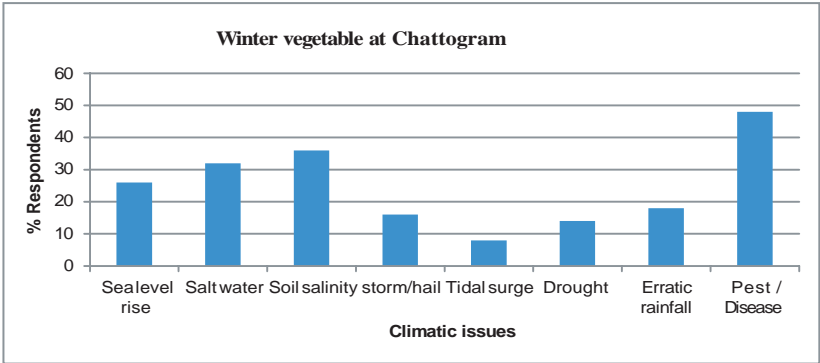
**Figure 9.** Farmers response on long term impacts of climate change affecting Boro rice at Chattogram



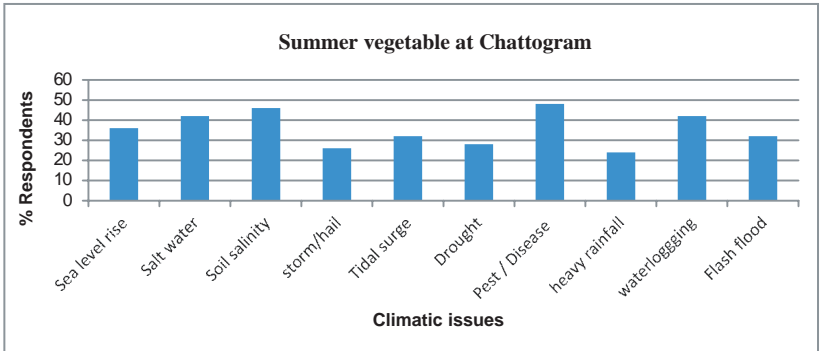
**Figure 10.** Farmers response on long term impacts of climate change affecting Boro rice at Cox's Bazar

**Vegetable cultivation**

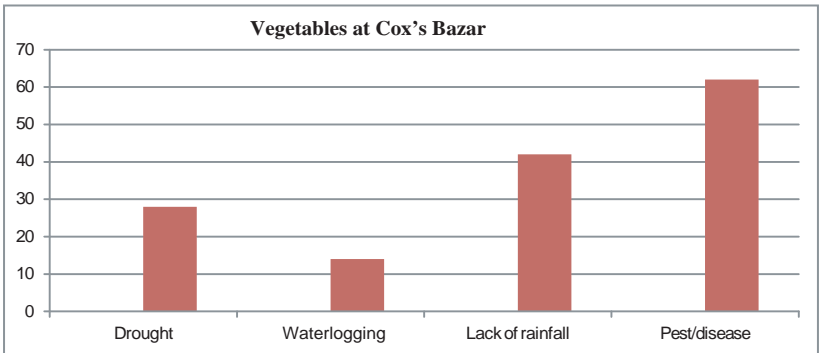
Data presented in Figure 11 and Figure 12 reveals that pest and disease attack, soil salinity, salt water and water logging were the major problems in cultivation of vegetables in Chattogram districts. In Cox's Bazar districts major problems in vegetable cultivation were pest and disease attack, lack of rainfall, drought and waterlogging were the major risk vulnerabilities (Figure 13).



**Figure 11.** Farmers response on long term impacts of climate change affecting winter vegetables at Chattogram



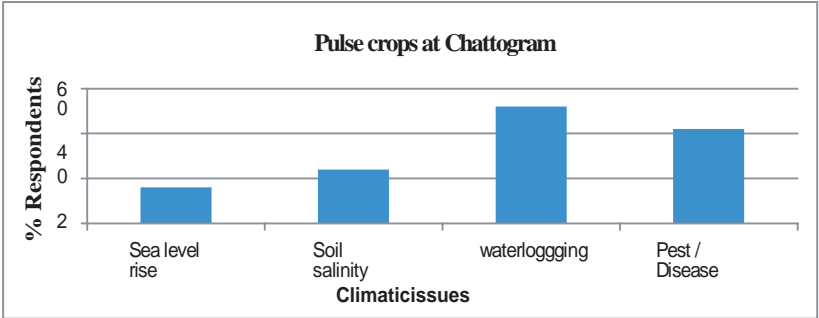
**Figure 12.** Farmers response on long term impacts of climate change affecting summer vegetables at Chattogram



**Figure 13.** Farmers response on long term impacts of climate change affecting vegetable crops at Cox's Bazar

**Pulse crops**

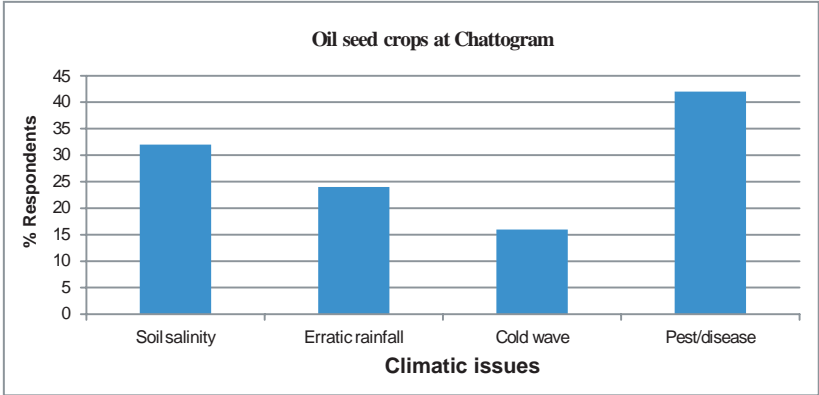
Information in Figure 14 shows that water logging was the major risk vulnerabilities in pulse crops at Chattogram as majority of the respondents opined. Other factors were pest and disease attack, soil salinity and sea level rising. None of the selected respondents were found to cultivate pulse crops at Cox's Bazar.



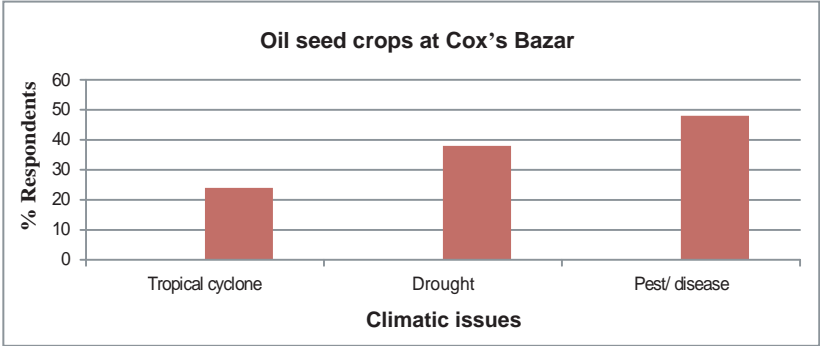
**Figure 14.** Farmers response on long term impacts of climate change affecting pulse crops at Chattogram

**Oil seed crops**

Data presented in Figure 15 reveals that majority of the respondents in Chattogram opined pest and disease outbreak is the most vulnerable factors in oil seed crop. Other risk vulnerabilities were erratic rainfall, soil salinity and cold wave. In Cox's Bazar, pest and disease attack, tropical cyclone and drought were the major risk vulnerabilities (Figure 16).



**Figure 15.** Farmers response on long term impacts of climate change affecting oil seed crops at Chattogram



**Figure 16.** Farmers response on long term impacts of climate change affecting oil seed crops at Cox's Bazar

**Adaptation Practices for Sustainable Agricultural Production**

There were distinct changes of local climate specially temperature, rainfall, salinity, drought, flood, hotness, coldness and fog. which might have combined effect on productivity of crop production in the study area. Against the impacts of those changes, government as well as local community has undertaken some sort of adaptation measures.

Based on the findings of the FGDs, field visits and discussion with farmers and review of the available literatures, some adaptation/innovative farming practices have been identified and documented. Identification of the innovative practices was considered based on i) analysis of the vulnerability, ii) suitability of the crops and practices to meet household needs, iii) possibilities of adoption by members of vulnerable communities, iv) targeted extrapolation area and above all v) possibilities of adaptation to the impact of climate change. Some promising adaptation practices have been summarized in Table 04 and Table 05.

A number of adaptation options/practices were being used by the respondents. Promising and viable adaptation options/practices were selected by the farmers. Among the different adaptation practices against climatic vulnerabilities, farmers were mostly habituated with "Sorjan system of cultivating year round vegetables, spices and fruits on raised beds and creeper vegetables on bed edges making trellis on ditches and cultivation of fish in ditches during wet months in the water-logged/tidal surge areas", "Floating bed agriculture", "Introduction of some salt-tolerant

crop varieties (viz.wheat, maize, millet, mungbean, soybean, chickpea and rice)", "Utilization of bunds in gher areas in cultivating seasonal vegetables, fruits and spices and promoting science based rice-fish dual culture", "compost making and use of composts in homestead gardening" and "shrimp culture". With the changing climate, coastal people have been undertaken by the community to sustain their production system owing to their livelihood. Among those, coastal people changes their seed sowing/ seedling transplanting time accordingly. The respondent opined that due to having irrigation facilities and experience from erratic behavior of climatic variables the planting time have been shifted.

**Table 4. Adaptation Practices for Sustainable Agricultural Production in the Context of Climate Change in Teknaf upazila of Cox's Bazar District**

Sl	Adaptation Practices	% Respondents adopted
1.	Introduction of salt-tolerant crops (rice, mungbean, cowpea, soybean, ground nut) and sorjan system of year round cropping.	68.33
2.	Sorjan system of cultivating year round vegetables, spices & fruits on raised beds and creeper vegetables on bed edges and cultivation of fish in ditches during wet months.	55.00
3.	Using pond water in seed bed to escape salinity	45.00
4.	Promote compost making and use of compost in homestead gardening	28.33
5.	Utilization of canal water by digging canals for cultivating boro crops in large fallow lands	23.33
6.	Floating bed agriculture (vegetable and vegetable seedlings) using water hyacinth bed	20.00
7.	Utilization of bunds in gher areas in cultivating seasonal vegetables, fruits and spices.	18.33

**Table 05. Adaptation Practices for Sustainable Agricultural Production in the Context of Climate Change in Banskhali Upazila**

Sl	Adaptation Practices	% Respondents adopted
1.	Introduction of salt tolerant crop varieties (rice, wheat, maize, potato, strawberry, mungbean, cowpea, soybean, ground nut) in salt affected areas	71.67

2.	Sorjan system of cultivating year round vegetables, spices & fruits on raised beds and creeper vegetables on bed edges and cultivation of fish in ditches during et months.	61.67
3.	Cultural practices (mulching, changes in planting time)	43.33
4.	Promote compost making and use of compost in homestead gardening	40.00
5.	Floating bed agriculture in water logged areas	28.33
6.	Shrimp culture	15.00
7.	Boro rice-fish (bagda) dual culture	11.67

### Farmers' Opinion/Suggestions

Long-term impacts of climate change on crop production systems of the study areas were evaluated through household survey. There is a great scope of bringing the coastal area under intensive farming practices. In this context the respondents provided different suggestions to overcome the problems. Farmers' opinion/suggestions were evaluated through household survey in identifying the needs of GO/NGO interventions to reduce the long-term impacts of climate change for increasing crop production in the vulnerable coastal districts (Table 6).

**Table 06. Farmers' opinion/suggestion on the needs of Govt./NGO interventions to reduce the Impacts of Climate Change**

Sl	Adaptation Practices	% Respondents adopted	
		Banskhali	Tekanf
1.	Training of farmers for increased sustainable agricultural production	23.33	15.00
2.	To use fallow land through local innovations/ adaptation practices	20.00	23.33
3.	To produce and use of drought/salinity/flood adapted crop varieties	28.33	35.00
4.	To increase awareness among vulnerable farmers	21.67	20.00
5.	To increase agro production through farmers' community/groups	13.33	28.33
6.	To increase agro production by maximum utilization of production inputs	15.00	23.33
7.	To give appropriate value of crops production/ marketing facilities of crops and promote agrobusiness	35.00	31.67
8.	To develop marketing system and make agro net work	20.00	13.33

## Conclusion

Coastal agriculture is highly vulnerable to climate change and natural disasters. The intensity of disasters like sea level rise, tidal surge, soil salinity, salt water intrusion and cyclone in coastal belt are being increased. Consequently, the crop area is reducing and the cultivation of aus (summer rice), boro (dry season rice and other rabi (dry season) crops are being restricted in some areas. A vast area of agricultural land that remains fallow or seasonal fallow (30-50 % of NCA of concerned districts) in drought prone, flood prone and coastal areas due to vulnerabilities which will be aggravated further in future due to climate change. The main reasons of fallowing are: soil wetness/water stagnancy, late harvest of T. Aman, drought and increased salinity and expansion of shrimp culture.

Long-term data/information on climate change showed that there is a trend of temperature rise, erratic rainfall, drought spell, increased tidal surges, increase of soil salinity and water salinity, increase of sea level and intrusion of salt water into crop lands, submergence, cyclones etc affecting crop production systems in the coastal region. The study showed that the main reasons of yield reduction (20-40 % yield loss) in T.Aman crop are erratic rainfall, increased intensity and frequency of drought, salinity, floods, cyclone, use of local varieties, increased incidences of pests & diseases etc in the context of climate change. Average yield level of HYV Boro is being affected (20-40 % yield loss) by high temperature and salinity and that of T.Aus/Aus crop is being affected (20-40 % yield loss) by tidal surge. Vegetables, pulses and oilseed crops are being affected (40-60 % yield loss) by soil wetness, excessive rainfall and water-logging in the selected areas.

Local perception of the impacts of climate hazards in coastal areas was assessed during FGDs and household survey. Participants stated that the current climate in this region is behaving differently than in the past on a number of climate risk factors affecting crop production. These are: frequent drought, changes in seasonal rainfall pattern, in-seasonal rainfall, long dry spells, increase of soil salinity, increase of tidal surges. In addition, participants perceived that temperature has increased over the years and duration of winter has been shortened affecting the potential growing period of winter crops. Cultivation of wheat is being affected at grain filling stage due to high temperature and increased incidences of pests and diseases.

Increased intensity of soil salinity was perceived by the farmers as a result of white crust of salts on soil surface and crop burning during drier months in the coastal areas.

Sorjan system of cropping, rice-fish dual culture, utilization of bunds as vegetables/spices production in gher areas, floating bed agriculture and homestead gardening with introduction of salt-tolerant & drought tolerant crop varieties have been identified as potential adaptation options for development of coastal agriculture for increased agricultural production in attaining food security.

## **Policy Implications and Recommendations**

**Location specific production plans:** An in-depth study is needed for developing location- specific production plans for better coastal agriculture. This would need to be based on soil- crop-climate suitability through proper assessment of soil-related constraints, climate risks and socio-economic problems that presently affect crop production systems and livelihood of vulnerable populations in the coastal region.

**Developing Climate Change Scenarios based on GCMs:** There is need for building upon existing adaptation option menus if available, based on GCMs and innovative field practices that are locally viable. Assessment of past and current climate impacts; and understanding of local perceptions of climate impacts and local coping capacities and existing adaptation strategies is required. Capacity building in climate forecasting of DAE extension staff and community representatives should be an on- going part of such initiatives.

**Women's Involvement in Agriculture:** Capacity building of women farmers and agriculturists is key for interventions to support and strengthen household coping strategies in agriculture and for managing climate variability. Given that women are increasingly engaged in homestead gardening, seed production and preservation, processing and compost making in the context of drought occurrences, it would empower women with technologies related short duration and drought-tolerant crop varieties, cropping systems and homestead gardening.

**Capacity building and training:** Capacity building and training for strengthening local institutions, including self-help programmes and

awareness raising for local institutions are required. Strengthening/ carrying out awareness raising campaigns and advocacy on climate change and adaptation issues among vulnerable communities should be undertaken involving the community in participatory dialogue.

**Farming and adaptation practices:** There is need for conducting, strengthening and expanding crop demonstrations and block farming based on adaptation practices. Introduction of risk resistant crop varieties in agriculture with emphasis on crop diversification should be an integral part of the TOT, farmers training and demonstrations.

**Developing infrastructural facilities:** Road network, agro-processing and marketing infrastructure, canals and irrigation facilities need to be improved for mitigating impacts of crop production related vulnerabilities and climate change.

**Management of coastal saline soils:** There is need for improving the management of coastal saline soils through protective embankment, proper sluice gate, land leveling and improved drainage systems.

Bangladesh agriculture is highly risk-prone, and is subject to frequent natural shocks, mainly droughts, salinity, tidal floods and cyclones in the coastal region. Frequent natural disasters and climate risks damage the crops, reduce the asset base of the vulnerable farmers and even completely destroy it. River erosion, tidal surges and agricultural land degradation make these problems further intense. Under the situation, a package of production incentives (suitable seeds, fertilizers, irrigation, pesticides and implements) including credit may be provided to the vulnerable farmers for increased production through Block Farming.

Specific production plan for better coastal agriculture based on soil-crop-climate suitability through proper assessment of soil related constraints, climate risks and socio-economic problems presently affecting crop production systems of the vulnerable people of the coastal region.

Climate change scenarios based on GCMs need to be done considering several climate change prediction models as available in South Asia.

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## **Sustainable Livelihood of Coastal Communities Through Seaweed Cultivation and Utilization for South-Eastern Coast of Bangladesh**

Md. Shafiuddin\*

### **Abstract**

Bangladesh is a low-lying, riverine country located in South Asia (24°34' to 26°38' North, 88°01' to 92°41' East). The total area of the country is 147,570 sq. km (56,977 sq. miles). Bangladesh is in the transitional zone for the flora and fauna of the Indian subcontinent and Southeast Asia, and is part of the Indo-Burma biodiversity hotspot. The country features a great diversity of natural ecosystems. Bangladesh has a coastal zone of 480 km coastline and 25,000 km<sup>2</sup> of coastal area with a huge population, supporting a variety of land use practices. This coastal area with sandy and muddy beaches, estuaries and mangrove swamps can be provided suitable substrate and habitats for various seaweeds cultivation. Bangladesh is rich with 133 species of seaweed and fourteen of them are commercially important. Seaweed farming is highly developed in many south-east Asian countries. Seaweed is also an ingredient for bio-chemicals, pharmaceuticals and cosmetics industries. However, the seaweed industry in Bangladesh is an initial stage. Seaweed, if systematically cultured and explored, could emerge as a vital agricultural product for coastal people, be consumed as dishes and used in the pharmaceutical and cosmetic industries and contribute to the national economy. Seaweed could grow on rocks, soft sediments, pebbles and even on other marine algae it was abundant in St Martin's Island, Inani Beach, Cox's Bazar and Sundarbans. Sea is a unique reservoir. There are resources with limitless possibilities. Seaweed is one such precious blessing of the sea. History says, in 1670, the first cultivation of seaweed started in Japan's Tokyo. Its commercial cultivation started in 1940. Along with Japan, Philippines, Vietnam, Thailand and many other Asian countries started cultivating it. Seaweed is a great source of various vitamins, minerals and iodine.

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Program Coordinator, Integrated Development Foundation, Chattogram

Beside Cox's Bazar airport, on the beach of Nuniyachhara of Maheshkhali channel, recent growing unique activity of seaweed farming. *Hypnea* species of seaweed is being cultivated in tidal coastline of Nuniyachhara beach.

**Keywords:** Seaweed, Blue Economy, Sundarban, Economic, Cox's bazar

## Introduction

Bangladesh has a 710-km-long coastline and a 25,000-sq-km coastal area, supporting a variety of land use practices. This coastal area, with both sandy and muddy beaches, estuaries and mangrove swamps, provides substrates and habitats for the cultivation of various kinds of seaweeds, according to experts. People in Bangladesh are still not aware of the seaweed potential area. A few people are involved in seaweed cultivation in the south-eastern and south-western coasts of Bangladesh. Seaweed culture can be introduced in areas suitable for their cultivation by familiarizing poor farmers with cost-effective technology. Seaweeds can be cultivated using indigenous materials such as bamboo and rope. As seaweed cultivation requires a low quantity of inputs provides good returns and also employs many people, seaweed culture can be a good industry for coastal communities in Bangladesh. The country has no less than 140 species of seaweeds, ten of which were commercially important. Efforts are needed to increase production through improving harvesting techniques, creation of artificial habitats and seeding of suitable coastal areas. Bangladesh should therefore promote the cultivation and consumption of seaweed among their people.

In addition, extensive surveys need to be conducted to identify suitable sites for large-scale seaweed culture. The technology for the cultivation of different commercially important seed stocks and their improvements should be developed through research.

The seacoast of Bangladesh is one of the unreached areas of the world in the field of psychology. There is lack of very fundamental information and statistics regarding seaweeds distribution, total seaweeds and commercially important species available, abundance, seasonal availability, status and approaches for utilization in Bangladesh (Majumder, 2010; Khan, 1990). Seaweed has plenty of essential nutrients, especially trace elements and several other bioactive substances.

History says, in 1670, the first cultivation of seaweed started in Japan's

Tokyo. Its commercial cultivation started in 1940. Along with Japan, Philippines, Vietnam, Thailand and many other Asian countries started cultivating it. Seaweed is a great source of various vitamins, minerals and iodine. Japan produces seaweed worth two billion dollar every year. According to FAO, 25 thousand tones of seaweed is produced all over the world. Its commercial value is 6.5 billion dollar. Bangladesh, having a coastline stretching 710 km, bears a good prospect of blue economy revolution through seaweed cultivation. Bangladesh's Saint Martin Island is a great source of naturally produced seaweed. As far as we know, there are 215 species of seaweed of 102 groups. However, due to the crowd of visitors and local's negligence, many species of naturally produced seaweed are getting extinct gradually.

Seaweeds form a very important part of the marine ecosystem. Seaweeds can physically dominate the whole benthic environment and provide not only the primary food sources but also habitats for a whole range of other marine organisms. Seaweed is found throughout the world's oceans and seas, and none is known to be poisonous (Zemke-White and Ohno, 1999). Most seaweed species are red (6000 species), brown (2000 species) or green (1200 species) (Robinson *et al.*, 1980).

Seaweed has become a very versatile product widely used for food in direct human consumption. Therefore seaweeds are valuable sources of human food. Almost everywhere in the world, from ancient times, people have been consuming seaweeds. The Japanese, the Chinese, the Filipinos and the Hawaiians consider seaweed a food of great delicacy and have been using it in their diets for centuries (Armisen, 1995). Seaweeds are found in the coastal climatic zones throughout the world i.e. from the warm tropics to the icy Polar Regions. Seaweeds have been reported to be used for various purposes by the Romans, Egyptians, Japanese, and Chinese in the ancient time (Dillehay *et al.*, 2008). The extent and scope of seaweeds utilization in this modern world is increasing (McHugh, 2003). Utilization of seaweed as human food was once confined only in Japan, China and Republic of Korea but now spread to mass people of North America, South America Europe and Australia (McHugh, 2003). Apart from conventional seaweed food products like Japanese Nori or Purple Laver and Korean Wakame, seaweed food products like burger, juice, sandwich, chocolate, ice-cream, cake, salad, biscuit, chips etc. are producing on commercial basis (Sarkar, 2015). There fore seaweeds are valuable sources of human food. Almost

everywhere in the world, from ancient times, people have been consuming seaweeds. The Japanese, the Chinese, Filipinos and the Hawaiians consider seaweed a food of great delicacy and have been using it in their diets for centuries (Armisen, 1995).

Seaweed has been a staple food in many other countries for a very long time. The green seaweeds such as: *Enteromorpha*, *Ulva*, *Caulerpa* and *Codium* are utilized exclusively as source of food. These are often eaten as fresh salads or cooked as vegetables along with rice. *Porphyra* (Nori), *Laminaria* (Kombu) and *Undaria* (Wakame) are used for making fish curry and meat dishes as well as soups and accompaniments (Sajid and Satam, 2003). The seacoast of Bangladesh is one of the unreached areas of the world in the field of phycology. Seaweed has plenty of essential nutrients, especially trace elements and several other bioactive substances.

## Objectives of the Study

1. To ensure that long-term food, water, health and nutritional securities of the people are met through the conservation of biological diversity
2. Maintain and improve environmental stability for ecosystems
3. Ensure preservation of the unique biological heritage of the nation for the benefit of the present and future generations;
4. To proper utilization of blue economic resource.

## Materials and Methods

This study was designed and conducts to know the present status of naturally occurring seaweeds flora and its utilization pattern in 9 place of Cox's bazar District of Bangladesh (Uttar nuniarchara, Najirar Teck, Khuruskul, Cox's Bazar Sadar, Cox's Bazar; Pacher Dip of Ramu, Inani Beach Ukhiya, Samlapur, Shilkhali, Shah Parir Dip, Saint Martin's, Teknaf). Geographically these areas have been identified as the most important and promising areas for seaweed cultivation, because of the availability of coastal areas, favorable resources for seaweed cultivation, climatic conditions, cheap and abundant labour. Therefore the coastal district of Cox's Bazar was selected for the study (Figure: 1).

Seaweed is a marine alga that is generally classified as a plant. Seaweed is a primitive type of plants lacking true roots, stems and leaves (Robins et al.,

1980). This study work period we have identified following species which have huge export market and medicinal values (Table 1, Figure: 4)

### 1. Primary Data Collection:

Primary data were gathered by field surveys. This information was also used to confirm the secondary data. A combination of the following survey techniques were used for primary data collection.

### 2. Secondary Data Collection:

Data about seaweed cultivation, its potentials and constraints were collected from published and unpublished documents, relevant



The following culture method was used seaweed cutting/small piece attached with net or rope in floating or attached system for collection of sample from identified spot place. The study team tries to used planting system in the muddy beach of Naf river area and found that ways *Caulerpa* sp. grown were firstly then rope /net system.

### Attached method

1. Long Line method
2. Long line with hanging line
3. Net method

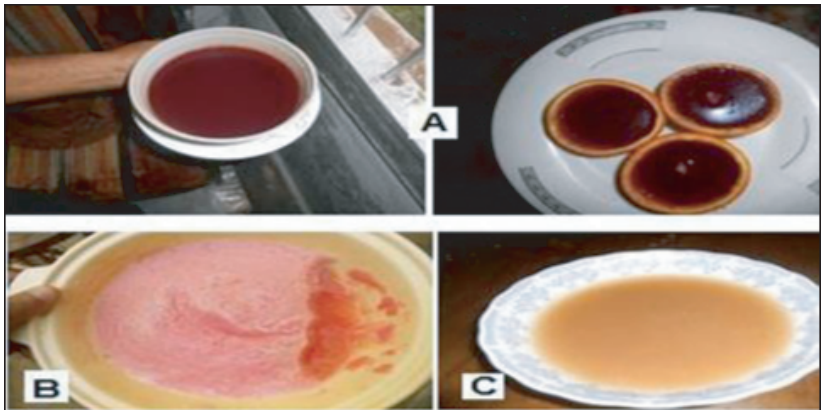
### Floating Method

1. Floating long Line method (Fig: 3 C)
2. Floating long line with hanging line (Fig: 3A)
3. Floating Net method (Fig: 3B)

Plantation Method

**Participatory Rural Appraisal (PRA):** PRA is a group of methods to collect information in a participatory fashion from rural communities (Chambers, 1992). The advantages of PRA over other methods is that it allows wider participation of the community, the information collected is likely to be more accurate. For this study, PRA tool such as focus group discussion (FGD) was conducted with fishermen and coastal communities in Cox's Bazar of Bangladesh. FGD was conducted to get an overview of present condition of seaweed farming in Bangladesh, its potential and constraints. FGD sessions were held on front of village shops, under the big trees, fishermen's houses and school premises wherever there are spontaneous gatherings and where participants can sit, feel comfortable and are easily observed.

**Cross-Check Interviews:** Cross-check interviews were conducted with key informants such as school teachers, local leaders, seaweed researchers from different universities and research organizations, and relevant NGO workers and local people. Where information was contradictory further assessment was carried out.



**Fig 2:** Different seaweed products A Seaweed jelly, B. Seaweed icecream, C. Seaweed soup



A. Seaweed Cultivation of Attached Net System

B. Net Culture System

C. Long Line Rope System

**Fig 3:** Sample collection and harvest from Saint Martin Island & Cox's bazar

As seaweeds are only harvested and processed here for marketing to Myanmar. Beyond this type of utilization, seaweeds are sometimes used there as medicinal food for young ladies and post-pregnant females. Traditionally boiled seaweeds are taken sometimes by adult female for good health. Rotten seaweeds are used there as plant manure for vegetable production.

### Distribution of seaweeds

In Bangladesh, seaweeds have been traditionally utilized as human food by the tribal people. There is no regular seaweed industry in Bangladesh. Some local collection of seaweed can occur for two to three months from November to January in the year. There is good growth of the edible green, red and brown seaweeds in the Sundarbans mangrove forests, on the pneumatophores. Defying the government ban, the poor people in St. Martin Island used to collect seaweed in a limited scale for their livelihood during April-May season which are being exported to Myanmar, China and Singapore.

One hundred forty seaweeds species from St. Martin's Island, 10 species from planted mangrove region and 5 species from Backkhali-Moheshkhali channel estuary of Cox's Bazar was reported by DoF (2014). Seaweed species are abundant Shaplapur coast, Shahparirdip area of Teknaf, Nuniarchara, Nazirartek of Bakkhali-Moheshkhali river estuary Jaillapara of Teknaf and in planted mangrove forest or Parabon region (Haque, 2013).

There fore, St. Martin Island is an extraordinary place for natural availability of seaweeds favorable climatic, environmental conditions and interconnected network of waterways make natural availability of seaweeds throughout whole Sundarbans mangrove forest where benthic forms of seaweeds naturally grow in inter-tidal areas on pneumatophores of mangrove tree, other wooden logs and barks of trees.

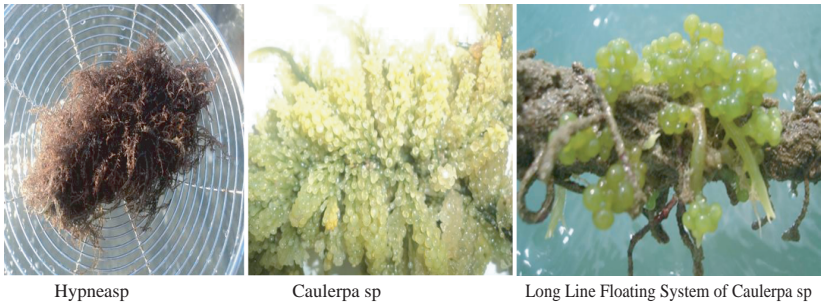
About 155 seaweed species are found in Cox's Bazar. In Cox's Bazar region, seaweeds are very abundant at Shilkhali/Shaplapur coast, Jaillapara, Shahparirdip area of Teknaf, Nuniarchara, Nazirartek of Bakkhali-Moheshkhali river estuary, Moheshkhali and and at planted mangrove forest or Parabon region. In Cox's Bazar, natural seaweed beds are found at Nuniarchara to Nazirartek areas of Bakkhali River and Moheshkhali Channel estuary and in Moheshkhali Island. About 140 seaweed species are found at St. Martin's Island. The St. Martin's island has four coasts: Western, Eastern, Southern and Northern coast.

### Commercially important seaweed species

Among the available seaweed species, 19 species of 14 genera are considered as economically important (Table 1) Natural production of seaweeds: Approximately, 5,000 metric ton seaweed biomass is annually available throughout the whole Bangladeshi coast from October to April.

**Table 1: Different Commercially important Seaweeds of Bangladesh**

Sl No	Genus	Species	Type
1	<i>Caulerpa</i>	<i>Caulerpa racemosa</i>	Green Seaweed
2	<i>Enteromorpha</i>	<i>Enteromorpha sp</i>	Green Seaweed
3	<i>Gelidiella</i>	<i>Gelidiella tenuissima</i>	Red Seaweed
4	<i>Gelidium</i>	<i>Gelidium pusillum</i>	Red Seaweed
5	<i>Halymenia</i>	<i>Halymenia discoidea</i>	Red Seaweed
6	<i>Hypnea</i>	<i>Hypne apannosa</i>	Red Seaweed
7	<i>Hydroclathrus</i>	<i>Hydroclathrus clathratus</i>	Brown Seaweed
8	<i>Sargassum</i>	<i>Sargassum sp</i>	Brown Seaweed
9	<i>Enteromorpha</i>	<i>Enteromorpha intestinalis</i> <i>Enteromorpha moniliger</i>	Green Seaweed
10	<i>Padina</i>	<i>Padina tetrastromatica</i>	Brown Seaweed
11	<i>Catenella</i>	<i>Catenella sp</i>	Red Seaweed
12	<i>Porphyra</i>	<i>Porphyra sp</i>	Red Seaweed
13	<i>Gelidium</i>	<i>Gelidium amansii</i>	Red Seaweed
14	<i>Codium</i>	<i>Codium fragile</i>	Green Seaweed



**Fig 4:** identified spp from Saint Martin Island & Cox's bazar

**Table 2: Micronutrients in normal salad and salad with seaweed**

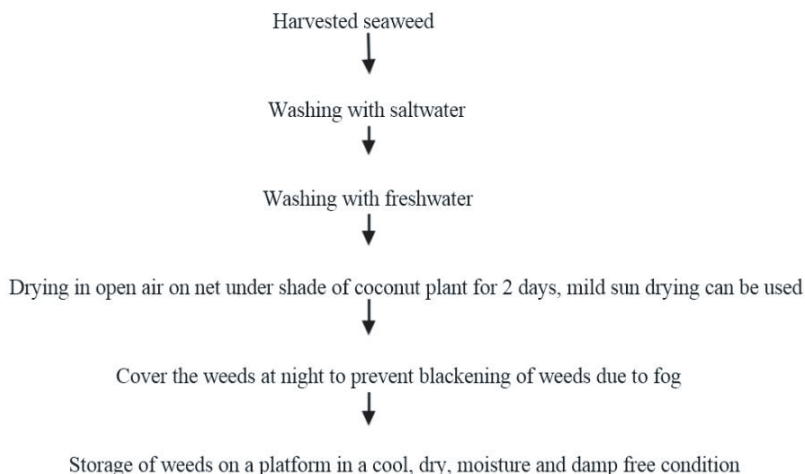
SL.	Treatment Type	Ca (ppm)	Fe(ppm)	K(ppm)	Na(ppm)	Za(ppm)
1	Normal Salad	833.05	16.29	6507.82	17,663.24	4.93
2	Salad with seaweed	1,565.14	154.17	6031.64	15,636.07	8.85

Utilization of naturally occurring seaweed in Bangladesh Conventional utilization of seaweed Seaweeds are almost unknown to Bangladeshi people. Seaweeds in Bangladesh have been utilized only by Mog or Rakhyine tribal community and people of St. Martins' Island. Traditionally, as a marine plant, seaweeds are respected by Mog. Seaweeds are known to them as 'Hejla'. Like different non-conventional food items seaweeds are taken by them. Seaweed salad and sauce is prepared by Mog people. Seaweed species used by Mog people is black in color; resemble shape like a thin thread.Seaweeds are most significantly utilized in St. Martin's Islandas seaweeds are only harvested and processed here for marketing to Myanmar. Beyond this type of utilization, seaweeds are sometimes used there as medicinal food for young ladies and post-pregnant females. Traditionally boiled seaweeds are taken sometimes by adult female for good health. Rotten seaweeds are used there as plant manure for vegetable production.

**Approaches for seaweed utilization by government organization**

Different types of seaweed food products such as salad, soup, pickle, cake, Chanachur, jelly sauce etc. has manufactured by them. In this case, a comparative analysis of micronutrient content in seaweed salad and conventional salad is known (Table 2).

Approaches for seaweed utilization by private entrepreneur and non-government organization Several seaweed foods, functional and personal care products have been developed by the study team (Figure 2). The post-harvest handling procedure followed by that private entrepreneur is presented at following process:



## Seaweed cultivation and coastal communities

A few people are involved in seaweed cultivation in the south-eastern and south-western coasts of Bangladesh. Seaweed culture can be introduced in areas suitable for their cultivation by familiarizing poor farmers with cost-effective technology. Seaweeds can be cultivated using indigenous materials such as bamboo and rope. As seaweed cultivation requires a low quantity of inputs provides good returns and also employs many people, seaweed culture can be a good industry for coastal communities in Bangladesh. According to a survey, seaweed can be cultivated in suitable areas stretching from Cox's Bazar to the Sundarbans.

Apart from its export potential, introduction of seaweed cultivation in the country's coastal areas could provide an alternative source of income for the people. Many edible seaweed species are available on the coast. Attempts should be made to develop products suitable for the Bangladeshi palate and to popularize this amongst the public.

## **Medicinal value of seaweeds in Bangladesh**

The protein contains in seaweed are of very high quality and have all the essential and non-essential amino acids. The lipids, which are present in very small amounts, are unsaturated and thus afford protection against cardiovascular pathologies. Seaweed has abundant vitamins, including beta-carotene, which is the precursor of vitamin A, the vitamins of the B group, including B12, vitamin C, D, E and K. The very high levels of enzyme activity in seaweed help the assimilation of all these vital elements. More than one million people are exposed to goiter and related diseases in Bangladesh. Through iodine deficiency alone, people suffer severe mental and thyroid problems. Most seaweed contain more iodine than sea water and are a much better alternative than iodized salt or drugs in regulating the production of thyroid hormone. Besides iodine, seaweed is a perfect source of calcium, phosphorus, iron, sodium, potassium, magnesium, sulphur, copper, zinc, cobalt and iodine. Medicinal use of seaweeds was also reported by Majumder, 2010. The content of calcium in seaweed is not only up to 10 times higher than that in cow's milk but is also much easier for the body to assimilate. Pregnant and lactating women, as well as malnourished children, should thus consume some seaweed daily to ensure that they get enough of the element that is found in the greatest quantity in human bodies (Leyman, 2002).

## **Seaweed uses for supplementary feed**

Supplementary feed is one of the most prime exogenous requisite for proper fish culture. The supplementary fish feeds are either be vegetable foods (e.g. pulse, cereals, grains, yeast, plant parts etc.) or animal origin (e.g. fish meal, meat meal, blood meal, meat and bone meal, internal parts of animal body etc.). Whatever the feeds type, the criteria for a successful fish feeds are, (i) readily acceptable, (ii) having high conversion rate (iii) availability (iv) highly keeping quality and (v) low cost. Several studies are directed to an efficient and cost-effective seaweed supplementary fish feed because of the importance of fish as a protein source for human and animal's diet. Seaweed plays an important role in efficient aquaculture production as it gives high influences not only to the production costs, but also to the fish health, growth and immunity. Aqua feed is the major determinant that influences the successful growth and intensification of aquaculture production.

## **Social and economic issues for seaweed**

The development of seaweed cultivation and need to be taken into account in fostering and planning it. Even if biological, technological and environmental conditions are favorable for the development of seaweed production, it may fail if social and economic factors are unfavorable. Such issues are equally important for the successful development of seaweed culture in Bangladesh. Seaweed could easily be a new item on the country's limited export basket and would contribute greatly in reducing poverty and persistent unemployment problem. At present, Japan, Korea, Philippines, China, India and Taiwan have been producing the seaweed commercially (Sahood et al., 2002). On the other hand, USA, Japan, Singapore and some European countries are importing seaweed and Bangladesh could explore the markets. The development of seaweed cultivation is also market-driven. If demand is low and natural resources are adequate, artificial cultivation is unnecessary. As demand increases, however, attempts may be made to increase production using resource management techniques. Improvements can be made to harvesting methods and artificial habitats, competing species can be removed and cleared areas seeded.

## **Seaweed supplementary feed for growth performance of fish**

The effect of seaweeds as feed supplements in fish diet which shows significant results on growth performance, feed efficiency and body composition of fish. Different studies indicate that the seaweed Supplementary feed for growth performance of fish was higher and effective than commercial feed.

## **Future directions for seaweed aquaculture**

Seaweed aquaculture technologies have developed dramatically over the last several decades, but there are still challenges to overcome. New strain development by advanced breeding tools is the most urgent challenge.

Superior strains will allow the growers to expand growing seasons and enhance production. Considering the global climate challenges, development of thermo-tolerant strains may be needed. Also the strains with disease resistance, fast growth, high concentration of desired molecules and the reduction of fouling organisms also need to be developed. Development of advanced cultivation technologies which are more robust and cost

efficient farm systems is very important. This new system will be even more critical for highly exposed, off-shore environments since most seaweed aquaculture have occurred near shore.

With offshore aquaculture, new designs and approaches to macro algae cultivation will be required, including strain development, harvesting, transport and processing. The offshore aquaculture system may leverage new material and engineering solutions, autonomous and robotic technologies, as well as advanced sensing and monitoring capabilities.

### **Benefits of a strategic approach to human resources management**

- 1 Facilitates development of high-quality workforce through focus on types of skilled people
- 1 Facilitates cost-effective utilization of labor, particularly in service industries where labor is generally greatest cost by culture time
- 1 Facilitates proper planning, monitoring, culture techniques & assessment of environmental uncertainty & adaptation of different organization to external forces.

### **Conclusion**

Seaweed can meet our need of nutrition. Alongside, it can be a great source of earning foreign currency. Cultivating seaweed can be an alternative employment source along with catching sea fish. Especially for women, it can be a profitable sector. A huge industry with limitless possibilities can grow. Along with the government, if industrial entrepreneurs of related fields come forward, they can open a possible door of a new world in blue economy which will enrich our national economy.

It is very necessary to use modern technology to increase the production of non-traditional marine resources. Almost three crore people live in 19 coastal districts, and most of them depend on the sea for their daily livelihood. Promoting seaweed cultivation techniques among coastal people can change their livelihood.

Seaweeds have potential to emerge as an individual export oriented industry in Bangladesh. More comprehensive studies on present status of naturally available seaweeds and their present status of utilization should be conducted and a long-term scheme for utilization of this resources required

establishing. Despite the great potential of seaweed culture, no attempts to grow seaweed have been made in Bangladesh so far.

This study has identified that Efforts are needed to increase production through improving harvesting techniques, creation of artificial habitats and seeding of suitable coastal areas of Bangladesh. The technology for the cultivation of different commercially important seed stocks and their improvements should be developed through research. For better opportunity must be implementation latest technology, technology transfer, global demand, skilled manpower training, opportunity creates and evaluation by strategic management for Bangladesh perspective.

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## **Bridging the Digital Divide is Now Priority Concern for Digital Bangladesh**

Md. Abdus Sabur\*

### **Abstract**

Digital Bangladesh implies the broad use of computers, and embodies the modern philosophy of effective and useful use of technology in terms of implementing the promises in education, health, job placement and poverty reduction. Digital Bangladesh facilitates on Vision 2021 of Bangladesh. This process includes all classes of people and does not discriminate people in terms of technology. This research has figured out that the digital divide is impeding the reality of Digital Bangladesh. The major causes of the digital divide is lack of access, technological literacy, high cost and awareness. The government has taken several efforts on bridging the digital divide and achieving the goal of Digital Bangladesh by 2021- the year which marks the 50th anniversary of Bangladesh's independence. It is now proper time to prioritize some issues on making the reality of Digital Bangladesh. For instances; equitable access of ICT and ITES enable services for all, more accessible apps development and orients to people, interesting and interactive learning environment, innovation and ITES enable agriculture and farming, digitalization of case and court management, more help line with online option in case of emergency support, early warning and satellite based network, e-Dialogue and Participation, Community e-Centers, e-payment and m-payment services and so on. Every services and facilities will be ubiquitous irrespective of location, gender, ethnicity and economical context of users.

**Key words:** ICT, ITES, Digital Divide, Digital Inclusion, Vision 2021

### **Introduction**

The Government of Bangladesh has committed to build 'Digital Bangladesh'. The 'Digital Bangladesh' implies the broad use of computers, internet and embodies the modern philosophy of effective and useful use of

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\* Programme Manager, YPSA, Bangladesh.

technology in terms of implementing the promises in education, health, job placement and poverty reduction. "Vision 2021" and "Digital Bangladesh" action plans to transform Bangladesh into a fast developing Middle Income Country by 2021. The ultimate objective is to make more and more services available at the doorsteps of the people with increased digitalization. Several projects for digitization have been completed and a big number of projects are under progress. According to the National ICT Policy-2009, short-term, mid-term and long-term plans consisting of 306 action plans have been identified for the realization of Vision 2021. The government has been benefiting on that process. For instance the number of mobile phone users are to over 154 million whereas the internet users is around 90.5 million (BTRC, 2018). More than 84.6 million access the internet on mobile phone. In addition to, according to World Bank the number of personal computer user 2.5 per 100 people, in research found that in 2019 it is percentage is 19%. Still there are many challenging issues for ensuring digital Bangladesh and digital inclusion. It suffers from structural handicaps in providing equitable and universal access to ICTs for its population. The majority of the content of the World Wide Web and application/services is produced in the English language, which is creating a barrier for many potential users in Bangladesh. In addition to large number of users are visual impaired so these application and web services is not accessible to that users. Alike, the features and operation of ICT gadget is hard to marginalized and excluded people causes the instruction moods is in English or not accessible. These processed has created a digital disparity as called digital divided. According to research it was found that there are several reasons that contribute to this digital divide which include marginalized areas, disadvantaged individuals, getting access to rural areas, high cost, not informed the benefits of using IT and ITES an lack of interest. The disadvantaged includes the disabled, the unemployed, and the uneducated. This paper it is tried to identify the level of digital divide, impact and what action should be taken and amendments regarding act/laws/regulation need to deploy for bridging the digital gap in the country within 2021.

### **Aim and Objectives**

The aim of the study is to explore the level of digital divide and way forwarding. This research has three strategic objectives as;

1. To identify the level of digital divide
2. To identify the possible impact of digital divide
3. To define some priority issues on bridging digital divide and facilitating digital inclusion

### **Methodology**

Qualitative and quantitative approaches were adopted to conducting this research. The secondary sources of information: the books and journals; reports published by ITU; Journals published by educational institutions, Reports of BTRC, Online published news and articles were reviewed thoroughly. A semi structured question naire were developed to assess the level of digital divide. A questionnaire survey is conducted to the ICT users in across the rural and urban areas. Another major tool of the study is qualitative survey which comprised of Focus Group Discussion (FGD) and Key Informant Interviews (KII). In that research two FGD and four KII was conducted.

### **Literature Review**

The *digital divide* is the gap that has been created between those who have access to technology, those who do not have access and those with limited access. The major cause of the digital divide is access. The digital divide may exist for several reasons. Obtaining access to ICTs and using them actively has been linked to a number of demographic and socio-economic characteristics such as income, education, race, gender, geographic location, age, skills, awareness, political, cultural and psychological attitudes (Zahiruddin, 2017). In addition to within a country the income levels and educational attainment of individual can creates digital divide. Alike, geographic location, people living in urban centers have more access and show more usage of computer services than those in rural areas. Gender was previously thought to provide an explanation for the digital divide. Lack of Information (Information poverty) is the consequence of other forms of poverty, social inequalities, and inadequacy of resources, illiteracy, corruption, injustice, poor health, and lack of basic public services.

In 2008 general elections in Bangladesh, Bangladesh Awami League announced its manifesto, its "Vision 2021" and "*Digital Bangladesh*" action plans to transform Bangladesh into a fast developing Middle Income Country by 2021. After the landslide victory in 2008 national parliamentary election, Awami League formed the government and focused on attaining

the seemingly lofty goals and targets outlined in the manifesto. In this process 'Digital Bangladesh' has emerged not only as a vision but also as a unique development approach to leverage ICT in delivering the social goods for the underserved. The philosophy of "Digital Bangladesh" comprises ensuring people's democracy and human rights, transparency, accountability, establishing justice and ensuring delivery of government services to the citizens of Bangladesh through maximum use of technology, with the ultimate goal being the overall improvement of the daily lifestyle of general people.

**ICT Application:** ICT is a powerful force that can and must be harnessed to the need of socio-economic development of the country. Although ICT practices alone cannot guarantee economic progress, they are a powerful catalyst for economic growth, poverty reduction and social equity. Among a lot of ICTs applications some of them are briefly illustrated bellows which are defined role in digital Bangladesh as;

**E-governance:** This is to ensure that the Govt. administration becomes a swifter and more transparent process. E-governance to enhance transparency, accountability, and efficiency in the delivery of public services to citizens.

**E-learning:** Learning conducted via electronic media, typically on the Internet. E-learning is about development of skills to access knowledge which addresses numerous issue such as local contents, multi-lingual and cultural diversity, and intellectual property rights.

**E-Business:** E-business or online business is conduct of business on the internet. Use of digital technologies can enhance the role of enterprise in promoting entrepreneurship, the accumulation of knowledge, the upgrading of skills, fostering innovation, reducing transaction cost, and there by increasing productivity.

**E-Commerce:** Ecommerce, also known as electronic commerce or internet commerce, refers to the buying and selling of goods or services using the internet, and the transfer of money and data to execute these transactions.

**Telemedicine or E-health:** The service of e-health can provide immense opportunity to the patients and the medical practitioners. Using the service of telemedicine, the patient of rural areas or in large cities, can consult with the doctors of different places of the country and beyond.

***E-Post:*** It may be recommended that using a V-sat network based on solar power E-Post services in the coastal, mountainous, and other remote Upazilas, scanned letters and documents can be sent to those areas which could other wise take more than a week to reach.

***Emergency Telephone Service:*** In all the developed and in most developing countries it always advised to carry the mobile phone along with whenever someone travels to mountain, jungles, and such other risky places. It is a regulatory obligation to facilitate Emergency Calls irrespective of the subscriber's locations. For instance national emergency call number 999.

***Decision Support System:*** A decision support system (DSS) is a computer program application that analyzes business data and presents it so that users can make business decisions more easily. By using the decision support system a manager/decisions takers can easily take decision on his/her business.

***National ICT Policy;*** For the development of ICT sector within the framework of overall national development, the government has approved the National ICT Policy in October 2002. Considering ICT as the thrust sector the vision of this policy aimed at building an ICT-driven nation comprising of knowledge-based society by the year 2006. A national ICT task force had been formed headed by the Ex. Honorable Prime Minister.

Key objective of National ICT Policy was "Building an ICT-driven nation comprising knowledge-based society by the year 2006". After the transformation of government, the ICT stakeholders felt the need to revise the current ICT Policy in line with the national goals, objectives and capabilities. Accordingly, the 'National ICT Policy Review Committee' was formed by the Ministry of Science and ICT. And the proposed The 'National ICT Policy 2009' which is the outcome of the work of this committee. Elimination of the digital divide between rural and urban areas and between Bangladesh and other nations is essential to be at par with middle-income nation. The vision of National ICT Policy 2009 is "Expand and diversify the use of ICTs to establish a transparent, responsive and accountable government; develop skilled human resources; enhance social equity; ensure cost-effective delivery of citizen-services through public-private partnerships; and support the national goal of becoming a middle-income country within 2021 and join the ranks of the developed countries of the world within thirty years".

## Research Findings:

### *Status of Digital Services and digital divide in Bangladesh:*

The Digital Bangladesh vision is comprises of four key elements as; *Human Resource Development, Connecting Citizen, Digital Government and ICT in Business*. The digital divide are discussed with the base of digital service of Bangladesh.

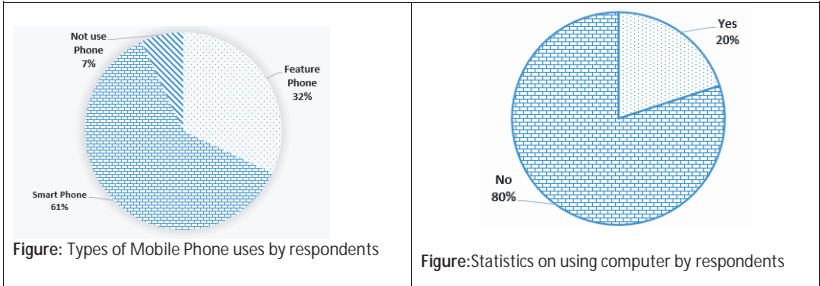


Human Resource Development; this component is about the future of "Digital Bangladesh" and is a precondition to propel the agenda to its final destination. The key objective here is to make the best use of new technologies to build world-class skills in all areas of study especially mathematics, science, and English language. ICT for education or e-Education will also deal with providing vocational and 'lifelong education' opportunities to the youth and adults in order to retool them and build newer skills to improve their productivity.

The Ministries of Education, and Primary and Mass Education have realized the potential of ICTs in elevating the educational quality and have deployed initiatives to develop digital materials for school education. Multimedia based classroom has established in several instances. Use of videotaped TV programme as learning tools is becoming popular among the farmers. Initiative to use digital media and e-learning platforms are being undertaken to provide on-demand and on-the-job training and skills building for the public servants. To consider the reality in many instances the digital platform is absence mainly the hard to reach areas schools, alike the capacity of teachers who are going to build the soldiers for Digital Bangladesh are not skilled on ICT knowledge. On the other hand on higher education platform, to increasing the course of computer literacy and its application, hardware and software engineering courses are being offered in different College and Universities, Bangladesh Computer Council, and Engineers Institutions of Bangladesh (IEB). But in many instance, we cannot make it access to all because most of the facilities are centered to cities not to marginalized. The research has figured out that a very few people were received training on IT and ITES. And the ITES services are

not ubiquitously in rural areas than urban.

**Connecting the Citizen:** Ensuring access to the Digital Bangladesh for all citizens, poor or rich, literate or Illiterate, urban or rural is another foundation stone of Digital Bangladesh. More specifically, this component will deal with i) building awareness and capacity of the communities to access public services leveraging ICTs, ii) issues associated with local language content and locally relevant content, iii) innovative access channels and platforms for common men/women, etc. In this force to action, BTCL has installed digital exchanges in all the districts and Upazila's in Bangladesh. Transmission links are being expanded up to all Upazillas levels and optical fiber cable is installed to distribute the facilities of ICTs all over the country. Bangladesh has already been connected to the global information superhighway through submarine cable. Mobile phones have created a sustainable channel of communication in Bangladesh. This device is most popular and reached to the poorest of the poor. Mobile phone based different programmes mainly on agricultural issues, health issues, legal, and human rights issues already attracts a large audience and reached to marginalized people. Community FM Radio has emerged as another channel of communication for the poor and the marginalized. Research has figured out that about 90% respondents are using phone , 61% people using smart phone and only 20% respondent using computer. Among the smart phone users only 55% uses internet. The main purpose of using internet at smartphone is using social media mainly the Facebook and imo. The Research also revealed that reasons behind the not using smart phone and internet, in that context most of the respondents said that due to high price, do not understand the content and difficult to use.



**Source:** Field Study, 2019

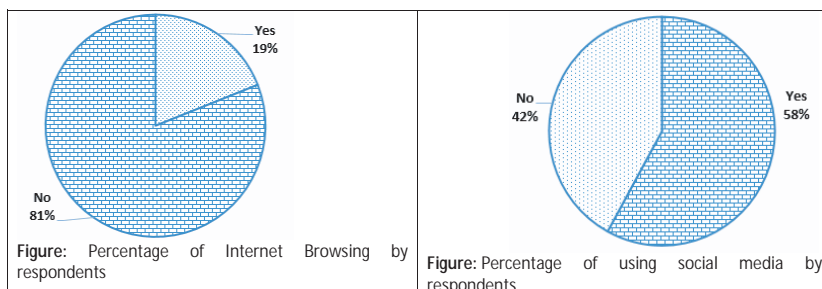
As truly enter the Digital Bangladesh several efforts should be undertaken

as to develop sustainable and accessible delivery channel as subsidy in community radio, low call rate, low cost broadband access, low cost smart devices, free helpline and should be operated by native language. As well as different have to organize different knowledge session on benefits of using internet, IT and ITES.

### ***Digital Government for Pro-poor services***

The key objective of 'Digital Government' would be to leverage technology in all spares of government with a sharp focus to ensure delivery of such services to those who are the least served. In Bangladesh, government is the key provider of citizen services and public information. Communities rely on public services like agriculture, health, education from the government. Hence, one of the key subcomponents of the Digital Bangladesh would be provision of ICT enabled services (e-Citizen services) by public agencies. The two key sub-components of this component are e-Citizen Service and e-Administration to delivery e-Citizen Services. The key objective of the e-Citizen service sub-component is to ensure anytime (24X7), anywhere services to anyone especially poor and marginalized in need of such services at a cost that he/she can afford and in a way that is transparent to all. This vision comes in action that government has taken several efforts as providing E-Services from all Districts since 2013. Government has also started using Union Parishads Complexes to coordinate all development activities. Besides using this complex as the office of the Union Parishads, provision have been made to accommodate Union level offices of Health and Family Welfare, Agriculture, Education, Livestock, Ansar and VDP, BRDB and LGED. Villagers will now come one single place and ventilate their various difficulties and problems to the concerned officials. At the same time, the elected representatives would be able to supervise the activities of various offices at the Union level and enable them to perform coordination effectively. Such a nice building may have a room allocated for providing E-services. Gradually all 4554 Unions will also be provided with such connectivity. Payment of utility bills through mobile phones, SMS-based railway ticketing information, etc. are some of the pioneering initiatives of the government which can be cited as examples of ICT-based service delivery. These ICT based service delivery is relaxing users from standing in long queues to pay their dues, and instead, afforded them alternative ways to settle their bills any time and from anywhere suiting their lifestyles. What is concerned today there are similar dozen ICT based services but poor and marginalized are not used to uses this services.

Research has figured out that only 19% of people are uses internet browsing rather Facebook is 58%. It is very interesting that respondent are using more facebook than internet browsing. Research figured out that the respondents are internet browsing for collecting



**Source:** Field Study 2019

necessary information and acquisition of different available services of government and private agencies. Research also tries to figure out why they do not uses internet. Most of the respondents said that the do not understand the contents at website, difficult to use and no need. So, it is important to make aware the people about the benefits of ethical using internet and it should be user friendly and accessible.

### ***ICT in Business;***

This component will deal with three broad issues of Digital Bangladesh namely i) access to market, ii) promotion of ICT business to support Digital Bangladesh and iii) ICT as an export oriented sector. Access to market through ICT can open up markets for small entrepreneurs and large business alike. Introduction of ICT platforms to participate in public procurements (e-Tender) is yet another example of how ICTs are leveraged in various parts of the world to open new opportunities for the businesses. Alike, promotion of ICT business is deals with assistance to the private sector to attain the international standards by bootstrapping some of the training institutions/mechanism and by promulgating the necessary standards and benchmarks required to maintain and encourage quality. Finally, the third sub-component involves promoting the ICT business sector to boost its potential for ICT export and earn foreign currency. This may also involve providing the right springboard required for the local companies to access the global market.

Government has been establishing High Tech Park with all modern infrastructural facilities. But access to the information is exclusively dependent on the combination of telecommunication infrastructure, the availability of user-end equipment and tariff of the service. Though in access to global market Bangladeshi freelancers are doing well. There are about 650,000 registered freelancers and in global its position is 2nd. These freelancers are earns \$100 million in annual. So, the IT freelancers earning is emerging in Bangladesh economy. So, what is concerned today on ICT business, though the ICT business approach is open, competitive and international standard. So the marginalized and less competitive applicant cannot win this battle.In that context, we should give priority to this emerging sector (outsourcing), should provide basic communication knowledge to our applicant and provides depth subjective knowledge on the market demand issue. It was observed from the research that the purpose of using internet is accessing Facebook and a low percentage of respondents are using internet for information acquisition (13%) and e-commerce (6%).

**Measuring Digital Divide**

Research has figured out that the digital divide exists in Gender, Location and Economical Context of Participants. For instance, female are using less smart phone, computer, internet, social media than male. This variance is also acute in urban to rural areas. The following table is justify the testimony.

Digital Divide Indicators	Female	Male	Digital Divide Indicators	Rural	Urban
Smart Phone User	35%	61%	Feature Phone User	32%	22%
Computer User	16%	23%	Computer User	14%	33%
Social Media User	55%	62%	Social Media User	55%	67%
Internet Browsing	16%	23%	Internet Browsing	14%	33%

**Source:** Field Study, 2019

To measure the progress and outcome of the ICT-related initiatives, ITU has devised an index to rank the countries in respect of ICT capacity. The index, known as Digital Access Index<sup>1</sup> (DAI), is prepared based on the infrastructure, affordability of access knowledge, quality of ICT services and internet user penetration of a country.

The digital Access Index is a vital reference for governments, international development agencies, non-governmental organizations, and the privet sectors to assess national conditions in Information and Communication Technology and overcome the digital divide particularly in developing countries.

In the ICT Development Index released by the International Telecommunication Union (ITU), Bangladesh is ranked is still not encouraging yet. Out of 154 countries, rank of Bangladesh is 138. Bangladesh is gradually moving towards its desired goal in e-government development ranking securing its place 115 (ITU, 2018). So there is huge work should be done on being digital Bangladesh.

### **Possible impact of digital divide**

The Digital Divide has a tremendous impact upon the culture and the people of every region. Research has identified the effects of the digital divide are immensely felt in the following areas: Education, job opportunities, communication, politics, consumer satisfaction, health Information, community Involvement, government, and emergency information.

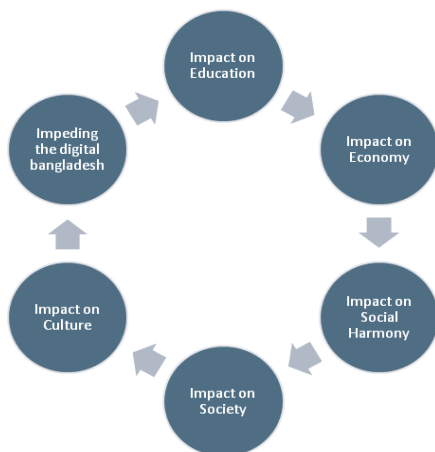
### **Impact on education**

The access and availability of ICT have been associated with academic success and robust research activities since users can quickly make references. Education is a very dynamic sector and keeping up to date is crucial to success, the presence of internet access will ensure you get the latest trends and revolutionize research skills. The inadequacy of ICT equipment has made the already weak education system. In Bangladesh, this is practical scenario is the urban based institutions are generally doing well rather marginalized educational institutions. So, there have fear of quality level of education due to digital divide. Though, Governments are now striving to avail ICT services to all schools in an effort to improve the education standards.

### **Impact on the economy**

Availability of telecommunication services is crucial for economic growth, and there exists a strong linear correlation between the two.

Interestingly, socio-economic status is one of the major causes of the digital divide and it also a consequence of the digital divide. Penetration of internet enables people to engage in economically productive activities such



as trade without much hassle. They can shop online and compare prices to get the best bargains, safely and securely transact online this translates to economic empowerment. So, due to digital divide the economy of developing nations is being impeding.

### **Impact on social harmony and cohesion**

The inclusion of ICT services has been crucial in enhancing social interactions among people. Social media such as Facebook has been useful in facilitating communication and maintaining touch with friend and relatives of close ties. Research has finding that social media plays in important role on retaining social harmony and cohesion. The misuse of social media creates social unrest and breaks the cohesion. For instances, Ramu tragedy 2012, Nasirnagar cases 2016 etc. Such segregation creates a potential for social conflicts in the communities where the wealthy can have computers and access the internet while the poor are barred.

### **Impact on the society**

The digital divide has contributed significantly to stratification in the community whereby there arises a class of persons with access to the internet and another class unable to use the ICT services either due to affordability issues or literacy levels. Some other factors that contribute to the digital divide in the society include age, race, and ethnicity. The digital divide has led to a rise of new alignments in the community whereby people are classified depending on ability to access internet services this is coupled with associated benefits, and therefore those with limited access to technology continue to lag behind in development matters.

### **Impact on culture**

Technology affects different cultures in varied ways either on the positive or the negative. The integral components culture like relationships, communications, and art have been dramatically evolved by technology. However, it seems like some specific customs and cultural traditions have remained intact. The developed countries experience tremendous changes in their culture as they incorporate new cultures acquired from the internet while the developing countries with people having limited access to the internet have their culture unchanged. Because they do not have access to technology, people in technology-poor nations are left behind. However, in order to narrow the digital divide, people need access to technology.

### **Impeding the digital Bangladesh**

Due to impact of digital divide the digital Bangladesh vision within 2021 is now impeding. Till now internet access is not reach everyone, uses of computed and ICT is not ubiquitous, website and social media is not access to all due to exotic operational mood and the services of government is far beyond of doorsteps.

Alike, lack of knowledge and access of ICT creates awful to the users, in many cases service providers are reluctant to create or provide services for marginalized areas. So these factors are impeding the digital Bangladesh.

### **Priority issues on bridging digital divide**

The government is moving closer to achieving its goal of a Digital Bangladesh by 2021, with stakeholders saying two thirds of the work is being done with one years to go. The number of mobile users, internet users and information availability at online has been increased. While emerging technologies such as artificial intelligence (AI) and internet of things (IoT) is poised to shape our future, the government of Bangladesh, in alignment with governments all around the world, is focusing on technology to ensure poverty alleviation, quality education, gender equality, industry innovation and infrastructure, peace and justice and partnerships. All these are aspects revolving around the Sustainable Development Goals (SDGs).The key essence of achieving these goals through technology will be to bridge the digital divide. This research has identified the priority issues on bridging digital divide. The priority issues are;

#### ***Equitable Access of ICT and ITES enable services for all***

In the ICT Development Index released by the International Telecommunication Union (ITU), Bangladesh is ranked is still not encouraging yet. The following priorities should be concerned as Domestic and International Connectivity, Telecommunication Services (e.g., 3G, 4G, and LTE), Access to Broadband, Last Mile Connectivity, Content Development and Services etc. By considering these issues, the Citizens of the country irrespective of economic condition, education, race, ethnicity, profession, gender are connected through network of mobile communications, broadband Internet, audio-visual media for exchanging information and accessing services.

#### ***More Apps development and Orient to People***

There are about 500 Bangladeshi apps in Google play store. In where about

53 apps are developed by Bangladesh government for her citizen<sup>2</sup>. Whereas there about 44 Ministry in Bangladesh ads here is under more than three hundred department and directorate<sup>3</sup>. So, government should develop more mobile apps of their services and information. All apps should be native, self-explanatory and accessible. Alike, government should promote non-government organizations for developing apps for disclosing their information and services. Afterwards, it will be effective if to orient the name and benefits of using apps to mass people.

### ***Vibrant ICT Industry***

A vibrant ICT industry forms a critical component of the backbone for the vision of Digital Bangladesh, the government has put special emphasis on this sector. Specially, institutional financing to IT and ITES Industries, adequate tertiary ICT-related educational institutions, Private corporate business in IT enterprise, low cost bandwidth, IT Park/Software Technology Park, available power and IT friendly policies.

### ***Modernized Education System***

Modernized education system is indispensable for digital Bangladesh. For bridging digital divide the following issue should be prioritized as; Teacher-led content development, Interesting and interactive learning environment through multimedia classrooms in every school, Incentives for teachers based on performance and innovation, ICT literacy for students in the tertiary education, The Bangladesh Research and Education Network to connect all universities and research institutions with high-speed connectivity, All education services to be made available online or through mobile platforms, Education TV or web TV, Modernizing Bangladesh Open University, Public-private partnership.

### ***Universal Quality Healthcare***

Being digital Bangladesh, ensuring adequate healthcare services to the marginalized section of the population. The following issues should be prioritized for bridging digital divide as, E-Healthcare Management, E-Healthcare Services, National Health and Demographic Information Should be Updated Regularly.

2. [play.google.co/store/Apps/Developers](https://play.google.co/store/Apps/Developers)

3. <https://cabinet.gov.bd/>

***Productive Agriculture***

Agriculture in Bangladesh accounts for 18.73% of GDP and employs 43.53% of the labour force directly. For bridging digital divide should innovation in Agriculture as ICT based surveillance system will be developed to assist farmers with timely and accurate detection, diagnosis, prevention, and control of diseases, receives new technologies, access to new information and services, access to market and rural finance.

***Just Judiciary and Responsive Law Enforcement***

Judiciary is considered as a pillar of democracy. Access to justice is constitutional rights of citizens. By ensuring easy and affordable access to judicial services, eliminating pending cases through digitalization of case and court management process, improving legal enforcement system through integration of ICTs in all stages of legal process.

Law enforcement is an integral component of the justice delivery mechanism. Law enforcing agencies are entrusted with providing services to all citizens and making their lives safe and secure. For bridging the digital Bangladesh the following issues should be prioritized as; secured environment of rule of law, digitized crime data, established strong connectivity in Police areas WIMAX, Provide IT literacy to Police in all levels, strong Passport verification process, Crime data management system (CDMS) will be installed in all levels, help lines with online option in case of emergency, Cyber-crime prevention and prosecution.

***Reduced Environmental Vulnerability***

Bangladesh is one of the most vulnerable countries to climate change. The following issues should be prioritized for bridging digital Bangladesh as; using remote sensing techniques on weather forecasting model, develop an early warning and disaster recovery, developed satellite based network, using GIS-Based Modeling in development planning and web based cyclone shelter information.

***Effective and Efficient Social Security***

Bangladesh economy has made significant progress in last decades. Bangladesh has also transformed into Developing country. Still 20% of the population are hardcore poor in the country. However, there is a need for special support to most vulnerable group in the society. Social safety nets can play an important role in alleviating poverty and in promoting long-

term growth by providing impoverished households with the social protection that markets and informal networks are unable supply. Thus, priority of the government is to ensure integration of ICTs in the areas, where it can maximize benefit to the poor and all marginalized segments of the population.

### ***Hassle-Free Land Management***

Land, as a resource, is the foundation of any country's economic development, and it is directly linked to national income. But in reality, One-fourth of all land records are disputed. Good governance and effective public administration recognize land as the principal source of wealth and indeed wealth generation in a society. A set of new policies related to land administration and land use highlighting appropriate integration of ICTs for ensuring better access to land records and bring about transparency and accountability in land transactions as well as better access to khas land by poor, climate displaced people and vulnerable community groups.

### ***Parliament and Vox Populi***

ICT can play a crucial role by improving the performance of parliamentarians so that they can better represent their constituents, scrutinize the actions of the Executive and make sound laws. ICT use can bring about conditions which can facilitate greater equity and increased access to essential services such as education and health services to all, especially to those segments support for whom is inadequate. Alike, in using various means of e-Dialogue, e-Participation, e-Deliberation and e-Consultation can strengthen democracy and bring back muchneeded trust of the people in democratic processes.

### ***Self-Governed and Responsive Local Government***

Local government institutions are the cornerstones of democracy. The central government reaches its remotest citizens through local government institutions and vice versa. The ICT Policy 2009 has given guidelines about incorporation of Information and Communication Technologies (ICTs) in local government by the agencies of Local Government Division (LGD). The following issues should be prioritized on bridging the digital Bangladesh as; Seamless Networked Information Management System at LGIs, Integrating ICT's in the Operations of Local Government Bodies and Agencies, Strengthen the Information and Service Delivery.

### ***Active-Citizen Civil Service***

The Bangladesh Civil Service (BCS), is an elite civil service that provides administrative and policy support to the Government of Bangladesh. The following issues should be prioritized for bridging digital divide as; Change Management to Inspire Civil Service For Improved Service Delivery, Creating One-Stop Shops<sup>4</sup>, Citizens Charter<sup>5</sup> as A Point Of Departure for Ensuring Accountability, Paperless Office<sup>6</sup> Or 'Less-Paper' Office Connecting The Civil Service (providing reliable and high-speed connectivity to the civil servants in all tiers within the central and field administration within a defined timeframe needs to be a high priority of the government), Capacity Building And E-Leadership Development<sup>7</sup> of Government Official and Ensuring Proper Budget Allocation.

### ***Inclusive Banking and Access to Finance***

An efficient and robust banking system is a critical enabler for growth of business sector in any country. It is mentionable that only the access to formal financial services is 37 percent (BB, 2019). To bridging the Digital Divide the following issues should be prioritized as; set up electronic interbank transfers and gateway to ensure seamless transaction with unassailable security, Domestic and international money transfer and payments will be made through e-payment and m-payment services, using ICT and KYC using NID towards a tiered approach for reduced cost of banking for rural customers, bring down transaction costs, customers data preservation, banking and payment through Internet and mobile phone, all banks will work towards developing a standardized and core banking platform led by the government, interoperability will ensure seamless interbank transfers.

### ***Indomitable Youth***

The future growth of Bangladesh will continue to be closely linked to the development and empowerment of its youth.

4. one-stop shop' is to develop service delivery centers that can serve multiple needs of citizens by aggregating many services that originate from different departments of the government

5. Citizen's Charter is a document which represents a systematic effort to focus on the commitment of the Organisation towards its Citizens in respects of Standard of Services, Information, Choice and Consultation, Non-discrimination and Accessibility, Grievance Redress, Courtesy and Value for Money

6. Paperless office (or paper-free office) is a work environment in which the use of paper is eliminated or greatly reduced. This is done by converting documents and other papers into digital form, a process known as digitization.

7. E-leadership is a social influence process, mediated by technology, to produce a change in attitudes, feelings, thinking, behavior, and performance with individuals, groups, or organizations to direct them toward achieving a specific goal

The fact that investing in youth is of the utmost importance to any developing nation is a foregone conclusion. Bangladesh Government, private, donor and UN adopted a number of declarations and programmes of action which make specific references to youth and their rights. There are certain priority areas for action e.g. ICT, education, employment, participation in decision making, etc. Financing Agencies to provide access to funds to support young people's ideas and encourage ICT entrepreneurship. Outreaching the Government web based services and Information to people Government should outreach the existing web based services, information to mass people by different interventions as knowledge sharing session, courtyard meeting etc. As well as to ensure how people will benefits on using online based services.

### ***Enablers of Digital Bangladesh***

A comprehensive ICT-enabled policy and legal framework is absent for all vertical and horizontal aspects of economy and society. Outdated laws and new laws do not talk to each other and create scope of manipulation. Standard practices are missing in policy formulation and law enactment. Inadequate knowledge and awareness in issues like privacy, IT security and cyber security. Inadequate knowledge for interoperability, standard practices, open standards and architectures etc. For bridging the digital divide the following issues should be addressed and contextualized.

### **Conclusion:**

Making Digital Bangladesh within 2021, it is essential to bridge the digital divide. Bangladesh government is working to achieve Digital Bangladesh Vision 2021 by establishing the Seven Five-Year Plan (2016-2020), the National ICT Policy 2015 and large ICT interventions. Bangladesh has seen a massive rise in the number of internet users. The government's long-term goal of bringing the whole country under broadband coverage. The country is successfully leveraging this rising penetration and has earned \$800 million in 2017 by exporting ICT products and services. The government says it hopes to export software and ICT services worth \$10 billion from twelve high tech parks by 2030 and aims to earn \$5 billion from them by 2021. Established Community e-Centres at all local government. ICT based service delivery is relaxing users from standing in long queues. The government also pledged to introduce compulsory computer and technical education at secondary and primary levels by 2013 and 2021 respectively. By this process Bangladesh becoming middle-income country within 2021

and join the ranks of the developed countries by 2041. But the reality is now far, the majority of the population still living in the rural areas, the ICT content, services and platform is still not accessible to marginalized people, maximum services are city based. Research revealed that digital accessibility is not ubiquitous, it varies to location, gender, race and economical context of users. This context is creating digital divide which is impeding the digital Bangladesh vision. So, for making reality the Digital Bangladesh, Government should make affordability of IT and ITES as computer, smart phone and internet access to users. Many apps should be developed and have to orient the apps and different internet services (government and non government) to people mainly the marginalized people. Then we can bridge the digital divide and assure digital Bangladesh.

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# **Training Needs Assessment For Human Resource Management**

Gazi Md. Mainuddin\*

## **Abstract**

Training needs analysis is the first stage in the training process and involves a procedure to determine whether training will indeed address the problem which has been identified. Training can be described as "the acquisition of skills, concepts or attitudes that result in improved performance within the job environment". Training needs analysis looks at each aspect of an operational domain so that the initial skills, concepts and attitudes of the human elements of a system can be effectively identified and appropriate training can be specified. This paper will focus on various aspects of Training need analysis. Training needs assessment is an ongoing process of gathering data to determine what training needs exist so that training can be developed to help the organization accomplish its objectives. Conducting needs assessment is fundamental to the success of a training program and Good human resource management will become the organization is high ranked for program development.

## **Background**

Different Organization was conducting different training courses in different fields and areas as well. Outcome or achievement of the training programs depends on success of participants. The yardstick of outcome may not coincide at a point, as varies due to different-Motives; Environment; Background; Attitudes; Learning skill; Educational background and of different job environment etc. of attendance. But the training courses as designed and offered for all; any person following some criteria may enroll in the program. Undoubtedly the training left open to all with limited provision. The reasons of which groups were not homogeneous rather heterogeneous, like on the job and the new entrants enroll in the same course with the experienced personnel (Taylor *et al.*, 1998).

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\* Program Manager & Head- HRM&D and Admin Division, YPSA

The course conducted so far attained a prestigious position in the country compared to other organization/training institutes. The main objectives of the training are to **develop Human Resource** to have footprint in the development of professional management that will in turn contribute the nation as a whole.

**Success of training may be considered as fruitful in regards to:**

- a) Career building;
- b) Acquiring professional knowledge;
- c) Influence in the development of an organization;
- d) Development of self growth like getting a better jobs.
- e) Development of managerial skill
- f) Development of Attitudes etc.

The purpose of a training needs assessment is to identify performance requirements and the knowledge, skills, and abilities needed by an organization workforce to achieve the requirements. An effective training needs assessment will help direct resources to areas of greatest demand. The assessment should address resources needed to fulfill organizational mission, improve productivity, and provide quality products and services. A needs assessment is the process of identifying the "gap" between performance required and current performance. When a difference exists, it explores the causes and reasons for the gap and methods for closing or eliminating the gap. A complete needs assessment also considers the consequences for ignoring the gaps (Goldstein, 1993).

**The objectives of training needs assessment are;**

- a) Employee analysis/Man analysis
- b) Task analysis
- c) Organizational analysis
- d) Group analysis
- e) Political trends such as sexual harassment and workplace violence

The scope of the study was limited in conducting a sample survey among listed participants in given areas. While conducting this research, following limitations have been faced.

- ı The respondents were only available during the office hour. Most of them did not want to share information during their busy hours.
- ı Many respondents had left their previous job as specified in the

enrollment list and we failed to reach them.

- ┆ A big amount of time has been wasted while they were knocked due to their time references.
- ┆ Some participants who were included in the sampling frame attended their course long before. Many of them could not recollect many issues while responding. Findings may create a variance from the findings of recently participated ones.
- ┆ The time frame was another constraint.

### **Methodology of the Study**

Here, Methodology can be briefly described about the information that how these are collected. There are two method used for collecting data, which are as follows.

#### ***Primary Data***

The Primary data in this report mainly includes information collected from the respective officer and subordinates of the respective department. The survey was conducted to identify the performance in concerned department by company Primary data was collected through interviewing of concerned people of different department. The information was taken by face to face and also data was collected through Questionnaire.

#### ***Secondary Data***

Secondary data is very much essential to conduct and efficient study and to have a fruitful result. The major source of secondary that used in the report are given as follows -

- Annual Report of the Company.
- Use of text books, newspaper, brochures, published books, articles, journals, and research papers etc.
- Different reports (training, programs, visit report)
- Web site of the organization.

Observation: The methodology of research was observation. We observe the employee behavior in work place, working knowledge, attitude with their colleagues.

## Results

### **- *Employee analysis/Man analysis***

To assess the employee how they do and compile their responsibility with their skill and knowledge and identify their competencies for doing the works and gaps of knowledge, skill and attitude.

The analysis of employee the following methods can be used (Eerde *et al.*, 2008)

- Evaluation of activities: Evaluation of employee activities to know the potentiality of employee, productivity, absence, rate of accident, grievance and how they use of instruments.
- Questionnaire: Answer from the employee by the questionnaire.
- Supervision: By supervision the employee can be identified the gaps of employee
- Behavior analysis: The reflection of employee behavior analysis.
- Record analysis: By analysis of employee records
- Critical incident: By analysis of critical incident.

The employee analysis for an employee commences with an evaluation of the individual strengths. An employee should write down all of her strengths during this stage of the SWOT analysis. It helps to write down their strengths, or use available software, which can ordered and downloaded online. Examples of strengths can be lots of experience, and even strong oral and written communication skills. The key for evaluating strengths is comparing individual skills versus other employees of the same pay grade.

The effect of employee analysis for an employee includes evaluating and recording various weaknesses. Effects are-

- The employee will be self motivated and aware to gain organization vision and mission
- The employer can take initiatives of employee for their development
- Cost effective for employer and organization
- Increase the positive perception of employee
- Increase the positive leadership among the employee.

Identification of staff: Employee are classified or reclassified on the basis of duties and responsibilities, as described in the job description. It is

important that supervisors maintain current job descriptions all positions, to ensure that positions are properly classified and paid. The first step in classifying a position is to ensure that the job description is current and accurate.

The classifies positions into salary range/pay grades factor system. For staff positions, a Position Audit Committee comprised of representatives from each division meets as needed to review positions submitted for classification or reclassification. For administrative positions, a Human Resources committee meets as needed to evaluate and classify positions.

Start by developing a complete understanding of the position. This is the foundation on which hiring is based. In conducting your analysis, consider:

- | All of the duties and responsibilities of the position
- | Their scope and level
- | The context in which these are to be performed
- | The amount of responsibility, authority and accountability required to perform the work
- | The major and minor activities

***Identify Performance Behaviors :*** Identify examples of behavior would use to evaluate the quality of the work. Identify examples of both effective and ineffective behaviors. To do this, ask the following questions:

- | What are the performance expectations for superior performance?
- | How do you know someone is doing an excellent, satisfactory or poor job?
- | How does it look when a high performer is doing an excellent job or when a poor performer is doing an unsatisfactory job?

### **Identify Target performance level :**

Target levels refer to the types of behaviors demonstrated by high performers. They are not minimum standards. The key is to select the target level that high performers demonstrate most of the time. While all people may be able to demonstrate a level once, target levels refer to what they do most of the time. High performer in the job demonstrates most of the time they are engaged in that competency. Review the final list of Competencies, Knowledge, Skills and Abilities (CKSA) and determine the various ways in which these could be acquired through education, experience (work,

volunteer and/or life) and/or training. It may be helpful to consider the background of high-performing employees in this type of position. It is important to determine a qualification that is appropriate to the job on day one and not inappropriately high or low. If qualifications are set too high, candidates that have the competencies may be inadvertently eliminated at the screening stage before having the opportunity to prove themselves. Alternatively, if the qualifications are set too low, most of the applicants will need to be considered which can be a time consuming process and many may not have the required competencies.

***Solutions:*** Help leaders and employees achieve their highest potential. Employee development analysis and reports enable to assign roles appropriately, essentially designing "Dream Team."

Perhaps individual or team that needs some direction, feedback or data regarding their performance and potential. Maybe organization as a whole is in a state of change and could benefit from some objective input in order to redefine itself. Employee development is a critical aspect of business life; it is essential to address ongoing development for employees at each stage of their careers.

### ***- Task analysis***

Task analysis tries to answer the question of what should be taught so the trainee can perform the job satisfactorily. It is a systematic and detailed analysis of jobs to identify the type of behavior required of the job holder and the standards of performance that must be met to achieve the desired results. While task analysis is similar to job analysis, it is employee centered, not job centered and is concerned with behavior needed on the job and expected level of performance, questionnaire, interviews, personnel records, reports, observation and other methods can be used to collect information about jobs in the organization.

Task analysis analyze the employee qualities and qualification. To identify the important work related tasks and knowledge, skills, behaviors, abilities determine if the content and activities are consistent with trainee on the job experience. The Following methods used for task analysis.

- Work analysis- Job specification related with designation.
- Comparison with standard- employee performance compare with

expected standard.

- Questionnaire- task analysis perform by questionnaire to supervisor, learner and superior
- Record analysis- It also done by employee record keeping and analysis.

**In general, there are five kinds of task analyses and these are-**

- i) job or performance analysis,
- ii) learning analysis;
- iii) cognitive task analysis,
- iv) content or subject matter analysis;
- v) activity analysis.

### **Application**

The term "task" is often used interchangeably with activity or process. Task analysis often results in a hierarchical representation of what steps it takes to perform a task for which there is a goal and for which there is some lowest-level "action" that is performed: this is known as **Hierarchical Task Analysis**.

Task analysis is often performed by human factors and ergonomics professionals. Task analysis may be of manual tasks, such as bricklaying, and be analyzed as time and motion studies using concepts from industrial engineering. Cognitive task analysis is applied to modern work environments such as supervisory control where little physical work occurs, but the tasks are more related to situation assessment, decision making, and response planning and execution.

Task analysis is also used in education. It is a model that is applied to classroom tasks to discover which curriculum components are well matched to the capabilities of students with learning disabilities and which task modification might be necessary. It discovers which tasks a person hasn't mastered, and the information processing demands of tasks that are easy or problematic. In behavior modification, it is a breakdown of a complex behavioral sequence into steps. This often serves as the basis for chaining.

The results of task analysis are often represented in task models, which clearly indicate the relations among the various tasks, An example notation

used to specify task models is, which is also supported by tools that are freely available "Task analysis for instructional design is a process of analyzing the kind of learning that you expect the learners to know how to perform".

**Instructional designers perform a task analysis in order to:**

1. Determine the instructional goals and objectives.
2. Define and describe in detail the tasks and sub-tasks that the student will perform.
3. Specify the knowledge type that characterize a job or task.
4. Select learning outcomes that are appropriate for instructional development.
5. Prioritize and sequence tasks.
6. Determine instructional activities and strategies that foster learning.
7. Select appropriate media and learning environments.
8. Construct performance assessments and evaluation.

**Organizational analysis:**

An organizational analysis tries to answer the question of where the training emphasis should be placed in the company and what factors may affect training. It involves a comprehensive analysis of organizational structure, objectives, culture, processes of decision-making, future objectives, and so on. The analysis begins with an understanding of short-term and long term goals of the organizations, as a whole, and for each department specifically. These would help to identify what capacities are needed to fulfill these goals.

The HR professional should examine organizational goals and objectives, personnel inventories, skills inventories, organizational climate and efficiency indices, turnover and absenteeism, rates of accidents, changes in system or subsystems, MBO or work planning systems, etc.

An Organizational Analysis is a process by which an organization's systems, capacity, and functionality are assessed in order to increase its efficiency, performance, and output. With the use of various models and theories, an Organizational Analysis aims to understand behavioral relationships, structure, and technology. An Analysis, or sometimes called restructuring, of an Organization may become necessary when either external or internal forces have created a problem or opportunity.

When performing an organizational analysis, many details emerge about the functions and capacity of the organization. All of these details can make pinpointing what is efficient and inefficient difficult. Using theoretical organizational models can help sort out the information, and make it easier to draw connections. After working through these theoretical models, the organizations present situation is more adequately addressed, and the trajectory of the organization can be more fully determined.

For analysis the organization we used some methodology. Following the methodology followed for organization analysis.

- | Study the organization yearly report
- | Study the training report
- | Study the organizational profile
- | Observation
- | Interview with the employee and top management people
- | Interview with the stake holders and community
- | Search the organization web site

## **Application**

Essential components of carrying out an organizational analysis include evaluating external factors that can affect the organization's performance as well as strategically assessing the organization's own resources and potential. Internal strengths and weaknesses along with outside opportunities and threats are keys to an organization's success.

SWOT analysis, which stands for strengths, weaknesses, opportunities and threats, is a strategic-planning method an organization's leaders often use to aid them in establishing business objectives or achieving the organization's mission goals.

**Strengths :** An organization's strengths are internal characteristics that can give it an advantage over competitors. Evaluating organizational strengths usually involves assessing current management, resources, manpower and marketing objectives. Generally, internal analysis examines an organization's available resources and core competencies. Determining the organization's capabilities helps its leaders make long-term plans and sound decisions.

**Weaknesses :** An organization's weaknesses are another example of internal characteristics that can affect its operations and level of performance. Identifying weaknesses helps organization spot problems so that it can make the necessary changes. This strategy allows decision makers to develop other more appropriate alternatives in their strategic-planning objectives when operations fail to perform as projected. Weaknesses may include poor leadership, low employee morale, weak financials, low cash flow, outdated technology and inefficient organizational functions or processes.

**Opportunities:** In general, external organizational analysis weighs the potential opportunities and threats that are present outside of the organization. External analysis may include market analysis, sizing up the competition and evaluating the impact of new technological advances. When assessing opportunities in the external environment, organizations must set out to identify current market and industry trends, potential niche markets and the weaknesses of major competitors.

**Threats:** External risks aren't always bad for an organization. For example, the labor market can pose either a potential threat or an opportunity depending on the state of the local, national and global economies. Legislation and government regulation are other factors that can have an effect on how well an organization performs.

**Problems:** Some problems we have faced during the organization analysis. Our group members living in the scatted area and all are service holder. Though limited resources we have tried to gain optimum output. While conducting this study, following problems have been faced.

- । To sit together with the term group member due to all is being living in scatted area.
- । The respondents were only available during the office hour. Most of them busy in office time, so it was difficult to share information during their busy hours.
- । A big amount of time has been wasted while they were knocked due to their time references.
- । Some participants who were included in the sampling frame attended their course long before. Many of them could not recollect many issues while responding. Findings may create a variance from the findings of recently participated ones.
- । The time frame was another constraint.

Strategy helps to identify the organizational strength, weakness, opportunities and threats. The following strategy helps to make organizational analysis:

- Comparison between the achievement with the goals and objectives of the organization.
- Analysis of manpower inventory.
- Analysis of skill inventory.
- Examination of complaints.
- Analysis of organizational climate indexes.

### **Group analysis**

A group of reliable employee identify the barrier to achieve the target of organization. Deriving from analysis, draws on a range of other traditions and approaches. Group analysis also has applications in organizational consultancy, and in teaching and training. Group analysts work in a wide range of contexts with a wide range of difficulties and problems. In group analysis, on the relationship between the individual group member and the rest of the group resulting in a strengthening of both, and a better integration of the individual with his or her community, family and social network (Crutchfield, 2000).

The method of group analysis (MAG) is a tool for analyzing, intervening and training. Group analysis is based on the view that deep lasting change can occur within a carefully formed group whose combined membership reflects the wider norms of society. Group analysis is a way of understanding group processes in small, median or, large group. There are some process using in group analysis.

- Brain storming
- Advisory committee
- Problem clinic
- Conference
- Seminar
- Workshop

Group analysis begins with an understanding of short-term and long term goals of the organizations, as a whole, and for each department specifically. These would help to identify the purposes which needed to fulfill these goals.

- To identify specific problem areas and gaps in the organization.

- Identify the employee behavior in the work place
- Helps to develop the inactive employee as skill manpower
- Know how to handle the stakeholders and colleagues.
- Know how to prepare a report.
- How to get management support.
- To adapt the employee with the changes.
- To determine the costs and benefits of training.

Group analysis applies both quantitative and qualitative analysis to help organizational value, investments, assess market opportunities, evaluate pricing options, and manage risk. The following strategy can be used for group analysis.

- Comparison between the achievement of organization goals and objectives.
- Analysis of manpower inventory.
- Analysis of skill inventory.
- Employee record analysis.

### **Sexual Violence Problem**

A political trend is the general direction in which political ideologies tend to move or develop. These recent trends have led to new technologies that impact politics, a shift in power, conflict transformation techniques and multi-stakeholder dialogues.

Sexual harassment is bullying or coercion of a sexual nature, or the unwelcome or inappropriate promise of rewards in exchange for sexual favors. In most modern legal contexts, sexual harassment is illegal. As defined by the US EEOC, "It is unlawful to harass a person (an applicant or employee) because of that person's sex." Harassment can include "sexual harassment" or unwelcome sexual advances, requests for sexual favors, and other verbal or physical harassment of a sexual nature.

Where laws surrounding sexual harassment exist, they generally do not prohibit simple teasing, offhand comments, or minor isolated incidents. In the workplace, harassment may be considered illegal when it is so frequent or severe that it creates a hostile or offensive work environment or when it results in an adverse employment decision (such as the victim being fired or demoted, or when the victim decides to quit the job). The harasser can be the victim's supervisor, a supervisor in another area, a co-worker, or someone

who is not an employee of the employer, such as a client or customer and harassers or victims can be either male or female.

Workplace violence or occupational violence refers to violence, usually in the form of physical abuse or threat, that creates a risk to the health and safety of an employee or multiple employees. So, Workplace violence is any physical assault, threatening behavior, or verbal abuse occurring in the work setting.

**Workplace Violence and Sexual harassment Includes:**

- | Beatings
- | Stabbings
- | Suicides
- | Shootings
- | Rapes
- | Near-suicides
- | Psychological traumas
- | Threats or obscene phone calls
- | Intimidation
- | Harassment of any nature
- | Being followed, sworn or shouted at

**Impact:** Another arena that is giving me great hope is the powerful, new internet "Democracy," which is enabling more direct democracy and changing the political landscape dramatically in just a few very short years. Community sites that draw millions of fans suddenly have major influence and this will transform politics in the years ahead.

Internet activism, such as Move. On org and similar sites of all political stripes have hugely impacted political races and issues. "Web2.0" media sites such as Digg.com and political blogs such as DailyKos.com are doing end runs around the mainstream media and becoming so popular that mainstream politicians court them and line up for interviews.

Voter drives on widely celebrated youth sites such as MySpace.com have registered thousands of new voters. Mobilevoter.org helps organizations set up technology so people can "text in" their voter registration on their mobile phones.

Video sharing sites such as YouTube.com enable users to share political video clips with millions of users. On-line booksellers such as Amazon.com

make every political book and expose easily accessible to all. And search engines like Google.com provide more transparency in politics, as anyone can quickly access information on the web.

However, one major technology that has created much controversy is voting machines that lack paper trails to ascertain how someone voted. A great deal of evidence has surfaced in the last two elections questioning their accuracy and ability to be tamper-proof. If these challenges to vote protection are not resolved soon, they will undermine confidence in democratic institutions and lead to huge unrest in the future.

### **Conclusion and Recommendations**

In the study, senior management, different department/programs/projects head and the respective team member's assistance to do the training needs assessment. After completing the study we have found the followings:

#### ***Recommendations***

Inserting some recommendations referring to the findings/outcome of the research. There are some recommendations which might be helpful for Training design of YPSA for their success.

#### ***Need based training***

According to the need assessment respondent propose some training program on the basis of their necessities. Those are as follows: Training on

1. Office Management
2. Presentation Skill
3. Communication Skill
4. Negotiation Skill
5. Development of Leadership skill
6. Development of Convincing power and Assessment skill

#### **Interest of the participants on training**

According to the opinion, 94% of the respondent, everybody has an enthusiastic interest for learning, as training helped them in self development which contributes an organization, so respondent desire to get more training, so YPSA should arrange different training for staff development.

### **Recommendation about fruitful training**

Respondent openly express their views how the training program can cultivate more enjoyable and fruitful outcome. The opinions are as follows.

- | Medium of Instruction should be in Bangla & English.
- | Internet facility should be given to the participants.
- | Particular time should be given to group discussion.
- | Resources person should be friend than mere teacher.
- | Listening of participant's problem on the related topics to solve.
- | Criticizing participant's opinion should be discontinuing.
- | Prayer break should be given.
- | Emphasize should be given sharing experience or success stories.
- | Video clipping is an important one, it should be continued.
- | An assignment should be taken after the training program for evaluating learning.
- | Certificate should be given on time.
- | A group picture (Participants + Resources Person) should be taken & provided to everybody.
- | Training should be well organized.
- | Any problem should be minimizing while training.

### **Innovative approach about training:**

Respondents offer some modern & scientific approaches to make pleasurable Learning.

- | Video Clips
- | Case study
- | Film show on related topics
- | Field visit
- | Short course in English
- | Daily assignment

### **Informative Handout:**

More informative handout to be distributed to satisfy the demand of the participants. Training Institute should develop the quality standard of their own information system by providing the current information needed for the different business sectors.

## **Recommendations**

### **Confront**

- | If possible, confront the sexual harasser immediately. Tell him/her that you find that type of attention offensive;
- | If possible, tell the harasser that the behavior affects you negatively and has the potential of negatively affecting your job;
- | If possible, tell the harasser what behaviors (gestures, physical or verbal) behaviors you find offensive.

### **Resolve**

- | Seek confidential advice to develop your personal resolution strategy;
- | Consider writing a letter to the harasser and keep a copy for yourself;
- | Document all the incidents of sexual harassment. Be detailed, precise about date, time, location, and person/persons involved.

### **Support**

- | If you know someone who is being harassed, give him or her support. Encourage the recipient to talk about it and to take immediate action to stop it;
- | If you actually see or hear an incident of sexual harassment or are subjected to an offensive environment, you can also take the appropriate steps to resolve the harassment or co-file with the complainant;
- | When a recipient files a complaint, if possible, support him or her throughout the complaint process.

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## **Author's Guideline for Social Change**

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Social Change accepts article submissions up to 8,000 words, including abstract, tables, figures, notes and references. The journal also invites shorter submissions up to 5,000 words that review and analysis current policy practice and different issues of human and social development. Manuscripts must be typewritten on one side of 8.5 X 11 inch paper in double spacing. Only one copy is required. The maximum length of papers is 8,000 words. Longer papers may be accepted only in special cases. Manuscripts should be carefully checked before they are submitted, and should be preceded by a covering page stating the title of the paper, full names of authors, identification of each author (position and institutional or other affiliation), and mailing address for each author. A summary of about 150 words outlining the scope of the work should be included. Manuscripts must not have been published previously in any periodical and should not be submitted elsewhere until a decision is received from this journal. Submissions are peer -reviewed.

### **Preparing Documents for Submission**

***Title page document:*** A separate document containing the manuscript title, author names, the corresponding author, author affiliations notes on each author up to 80 words in length, 5 keywords and an abstract of up to 200 words.

**Main document :** Remove all obvious author identifying information, including self-citations and acknowledgements. Arrange your document in the following order: main text, References, Endnotes.

**Text :** 12 point Times New Roman font, 1.2 or 1.5 line spacing.

**Quotations :** indent quotations of more than 40 words. For shorter quotations, include them in the paragraph and use single quotation marks. Interview quotations should be indented, even where shorter than 40 words, and followed by italicized identifying information in brackets, for example: (Suzanne, daughter, regional area).

**Headings :** first word capitalized, 12 point casing, aligned with left margin, no numbering.

**Table and Figures :** Include on separate sheets following the list of references or in separate files. Number tables and figures separately and numerically, include a short descriptive title, and insert any notes and legend below. Indicate placement in the text, for example: 'Insert Table 1 here'.

**Endnotes :** use sparingly, in text explanations are preferred. Place endnotes after the list of references.

**References in the text:** References should be arranged in alphabetical and chronological order, In the text, in brackets, author's surname followed by date of work, in the reference list at the end of the paper, author's surname and initials followed by the title of the book, publisher and year of publication, or title of periodical, volume, number, date, page numbers, and place of publication. Title of books and periodicals should be underlined in the manuscripts. [Followed the 'Harvard style' particularly APA (American Psychological Association).

**Photography/Image/Maps in the text:** Illustration in the form of photography and drawings is welcome. Photographs should be clear with strong contrasts and printed on glossy paper. They should be numbered consecutively on the back with captions typed on separate

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- Incorporate a dedicated discussion of the methodology, outlining the approach taken, its relevance to the research issues at hand and any innovations involved.
- Provide details of any formal ethical approval, recruitment strategy, the process used for obtaining informed consent and any ethical concerns that arose during the research.
- Explain the research setting and include the sample size and /or key characteristics of participants where relevant.
- Describe the process of analysis for desktop reviews, e.g. coding strategies, including computer coding, and when part of a research team, the role of each person in the analysis, consideration of any bias and strategies for ensuring consistency between researchers.
- Outline any limitations of the research, including that relating to the data and methodology.
- Limit the use of jargon, but where used place it in single quotation marks and explain its meaning in the text.
- Declare any funding arrangements and the role of the funding body in the research.

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The reviewers' recommendations determine whether an article will be:

1. Accepted
2. Accepted subject to minor revisions
3. Accepted subject to re-submission with significant revision
4. Rejected

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