

Post Disasters Social Pathology in Bangladesh: A Case Study on *AILA* Affected Areas

Md. Abul Kalam Azad^{1,*}, Mohammed Moniruzzaman Khan²

¹Institute of Disaster Management and Vulnerability Studies, University of Dhaka, Bangladesh

²Department of Sociology, Jagannath University, Bangladesh

Copyright © 2015 Horizon Research Publishing All rights reserved.

Abstract Bangladesh is experiencing with frequent natural disasters due to her unique geographical characteristics. In this regard the aim of the study is to examine how a natural catastrophe creates social pathologies or social crises in the society and to identify the major causes of social pathology by employing qualitative and quantitative approach. Although there is no concrete definition of social pathology, it can be defined as disruptions in normal social life and social chaos that replaces social order. Multiple socio-economic factors i. e. prevalence of saline water, fewer job opportunities, lack of education, migration of male member, are responsible for social diseases or social pathologies such as crime, poverty, corruption, unemployment, sex crime and gender based violence. Artificial saline water intrusion by political elites and losses of economic productivity are the basic reasons for creating social anomies or disorders in coastal Bangladesh. Thus, the people living in coastal areas are experiencing several problems including physical illness, health problem, food crisis, and breaking down the family life where women and children are subjects in most inhuman situation and they are becoming more vulnerable. Balanced social structure through establishing comprehensive sectoral development and risk reduction process could manage minimum life sustaining requirements of the poor and disadvantaged people which it also could ensure social harmony and solidarity in post disaster period.

Keywords Social Pathology, Occupation Change, Politics of Salinity Intrusion, Crime, Sex Crime

systems must adapt to their changing physical and social environment."

Bates, Dynes, Quarentelli, 1991:288

During the past decade, the number of disasters has risen sharply across the world. Between 2000 and 2006 the numbers of natural disasters have almost doubled than earlier period (The Annual Disaster Statistical Review, 2006) and recorded upwards of 600 disasters globally each year (CRED, 2002). They have had a disproportionately heavy toll on developing countries both in terms of loss of lives and damage to property (Ofori, 2002). Bangladesh as a developing country is identified as the country of highest risk (GAR, 2009) and Bangladesh leads the top 10 countries in the Asia-Pacific region based on absolute physical exposure for floods; 5th for storms; and 8th for earthquakes (Asia Pacific Disaster Report, 2010). Due to unique geographic characteristics, Bangladesh frequently suffers from devastating tropical cyclones, flood, drought, riverbank erosion, landslides, tornado, earthquakes etc. The funnel-shaped northern portion of the Bay of Bengal causes tidal bores when cyclones make landfall, and thousands of people living in the coastal areas are affected. In May 2009 Cyclone Aila has caused enormous loss of lives and livelihoods in the coastal districts. Many villages were inundated by water and thousands of women, men and children lived in dismal condition without shelter and proper water and sanitation facilities (Ahmed, et.al. 2009). Even, they are now facing hunger and diseases without their livelihoods. Cyclone Aila victims are located in the remotest areas and it breaks down the social order in the affected coastal regions of Bangladesh. Cyclone Aila has enduring effects and major economic consequences and has led to the abandonment of social mores and relationships and even to violence, social pathologies including unemployment, crimes and gender based crime etc. which post Aila situations can be seen as a 'social crisis period' (Quarentelli and Dynes, 1977) or a social pathology. The present study sets the behavioral observations in a context of social attachment and socio-pathological identification model, exemplified by a tentative diagnosis of social problems and social behaviors. An attempt has been made to present a

1. Introduction

"All disasters are failure on the part of human systems. In every disaster, the physical and social infrastructure fails to protect people from conditions which threaten their well being. At times, the infrastructure itself creates conditions which result in extensive social disruption. To reduce the vulnerability of people to disasters, social and technological

general socio-pathological model by analyzing post Aila social conditions from sociological point of view.

2. Statement of the Study

The poorest regions of the world are facing a double challenge: continued population growth and potentially severe water and food shortages, and for natural disaster (World Bank, 2005). Disasters cause widespread human, material and environmental losses. In the last ten years 478,100 people were killed, more than 2.5 billion people were affected and about US \$ 690 billion in economic was lost due to disasters (ISDR, 2004). Among different hazards, hydro-meteorological hazards amounted for 97% of total people affected by disasters, and 60% of total economic losses (SHAW, 2006). Bangladesh is one of the most densely populated countries of the world with 28 percent people living in the coastal area. The vulnerability to climate change is considered to have massive and disastrous consequences for Bangladesh (ADB, 2004) and it is especially more vulnerable to cyclones because of its location at the triangular shaped head of the Bay of Bengal, the sea-level geography of its coastal area, its high population density and the lack of coastal protection systems. Around 0.7 million lives were lost due to disasters between 1970 and 2004, and the economic loss was US\$ 5.5 billion (FFWC, 2005). About forty percent of the total global storm surges are recorded in Bangladesh, and the deadliest cyclones in the past 50 years, in terms of deaths and casualties, are those that have struck Bangladesh. Cyclone *AILA* hit the west border of Bangladesh on 25 May 2009 affecting an estimated 3.90 million people in 11 coastal districts of Bangladesh's 64 districts. A total 190 death tolls have been recorded. In the aftermath of the Cyclone and tidal surges, some 100,000 livestock were killed and over 340,660 acres of cropland destroyed. Cyclone Aila made 375,000 people homeless with more 50% of the displaced people (more than 200,000) still living in a severe condition after Cyclone Aila in severely affected Khulna and Shatkhira District (Action Aid, 2009). Longitudinal studies reveal (Chowdhury, 2008; Nasreen, 2012) that cyclones have direct and indirect impacts on general public health, livelihoods, infrastructure, the economies and socio-cultural foundations and cyclones disrupt the economic activities. It also affects access to food and drinking water, and increases the transmission risks of infectious diseases and state of unemployment thus contributing to the interruption of livelihoods, social disorder and even changes the social identity. Social cohesion also becomes less effective in those villages where the natural disaster is highly covariant. The likely reason is that households fail to help each other in those villages where almost all households are affected by the natural disaster. To do so, we need to study problems as "disturbing situations or dysfunctional conditions". Although problems may be psychological or sociological, as social scientists we are primarily concerned with the last type. The present study has

intended to explore the major social problems how a cyclonic storm surge interrupts the livelihood of the coastal people in Bangladesh. As, disaster like cyclone often leads to social pathologies such as substance abuse, violence, abuses of women and children, crime, corruption, criminality, discrimination, isolation, stigmatization and human rights that undermine well-being. In addition, this study has also focused on the major causes of social pathologies and its impacts on livelihood in the coastal areas of Bangladesh in the wake of *Aila*.

3. Cost of Cyclone AILA: An Overview

Cyclone AILA was a tropical cyclone that had developed over the Bay of Bengal and hits the south-western coast of Bangladesh on 25 May, 2009, leading to a major climatic disaster, which affected the lives of millions (Concern Universal, 2009). In the south-west part of Bangladesh, 11 districts were badly affected as Aila caused a tidal surge to break through embankments, destroying hundreds of thousands of homes and people were killed while several thousand were injured (Ahmed, et.al. 2009). The sustained wind speed of the cyclone Aila was about 65-75 mph and thus it is defined as the category-1 cyclone. About 2.3 million people were affected by Aila and many of them stranded in flooded villages as they had no alternative to save themselves. The Cyclone Aila furiously hit Satkhira and Khulna districts of Bangladesh, entrancing immediate death of about 325 people including massive infrastructure damages. (Kumar, et. al., 2010). MoFDM (2009) reports that approximately 1 million men, women and children became homeless after Cyclone Aila. Around 243191 houses were totally destroyed and an additional 370587 houses were partially damaged due to cyclone Aila and 190 people had lost their lives with additional 7103 people were injured during the cyclone (MoFDM, 2009). An estimated 4.8 million were directly affected and nearly 3 million acres of crops were destroyed (Ahmed, et.al. 2009). It is also found that the socio-economic and demographic structure of the region has changed with nearly 100,000 people already migrated from the worst affected areas to search employment, as opportunities for income are very limited in the affected areas (Ahmed, 2010). According to WASH Need Assessment report of UNICEF (April, 2010), about 672,000 people are still living in vulnerable condition. Some 125,000 people are still living in makeshift shelters on the embankments with being unsafe and insecure and they are unable to maintain their basic needs including clean drinking water and shelters. Each affected household has seen their income decreased by approximately 44 percent as a result of cyclone *Aila* (South Asia Association of Poverty Eradication, 2009). Thus, the *Aila* affected people in the coastal regions are now struggling to manage minimum life sustaining requirements like , jobs, adequate food, shelter, water and sanitation facilities. Women and children are experiencing most inhuman situation and become more vulnerable as the

male earning member of the family either faced death or migrated for managing family needs and livelihoods.

4. Social Pathology: A Theoretical Framework

Disasters are usually conceptualized in terms of some physical cause but, for social scientists, disasters constitute failures in social systems. The demands in the society are made on the social systems become excessive but the capability of the social system is reduced due to disaster. People are unable to lead their normal life because of social problems induced by disaster including crime, illegal pressure on women to have a sex with male, increasing theft and robbery etc. in society. As a result, there exist a crisis to meet up the demands which have been compared with 'social crisis period' and this period is studied as 'social pathology' (Dynes, 1993; Qurantielli and Dynes, 1977; Nasreen, 2004). Disasters bring disruptions in the normal social life, create chaos, destroy social structure and contribute to replace social order (Nasreen, 2004). It is also commonly assumed that the social contract is tenuous at best and that major natural disasters and other crises trigger mass disruption, disorder, and social breakdown (Jacob, et al, 2008).

The social chaos exist in the society in disastrous time is incompatible with the pre-existing situation. Because, disasters displace the normal life and create social anomies or social problems referring to a process through which certain situations became a matter of public concern, are seen as a threat to the values of the society and as a deviation from "social normality" (as a social disease, deviance, problem, maladjustment, disorganization, malfunction, maladaptiveness, abnormality, degeneration, etc.). In other words, social pathology refer to violence, media portrayal of violent behavior, eccentric and exaggerated conceptions of personal freedom, neglect of facing social responsibility and the problems arising from them such as juvenile delinquency, suicide, psychoactive substance abuse, unemployment, and lack of support of victims of such increasing burdens of social life (Béla, Buda, 2009; Mills, 1943).

According to Rubington and Weinberg (2003, p. 4), social problem is "... an alleged situation that is incompatible with the values of a significant number of people who agree that action is needed to alter the situation". In contrast, some scholars have discussed the interaction between individuals and society in the behavior process. As Yan Taylor informs as "there is a dialectic relationship between human beings and the society that should be considered at all stages of misbehavior" (cited in Tabrizi, 2004:46) whereas the structural-functional perspective argues that human behavior is integrated with multi-structural, broad and inclusive factors, which deal with all aspects of life. According to sociologists, these factors could be traumatic might work into the depth of the society (Ghadimi, et al. 2012). For example, Emile Durkheim in *The Division of Labor in Society* (1964) insisted on the primacy of groups and social

organizations as explanatory factors of human misconduct which it is referred as social anomie. In Durkheim's definition, anomie refers to some sort of derangement, confusion, crisis, mismatch, and abnormality in the collective system (Ghadimi, et al. 2012). According to Durkheim, anomie involves a moral malaise; a lack of clear-cut norms with which to guide human conduct (normlessness). It may occur as a pervasive condition in society because of a failure of individuals to internalize the norms of society, an inability to adjust to changing norms, or even conflict within the norms themselves (Durkheim, 1951, p. 256). Breaking such rules and not following the norms are called "social anomies" by Durkheim (Tabrizi, 2004: 53-54).

In contrast to Durkheim, some structural sociologists such as Merton are of the conviction that the society itself establishes these contrasting needs by creating a mismatch between the goals it confirms and available approaches for accessing those goals. Robert Merton wanted to look at deviance in addition to conformity with society and explain differential rates and wanted to explore the dysfunctions of society while functionalists have concentrated on positive functions of society. Merton (1957, pp. 131–194) viewed anomie as a condition that occurs when discrepancies exist between societal goals and the means available for their achievement. Thus, according to Merton's theory of anomie, antisocial behavior (crime) is produced by the very values of the society itself in encouraging high material aspirations as a sign of individual success without adequately providing approved means for all to reach these goals. In order to investigate human abnormality and anomie, in a general typology Merton divides social behaviors into 5 categories as follows (Rafipoor, 1998:239):

1. resemblance
2. innovation
3. compliance and formality
4. isolation
5. rebellion.

The first group is the normal group of the society and the other four groups are the abnormal ones. The first group refers to the societies that have managed to confirm the cultural paths and goals. If a society fails to create such conformity, it will experience disorganization. In other words, all the four forms of abnormality or deviation will lead to social disorganization (ibid).

Like Robert Marton, Clifford Shaw and Henry D. McKay (1952) saw social disorganization from ecological perspectives. This approach examines the interrelationship between humans and their physical/social environment. The basic premise Shaw and McKay's ecological study is that crime is due to more social disorganization in pathological environments than the deviant behavior of abnormal individuals (Gibbons, 1979; Hagan, 2011). Shaw and McKay's ecological study argue that ecological determinism is an area or physical environment causes social pathology. By analyzing the concentric zone theory of Burgess and Park's notion of natural areas they documented the ecological impact on human behavior and the ecological distribution of forms of social disorganization (Hagan, 2011). Criminal attitudes and social pathology were also viewed as culturally transmitted within the social environment. Thus, it

is important to approach the study of disaster in understanding social disorganization or social pathology from social science tradition. The following tradition falls into the understanding of social pathology in the context of social scientific study of disaster.

5. Objectives

The purpose of this study is to present a better interpretation of post disaster social phenomena by examining general socio-pathological identification model in the context of the theory of social physics. This paper has addressed the following specific issues by applying sociological approach to disaster research: (i) the natures of post Aila social pathologies, (ii) the causes of social pathologies in the aftermath of Aila (iii) the impact of social pathologies on society in coastal regions of Bangladesh.

6. Methodology of the Study

The study of the post disaster social condition is increasingly forwarded as an urgent research needs. Multitude of approaches and methodologies are used for this purpose i. e. a triangulation of quantitative and qualitative research methods were used to collect the field data for this study. Based on cyclonic storm *Aila* devastated and aggravated severely social problem in these areas compared to other coastal areas the study covered four sub-districts namely Paikgacha and Koyra of Khulna districts and Kaligonj of Satkhira district. A number of tools and techniques including sample survey as a part of semi-structured interview questionnaire for quantitative method and case study, key informant interview (KII) and focus group discussion (FGD) for qualitative method were applied to organize the field level data. The respondents for this study had comprised both women and men due to the nature and the objectives of this study. A total sample of 190 respondents were interviewed from the study population for quantitative data while the qualitative data had been collected by conducting 5 case studies, 5 KII and 5 FGDs from the affected people and stakeholders.

Box-1: Methodological Framework of the Study

Methodological framework of the study

Quantitative Tools:

Sample Survey: Semi Structured Interview Questionnaire

Qualitative Tools:

Case Studies, Key Informant Interviews, Focus Group Discussion

7. Results and Discussion

7.1. Socio-Demographic Information of the Respondents

Among the 190 respondents, more than 51 percent are males and around 49 percent are females. The average age of the respondents is around 39 years whereas nearly 43 years for males and around 35 years for females. The study shows that among the respondents nearly 85 percent are married while 10 percent are unmarried and more than 3 percent are divorced whereas over 2percent are widow. Education is a key determinant of development determines many aspects of life, including demographic and human behavior. There is a substantial variation in education level among the sample of the respondents. It is seen that more than 16 percent (31) respondents are illiterate whereas over 21percent are literate. Only nearly a quarter percent (24.2) of the respondents had completed their primary education, more than 16 percent up to secondary level and more than 17 percent up to higher secondary and 2.1 percent had B.S.S degree. To be familiar with the occupation pattern of the respondents we had made an attempt to focus on it in all villages. It is observed that large numbers of respondents are involved in household chores. The fact, here, is that besides household activities, 18.3percent of females are engaged in agricultural activities out of 93 female respondents whereas around 30 percent are males out of 97 respondents. The occupational variation is also seen that nearly 10 percent are doing petty business out of all respondents of which 16.5% percent are males out of all male respondents and only more than 2 percent females are maintain their livelihood doing small business. The average monthly income is only BDT 4431.48 (USD 55.4) whereas the expenditure of the households is only BDT 4231.58 (USD 52.9).

Table1. Respondents by Age and Sex

Age	$\chi^2 = 16.12, df=6, P<0.01$	Sex		Total
		Male	Female	
15 - 25	Count % within sex of the respondent	11 (11.3%)	24 (25.8%)	35 (18.4%)
26 - 35	Count % within sex of the respondent	30 (30.9%)	30 (32.3%)	60 (31.6%)
36 - 45	Count % within sex of the respondent	21 (21.6%)	21 (22.6%)	42 (22.1%)
46 - 55	Count % within sex of the respondent	15 (15.5%)	14 (15.1%)	29 (15.3%)
56 - 65	Count % within sex of the respondent	9 (9.3%)	2 (2.2%)	11(5.8%)
66 - 75	Count % within sex of the respondent	5 (5.2%)	0 (0%)	5 (2.6%)
75 +	Count % within sex of the respondent	6 (6.2%)	2 (2.2%)	8 (4.2%)
Total		97 (100%)	93 (100%)	190 (100%)

n=190

7.2. Disaster-induced Unemployment Situation and Relation to Social Pathology

Table 2. Causes of unemployment

Causes of unemployment*	Number	Percent
Scarcity of work	44	49.1
Physical illness	18	19.6
Death of livestock due to Aila	5	5.4
Shrimp cultivation in agricultural land	9	9.8
Insufficient agricultural land	7	7.6
Entrance of saline water in agricultural land	6	6.5
Water logging	30	16.8
Flood	4	4.3

n=92, * Multiple responses

Disaster as natural event is creating a state of unemployment among the affected people. The study revealed that in the last one year more than 48% (92) of the respondents were unemployed after cyclone *Aila*. It is observed that several reasons such as insufficient agricultural land, water logging due to cyclone, destroying crops and cash crops are responsible to create state of unemployment situation among the coastal zones during post *Aila*. The agricultural land is gradually depleting due to saline water and shrimp cultivation in the agricultural land by political elites and land owner after cyclone. The severe unemployment situation was also related to decreasing livestock in household, migration of male member in abroad, flood, unavailability of work, entrance of saline water in agriculture land by political elites, damage of agricultural products, and water logging due to *Aila* in coastal zone of Bangladesh. Due to unemployment the coastal people had to face a hardship in managing their household demands. The study unfolds that more than 33 percent of the respondents had to face acute food problem and 23 percent of the respondents migrated to other place while nearly 5 percent of the respondents reported that the coastal people were migrating to better place for an alternative job and trying to settle in those places. The people who were working in the shrimp firm they suffered from physical illness including skin diseases, heart problem, and diarrhea. The study also revealed that once upon a time they had employment opportunities such as the coastal people were engaged in fish farming, working as day labor, doing small business, collecting honey from Sundarban, cultivating agricultural crops in their land or pawned land. But, the *Aila* period had made them unemployed and pushed them to work at the shrimp firm as a day labor to maintain their household minimum needs. Thus, cyclone *Aila* had disrupted the life pattern of the coastal people and it created an unemployment situation in the coastal regions of Bangladesh. To overcome this unexpected condition they adopt several strategies through fishing in the river, cultivating vegetables in homestead, taking and borrowing loan from neighbors, working as a day labor at shrimp firm. A cyclone AILA

affect man *Balararm* (43) from Shatkhira commented that:

I am facing many problems due to less income. In the last year, I was unemployed because of unavailable of jobs in our locality. On the other hand, due to decreasing the agricultural land I had to work at GHER. But I was not so expert in working at GHER. The reality makes that much difficult for me. Though I am involved in shrimp cultivation it does not bring better life than earlier.

7.3. Occupational Change due to Salinity Intrusion

Disaster has also profound consequences on social identity—how a person constructs his or her race, gender, class, and so on, as well as how others socially construct that identity (Miller and Garra, 2008). The study found that because of excessive entranced of saline water with the cyclone *Aila* the coastal people had to change their occupation. More than 50 percent of the respondents out of 190 changed their occupation after *Aila*. The people who were involved in agricultural production were working as day labor around 48 percent while 3 percent became maid servant and a significant numbers of respondents (26%) were involved in crab cultivation. The coastal people are, furthermore, engaged in collecting grass and selling in the market, fishing, agricultural activities, and working in the garments factories. More than 5 percent of the respondents are now working as hawker or street vendor in the local market and more than 3 percent of the respondents were working as computer typist during post *Aila* period. The coastal people also reported that they were collecting grass and selling in the market, fishing, and working in the garments factories. Thus, it is evident that due to the excessive salinity intrusion the *Aila* affected people are searching and adopting alternative jobs opportunities in meeting up their household demands.

It is observed that the respondents who have higher education are less vulnerable due to getting better jobs. The important nature or fact here is that the study populations who have low level of education are changing their occupation more frequently due to salinity intrusion after post *Aila* period. Even, occupational change is significantly associated with gender ($\chi^2= 5.8$; $p<0.001$). It reflects that occupational change causes due to salinity intrusion after post *Aila* and varies based on level of education of the coastal people ($\chi^2= 25.20$; $p<0.001$). The people who are more prone to salinity intrusion are seeking an alternative livelihood ($\chi^2= 42.52$; $p<0.001$). Thus, it is seen that during post *Aila* period salinity intrusion is significantly associated to the change of social identity of the marginalized people.

7.4. Politics of Salinity Intrusion: Post Aila Period Social Pathology

Geographic location and geo-morphological conditions of Bangladesh have made the country one of the most vulnerable ones to climate change, particularly to Sea Level Rise (Huq and Karim, 1999). In the agricultural areas, when salt-contaminated land no longer supports agriculture,

smallholders have no option but to sell their land to local elite, thus becoming landless. In both situations the expansion of shrimp farming is therefore irremediably followed by a sequence of social disintegration where it influences the breakdown of traditional livelihood support systems leading to the marginalization of the rural poor and it increases of landlessness and poverty, and transfer of land and wealth to local and national elites. Shrimp cultivation has been identified as a main reason for increasing the saline water (Morrison, 1973). It is observed that saline water was increasing in the coastal communities after *Aila* due to several reasons. Geographical factors and illegal cracking of embankment by local elites are important determinants for increasing the saline water in the coastal communities. According to around 24 percent of respondents out of 190, the saline water is now at in the coastal regions for illegal cracking of embankment by local elites. In addition, 43 percent of the respondents mentioned that social problems were also intensifying due to increasing interest of people in shrimp cultivation while the local elites were creating pressure on the small land owners to introduce the shrimp cultivation. Even, they were motivating the small land holders to sell the agricultural land. For instance, more than 3 percent (6) people had sold their agricultural land while around 8% (15) of the respondents had mortgaged their agricultural land to the local elites. A Case study informant Prova Sarker (35), illiterate woman commented in the following way:

“The local elites put pressure on the local people having agricultural land for shrimp cultivation or to sell the agricultural land. And, shrimp cultivation is causing artificial water logging and increase in environmental imbalance through using of chemicals and fertilizers. I have no objection against the shrimp cultivation by rich but my question is that why I don’t get to eat something.”

“My family is directly involved with shrimp cultivation. But I cultivate shrimp not willingly, but under pressure of others. As there is shrimp gher by the side of their land, due to saline water, paddy does not grow. Sometimes the gher owners or influential persons get hold of their land without intimating the real land owners. I lost some of my land in this way. For this, I quarreled with gher owners but in vain. I did not get my land back.” Voiced of Saiyed (55) a coastal affected man from Shatkhira.

The local people are becoming landless through this process whereas shrimp cultivation is keeping saline water logged for long time and it is damaging the agricultural land leading food scarcity and it is also responsible for artificial water logging causing environmental imbalance and high temperature in the coastal zones of Bangladesh. Thus, the social disintegrations and anomies are increasing in coastal areas in Bangladesh after cyclone Aila.

7.5. Salinity Intrusion and the Way Endangering Life

When disaster strikes, individuals, families, and entire communities are subjected to powerful forces of harm. Quarantelli (1998) reveals that this trilogy of forces--exposure to hazard, massive personal and societal loss, and profound and enduring life change--characterize the nature of disaster. Thus we define a disaster as an encounter which it is influenced by the ecological context, creating demands that exceed the coping capacity of the affected community (Shultz et al., 2006). The study delineates that the increasing salinity intrusion has endangered the life of coastal people. Majority of the respondent (80%) identified salinity intrusion as the main cause that makes their life endangered by creating various problems such as food insecurity, drinking/sweet water crisis, fuel wood problem, diseases, damaging agricultural crops, unemployment etc. This study statistically also proves the significant association between socio-demographic variables (gender: $\chi^2 = 0.814$, $p < 0.001$; age: $\chi^2 = 23.08$; $p < 0.001$; education: $\chi^2 = 20.48$, $p < 0.001$; marital status: $\chi^2 = 3.63$, $p < 0.001$, occupation: $\chi^2 = 24.03$, $p < 0.002$) and salinity intrusion in increasing the risk of local people on their livelihood. It is observed that more than 57 percent (87) of the respondents suffered from food crisis while approximately 27 percent run short of drinking/sweet water and a significant number of respondents (29.6%) faced difficulty in petty business whereas around 6 percent of the respondents suffered from physical injury. Fuel wood crisis (9.8%), lack of work (2.6%), crisis of livestock food (6.6%) and decreasing homestead trees (10.5%) were also found as major problems. It is clearly understandable that the coastal people are living at a high risk because they are suffering economically, politically, socially as well as mentally due to frequent disasters.

Table-3. Chi-Squire and Cramer’s V Value on Socio-demographic factors and Life Endangered

Socio-Demographic Variables	Salinity intrusion make life endangered	
Age	$\chi^2 = 23.08^*$, $df=6$, $V=0.109^{**}$	Likelihood Ratio= 31.93, $df=6$
Gender	$\chi^2 = 0.814$, $df=1$, $V=0.031^{**}$	Likelihood Ratio=0.817, $df=1$
Marital Status	$\chi^2 = 3.63^*$, $df=3$, $V=0.14^*$	Likelihood Ratio= 5.58, $df=3$
Education	$\chi^2 = 20.48^*$, $df=6$, $V=0.14^*$	Likelihood Ratio= 19.46, $df=6$
Occupation	$\chi^2 = 24.03^{***}$, $df=8$, $V=0.238^*$	Likelihood Ratio= 28.59, $df=8$

* $p=0.001$, ** $p=0.005$, *** $P=0.002$

7.6. Corruption in Post Disaster Period

The term corruption in this study has been used to refer to a wide range of illicit or illegal activities along with emphasize on the abuse of public power or position for personal benefit (World Bank, 1997). In Bangladesh there have three types of basic problems which could be defined/identified as 3D: *Durjog* (Disaster), *Durniti* (Corruption) and *Daridro* (Poverty). The major forms of corruption are nepotism and favoritism in case of relief distribution. Reissman et. al. (2005) argue that pre-disaster community cohesion is a basis upon which post-disaster recovery can be built. In addition, preexisting social stressors, influenced by socio-ecological strains, may influence post-crisis interactions during the recovery phase. Preexisting social stressors may also influence social interactions between disaster-affected communities and those attempting to provide post-disaster aid. The study examined that the in cases of relief distributions particularly political representatives choose their natives or clients as relief taker due to creating pressure. The political elites were also cheating the local people in weight. In some cases, the political persons in power of local government misappropriated the disaster relief after post Aila and abuse the authority. Even, they take bribe for VGD (Vulnerable Group Development) and VGF (Vulnerable Group Feeding) card from the local people. The government actors, moreover, were alleged for appointing their natives or clients in governmental projects for reconstruction activities (i.e. repairing bridge, roads and so on. They were also involved in mismanagement in rehabilitation processes. It was found that several causes were responsible for corruption in the coastal regions in Bangladesh including dishonesty of local government, lack of good governance, decreasing ethical issues and social norms, lack of social commitment, lacks of transparency and accountability, expectation to be rich, lack of political will, inefficiency of government official and local government, lack of skills and training to analyze the complex situation. The political masters got enough scope for resource accusation in illegal ways and they had no interest to serve the people. Thus, social norms of the political representatives were decreasing gradually. Due to lack of norms they were involved in misappropriation of money or relief which it could be interrelated with Durkhiem's concept of social anomies (Durkheim, 1951: 256) as it may occur as a pervasive condition in society because of a failure of individuals to internalize the norms of society, an inability to adjust to changing norms, or even conflict within the norms themselves.

A case study informant Fatima (28), studied up to primary level, Khulna informs:

"Corruption of elite class of her locality with the help of government organization creates the salinity intrusion. She claimed, the elite class destroyed costal dam and force illegal water intrusion in the area. As a result, the saline water is increasing and it causes different problems among local people. Particularly the vulnerable and destitute women and children are facing problems including food, economic, diseases and so on".

The consequences of corruption are very awesome including adverse impact on economy and social system. Corruption is also breaking down social capital and increasing inequality in the society. Moreover, social disorder and poverty is increasing among the poor people in the country and it is also destroying our social system. Even, a social political and economic unrest after Aila in the coastal Bangladesh polarize and divide the society into two parts.

7.7. Crimes as Post Disaster Social Pathology

Disasters bring disruptions in the normal social life, create chaos, destroy social structure and contribute to replace social order, disaster research may be viewed as the study of 'social pathology' (Dynes, et al, 1978; Nasreen, 2004). In the coastal region of Bangladesh this social pathology can be examined from the ecological perspectives of Shaw and McKay (1952) emphasize on the interrelationship between humans and their physical/social environment. The ecological perspective argues that ecological determinism is an area or physical environment causes social pathology (Hagan, 2011). The coastal ecology of Bangladesh is more vulnerable to climate change and to disasters. The qualitative data revealed that there had several forms of crimes in the coastal regions of Bangladesh during and post-Aila period. The forms of crime were included trafficking, theft, stealing brick from the road, child trafficking, begging, robbery (very limited extent) etc. Gambling and drug addiction were major crimes detected in which the young generation was more involved because of unavailability of job opportunities. Smuggling was also an important forms of crimes found in the study area. For example, the coastal regions particularly Shatkhir district have a border line with India. Some people are doing business and smuggling from India. They buy cloths, drug heroine, pensidile, yaba, etc.) from Indian market and sell it in Bangladeshi local market with help of border guards of Bangladesh. A case study participant Fatima (28), studied up to primary level, Khulna reveals,

"Salinity is destroying our agricultural production after Aila. As a result, the local people are now searching alternative employment opportunities. They are moving from one place to another for a better job. On the other hand, due to employment crisis social problems are increasing. Particularly in our locality criminal activities and thefts are increasing."

Violation of human rights is another form of crime which women are the subjects of victims. The coastal people were facing food problems because of destroying crops after Aila. Thus, they were using their child labor at sweetshop in the local market and their children also worked as street vendors. One FGD was conducted in Shatkhir district where the FGD participants identified the following causes of crimes in the coastal Bangladesh: (i) prevalence of saline water due to Aila, (ii) unavailable job or less job opportunities, (iii) high temperature, (iv) lack of education, (v) lack implementation of law, (vi) lack of awareness, (vii) poverty, (viii) losses of economic productivity and (ix) food

crisis. The study also discloses that due to crime social disintegration and anomies are also increasing. So, it is predicted that crime is existing in the coastal areas due to more pathological environment than deviant behavior of abnormal individuals.

7.8. Migration of Male Member and Sex Crime

The study discovered that the male members (60.5 percent household) of the family migrated to other places. Because of migration of male member of the households women had encountered several types of problems such as insecurity (18%), searching alternative livelihood options (11%), food insecurity (32.2%), financial crisis (5%) and sexually harassment (22%). Poor women find it extremely to ensure food security and financial need when they struggle to live in the society. To solve the problem some women made illegal sexual relationship with the rich men to earn money. On the other hand, due to absence of male partner for a long time women got involved in willful crime particularly illicit sexual relation. One key informant Bala Mukherjee, a school teacher, Koira, Khulna revealed:

“Due to the absence of men for a long time many women elope with other men. If anyone gets barriers, then she escapes with the man. In such case, if there are children, they go away leaving them.”

The cyclone *Aila* had also evicted the people from their residence. The homeless people had taken shelter on the embankment, road or shelter centre. At the shelter centre the sexual crimes were also found. One participant pointed that:

“While living in dam there, illegal affairs between men and women happen that sometimes lead to family break up.”

Due to illegal sexual relationship the family is breaking down and it also creates social unrest and conflict in coastal regions of Bangladesh.

7.9. Gender Based Violence (GBV)& Forms of GBV

Gender based violence has become a common phenomenon in coastal areas. Some typical forms of GBV such as - women oppression like physical, sexual, and psychological/emotional violence within the family, child sexual abuse, dowry-related violence were increasing due to Cyclonic storm *Aila*. At the family level, before *Aila* women were working in agricultural field and serving their family due availability of job opportunities while in post *Aila* period women had to face husband's torture for food and sexual abuse. The *Aila* affected women also had to work outside the home reducing the food problems. At the work place the women were harassed in different ways including paid less amount of wage compare to men, teasing and sexual abuse. After *Aila* in the coastal regions dowry was identified one of the most serious problems. The men were creating pressure on his wife to bring money or property from her father's family. One key informant Suraiya Banu Doli (56), school teacher, headmistress of *Paaikgachha* Government High School stated:

“Dowry has become a serious social problem. After Aila many people take dowry due to poverty resulting from disaster.”

“Poor people faint away due to the stress of poverty. I have judged 3 cases of divorce some days earlier.” Rabeya Hossen (35), Upazila Vice chairman, Paaikgachha, Khulna District.

Like other gender based violence, divorce has become a major concern in disaster research. This type of violence occurs in the coastal regions when women are incapable of bringing money or capital from her father's family. Besides, poverty, migration of male member, economic crisis resulting from *Aila* were also responsible for occurring gender based violence. The traditional structure of society like patriarchy and traditional gender norms are important factors behind gender based violence observed in the South-East Bangladesh. Weak community sanctions against perpetrators and lack of legal assistance are also responsible for violence against women in the coastal area of Bangladesh. Because of gender based violence the women were experienced physical weakness, frequent sickness and feeling giddy. The survey data also revealed that the affected women also suffered from mental health problem, meanness and insecurity. Moreover, due to misunderstanding with husband family broke up takes place and even family members or others think badly of them. It, here, can be argued that gender inequality and gender-based violence are violations of the human rights of women and have significant public health consequences.

8. Concluding Notes

Disasters are frequent events in Bangladesh. Though, disaster research in Bangladesh has been dominated by geographical approach because disasters are mainly considered as physical phenomena, this paper has emphasized on sociological approach to examine post disaster situations. However, although many disasters are related to physical phenomena, they mostly affect society, community, people livelihood, institutions, social order and the overall environment. The cyclonic storm *Aila* destroyed pre-disaster community cohesion and social integration and process. Because of this natural catastrophe the various forms of social diseases such as crime, poverty, economic crisis, degeneracy, health problem and unemployment situations are increasing in the coastal regions of Bangladesh. In fact, these social pathologies are the result of structural inconsistencies of the structure of society. It is evident that post disaster social structure doesn't perform perfectly and it doesn't security of all people. The women become the subject of harassment and the burden of family pushes them to a disadvantaged position. In the social structure the family is the basic unit of society and it requires recovering all needs of its member and society must deal in her efforts to secure a more perfect adjustment of her machinery for producing the social individual.

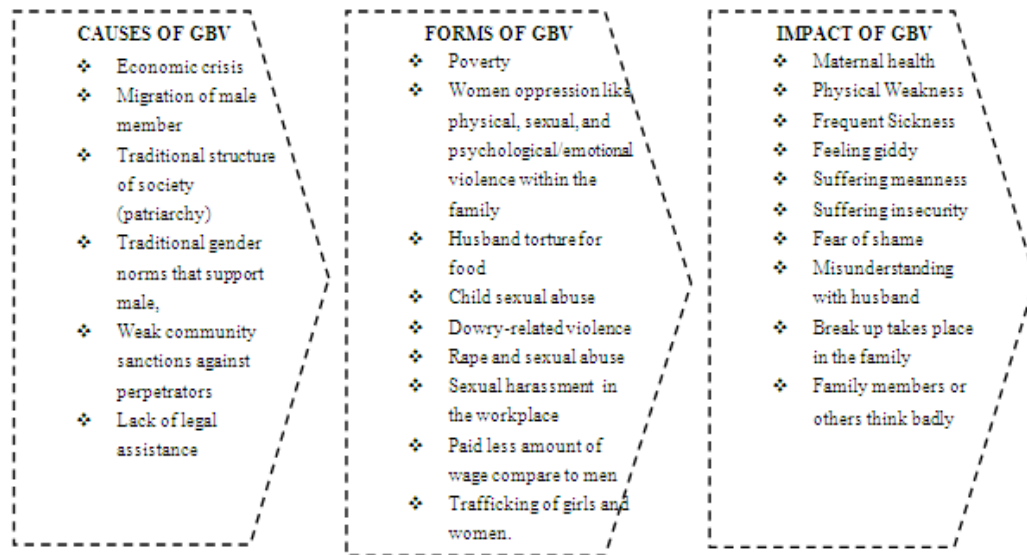


Figure1. Conceptual Framework of Gender Based Violence

9. Recommendations

1. Government and NGOs should create job opportunities by introducing small scale business.
2. Establish mobile clinic to reduce the immediate impact of disasters.
3. Develop a temperature absorbing technology to be converted into electricity or solar energy.
4. Develop saline water purifying technology for sweet water.
5. Relocate the garments factories for creating job opportunities and develop communication system.
6. Government should include Corporate Social Responsibility (CSR) in Disaster Risk Reduction.
7. Mobile legal aid clinics that provide legal information counseling and assistance humanitarian aid.
8. Saline tolerant paddy cultivation, alternative crops and livestock that are resilient to salinity intrusion (and higher winter temperatures in particular) should all be promoted.
9. All social pathologies need to be considered in developing a comprehensive policy (comprising all sectors) that promotes population mental health well-being and addresses issues that contribute to social development.

REFERENCES

- [1] Action Aid et al. (2009) 'In-depth Recovery Needs Assessment of Cyclone Aila Affected Areas' Aila response programme funded by ECHO, 25-31 October 2009.
- [2] ADB (2004) *Country Environmental Analysis*, Bangladesh; July 2004, p-15
- [3] ADB (2006) *Annual Disaster Statistical Review*, 2006.
- [4] Ahmed, A. U. et al. (2009) "Swelled Sufferings: Challenges after 3 Months of Aila" Emergency Capacity Building Project August 2009, (available on <http://www.ecbproject.org/bangladesh>. [accessed on. 23 December, 2012).
- [5] Ahmed, M Iqbal (2010) *One Year On-Plight of Cyclone Aila Communities Continues*, Emergency Capacity Building (ECB) Project Bangladesh Consortium and Campaign for Sustainable Rural Livelihoods (CSRL) May 2010)
- [6] Béla, Buda (2009) "Social pathology", *The Journal of Crisis Intervention and Suicide Prevention*, Vol 28(1), 2007, 50-51.
- [7] Rubington, Earl and Martin S. Weinberg. 2003. *The Study of Social Problems: Seven Perspectives*, sixth edition. New York: Oxford University Press.
- [8] Bates, Frederick L.; Dynes, Russell R. and Quarantelli, E. L. (1991) "The Importance of the Social Sciences to the International Decade for Natural Disaster Reduction", *Disasters* 15 (1991): 288-289.
- [9] Chowdhury, M. Jahangir Alam (2008) *Social Cohesion and Natural Disaster Loss Recovery of Households: Experience from Bangladesh*, Department of Finance and Center for Microfinance and Development, University of Dhaka, Dhaka – 1000.
- [10] Concern Universal (2009) *Situation Overview (WATSAN) of Cyclone "AILA"*. Concern Universal.
- [11] *Country Summary Report Bangladesh*, 2010. UNISDR, 2010
- [12] CRED (Center for Research on the Epidemiology of Disasters) (2002) *Quality and Accuracy of Disaster Data: A Comparative Analysis of Three Global Data Sets*, Brussels: CRED.
- [13] Dynes, Russel R. et al (eds). 1978. *Sociology of Disasters: Contribution to Disaster Research* Italy: franco Angeli.
- [14] Dynes, Russell R. (1993) 'Conceptualizing Disaster in Ways Productive for Social Science Research'. Paper Prepared for Seminar "Socio-Economic Aspects of Disaster in Central America," San Jose, Costa Rica, January 21-23,

- 1993.
- [15] ISDR (2004) *Living with Risk: a global review in disaster reduction initiatives*, (available online http://www.unisdr.org/eng/about_isdr/bd-lwr-2004-eng.htm [accessed on 20/12/2012]).
- [16] Ghadimi, Mehdi et al. (2012) 'An Investigation into the Causes of Crime Commitment by Imprisoned Women in Zanjan Province in 2009 (Social Pathology of Imprisoned Women)'. *Journal of Basic and Applied, Scientific Research* 2(6)5665-5678, www.textroad.com.
- [17] Gibbons, Don C. (1979) *The Criminological Enterprise*. Englewood Cliffs, N.J.: Prentice-Hall.
- [18] Hagan, Frank E. (2011) *Introduction to Criminology: Theories, Methods, and Criminal Behavior*, SAGE Publications Inc. London. UK.
- [19] Huq, S., karim, Z. (1999) *Vulnerability and Adaptation to Climate Change for Bangladesh*, Kluwer Academic Publishers, The Netherlands.
- [20] Jacob, Binu et al. (2008) 'Disaster Mythology and Fact: Hurricane Katrina and Social Attachment', *Public Health Reports*, September–October 2008 / Volume 123, 555.
- [21] Kumar, Utpal et.al. (2010) *Cyclone Aila: One Year on Natural Disaster to Human Sufferings*, Unnayan Onneshan-The Innovators, House-16 / 2, Indira Road, Dhaka, Bangladesh, www.unnayan.org.
- [22] Ministry of Food and Disaster Management (2009) *Situation reports for Cyclone Aila*, Disaster Management Bureau.
- [23] Miller, J., & Garran, A. (2008) *Racism in the United States: Implications for the helping professions*. Belmont, CA: Thomson Brooks/Cole.
- [24] Morrison, Denton, E. (1973) "The Environmental Movement: Conflict Dynamics". *Journal of Voluntary Action Research*.
- [25] Mohseni Tabrizi, A. (2004) *Vandalism, basics of social psychology. Sociology and psychology of vandalism in social pathology and social delinquency*. Tehran: An publication. 1st edition.
- [26] Nasreen, Mahbuba (2004) 'Disaster Research: Exploring Sociological Approach to Disaster in Bangladesh', *Bangladesh e-Journal of Sociology*. Volume 1. Number 2. July 2004. 21.
- [27] Ofori, G. (2002) *Construction Industry Development for Disaster Prevention and Response*, Singapore University Press, Singapore.
- [28] Rafipoor, F. (1998) *Social Anomie*. Tehran: Soroosh Publications.
- [29] Reissman, D. B. et al. (2005) "Integrating behavioral aspects into community preparedness and response systems", *Journal of Aggression, Maltreatment and Trauma*, 10(3-4), 707-720.
- [30] Robert K. Merton (1957) *Social Theory and Social Structure* (Rev. ed.). New York: Free Press.
- [31] Rubington Earl and Martin S. Weinberg (2003) *The study of Social Problems: Seven Perspectives*, New York: Oxform University Press.
- [32] Shaw, Clifford R. & McKay, Henry D. (1942) *Juvenile Delinquency in Urban Areas*. Chicago: University of Chicago Press.
- [33] Shaw, Rosalind. 1989. 'Living With Floods in Bangladesh', *Anthropology Today* 5(1):10-13.
- [34] SHAW, R. (2006) *Indian Ocean Tsunami and Aftermath: Need for environment disaster synergy in the reconstruction process*, (available online: <http://www.emeraldinsight.com/0965-3562.htm>).
- [35] Shultz, James M. et al. (2006) "Disaster Ecology: Implications for Disaster Psychiatry", U.S. Centers for Disease Control and Prevention and U.S. Public Health Service.
- [36] The World Bank (1997) *World Development Report 1997*. World Bank, Washington DC.
- [37] WASH Need Assessment, UNICEF, April, 2010.
- [38] Willialp, Acar et al. (1981) *Bureaucracy as a Social Pathology*, Social Systems Sciences Department, University of Pennsylvania. 400 Vance Hall, Philidelphia, PA.