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*Erasmus*

**Living in Toxicity:  
Slow Violence in the Surroundings of the Buriganga  
River of Bangladesh**

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## **List of Acronyms**

Dhaka WASA	Dhaka Water Supply and Sewerage Authority
DSCC	Dhaka South City Corporation
DNCC	Dhaka North City Corporation
UNHRC	United Nations Human Rights Council

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## **Abstract**

This research explores, how people of Suvadda - a union of Keraniganj subdistrict under Dhaka district in Buriganga Riverside, experience living in toxicity due to water, air, and noise pollution. More specifically, how slow and fast temporalities of environmental harm impacted their life, and how they observe the temporality of environmental violence, and how they respond to it. The Buriganga River and its surroundings are ecologically degraded and neighborhoods of low-income communities. Untreated industrial effluent and urban sewage are discharged into the river as well as household waste and plastic are dumped into the river and canal. Adopting slow violence, necropolitics, and environmental classism as the theoretical framework and based on qualitative interviews, this research provides an analysis of how pollution is disproportionately distributed among poor communities, and how these communities experience and respond to toxicity created by water, air, and noise pollution. This research also tries to investigate why these people do not participate in resisting the environmental injustice that they face.

## **Relevance to Development Studies**

This research investigates how water, air, and noise pollution create a toxic environment and how people of poor communities are exposed to and experience environmental injustice. It broadens our perspective of development to take into account people's lives, the environment where they live, their claims of environmental injustice, and their environmental knowledge. It illustrates the pervasive inequalities and environmental disparities and recognizes the detrimental effects of pollution on the environment and the people of underprivileged communities. This research contributes to the area of environmental justice and sustainability of the surroundings of the river where water plays a crucial role as the water bodies in the urban areas of Bangladesh are being polluted. This research brings the question that, although poor communities bear the consequences of environmental violence, their stories, knowledge, and experience of it are overlooked by media, public, and policy agenda which is a barrier in the path of achieving environmental justice and sustainability. The purpose of focusing on slow violence is to see the damages that cannot be seen and understand its causes and effects. Environmental justice and sustainability are intrinsically linked to the experience of suffering from slow violence. The voices of those who are affected by environmental injustice need to be acknowledged for environmental justice and sustainability. This research asserts that in order to make people's lives and environment sustainable, development initiatives should take into account their experiences, opinions, knowledge, and voices.

## **Keywords**

Toxicity, slow violence, pollution, environmental injustice, necropolitics, environmental classism, temporality.



# Chapter 1

## Introduction: Contextualizing slow violence, and environmental injustice in the Buriganga River Area

### 1.1 Setting the Context

Morium Akter has a respiratory disorder and migraine problem. She also has skin allergies and a chronic coughing problem. Marium has been living with this problem for more than 10 years. Her husband is a small trader who is suffering from cancer. Her home is located right next to the Suvadda Canal which is the gateway of untreated industrial water and is filled with industrial and household waste, and plastic. Her morning starts with hearing the noise of hammering iron in the dockyard. The dockyard industry is five minutes' walk from her home. Even during the night, she wakes up because of the noise from the dock. She stays at home with the door and windows closed. The smell from the canal directly enters her home and in the winter season, it becomes unbearable for her. Morium hardly breathes fresh air in her home and living environment. A black spot has appeared on the furniture and walls of her house. Most of the open freshwater sources have been polluted and grabbed due to industrial infrastructure, and the expansion of urbanization in Suvadda. Before the pollution, Morium had used the Suvadda canal water for domestic purposes. She cannot lift water from her tube well as the groundwater level is depleted. She stores the supplied water in the tank on the roof because her family gets the supplied water twice a day. She boils the water for drinking because there is dirt in the water. In her roof garden, she grows vegetables for domestic consumption but it does not grow and yield well. Morium does not see wildlife and aquatic life anymore in her living environment, but even three decades ago she used to see birds and fishes in the Suvadda canal. She hardly meets friends and relatives because no one wants to visit her place. She is socially disconnected in her own living environment.

Every morning, Masud wakes up at 6 am and goes to the river at 7.30 to ferry passengers and goods in his boat. There are more than hundreds of boatmen like him in Buriganga who live in Suvadda near the dockyard and canal. He cleans his boat daily in the river to remove mosses and toxic metal so that his wooden boat lasts longer, otherwise the boat needs to be repaired every year. He washes his body and clothes in the river during monsoon times as the water seems less polluted, but in the winter, he uses supplied water at public water points. Black spots appeared on his hands, legs, and nails as he washes his boat in Buriganga daily. He has itching and blisters in his body throughout the year. His eyes have become red and has dim sight. He is suffering from chronic coughing and respiratory problems. The toxic air and stench of the river entering his body has been an everyday experience for him for years. When he breathes, he feels like the air is toxic and it hits his lungs. In the winter when the toxicity increases in the river, he uses his 'gamcha' (a local towel made of cotton) to cover his nose so that the stench and toxicity enter less in his body.

He was a fisherman and was displaced from his work because there were no fish in the river due to pollution from garments, tannery, dyeing and dockyard, and sewage. He saw fish used to float dead in the river. Now he rarely sees fish and other aquatic life in the river. He does not see any birds in the river which once was a daily scene for him. He lives in a rented tiny house near the Rahaman dock and cannot sleep at night because of the sound from the dock. He feels something is buzzing inside his head. Moreover, the smells of burning oil and gas from the dock enter his house causing breathing problems and disturbing his sleep. Masud has a brother who works in the dock. He also bathes, and washes clothes in the river during monsoon season when the water increases and seems less polluted. He collects

water from a public water point which is a five-minute walk from his residence as there is no tube well or supplied water in his house. The place where he lives now is surrounded by residential buildings and factories. He has not seen snakes, frogs, and even grasshoppers for years which once was very common near his residence. Before his eyes, he saw how the canals in Suvadda and the banks of Buriganga have been occupied, and how different industries and market place were built there. Once this environment was clean and now, he cannot even breathe in this toxic environment. He used to spend his evenings sitting in the riverside, it's just a memory for him.

Like Morium and Masud people in Suvadda are every day experiencing, struggling, and dealing with toxicity and bearing the consequences of it, and noticing changes in their living environment over time. I begin with the stories of Morium and Masud's experience of living and dealing with toxicity because all these aspects of what this research is looking at have been captured in these two stories. The aim of this research is to examine how the people living in Suvadda, a union of Keraniganj subdistrict under Dhaka district, the capital of Bangladesh, are confronted with and affected by water, air, and noise pollution, how they respond to it as well as how they notice and perceive environmental changes in their living environment over time. The Buriganga River, once a lifeline of Dhaka, and its surroundings have severely been polluted and ecologically degraded which made human and more-than-human life vulnerable and these areas are socially vulnerable too. Industrialization and invasive urbanization, discharge of industrial waste, and urban sewage in the Buriganga River and its surroundings over three decades made the river and its surroundings toxic. This research provides an analysis of how polluting infrastructure has been placed here, how toxicity is experienced, how they act upon it, and how they perceive environmental changes. It also raises questions about why the burden of development is carried out by low-income people.

## **1.2 Community, Polluting Infrastructure, and Environmental Injustice**

The polluting infrastructure of industrialized nations has been transferred to third-world countries as a process of neoliberal policy. In neoliberal policy, effective management of public property, such as water, is achieved by treating it like a commodity, rather than by any social and political values equality (Ahlers and Zwartveen, 2009). Therefore, it separates environmental issues from social life. Without understanding the forces behind placing polluting industries within certain communities, the relationship between pollution and certain people can never be comprehended. Why polluting industries are placed within certain communities and these communities are bearing the consequences of pollution over a long period of time is one of the important aspects of this research. This problem needs to be understood by putting it into the context of political, economic, and geographical contexts. Moreover, rather than separating the environment from our daily lives, it is essential to position it in the geographies of daily life: the place where we live, work, learn, and play (Di Chiro, 2008). This viewpoint brings the environmental problem home by drawing connections between our health and the neighbourhoods we live, the water we use, the air we breathe, and the food we eat (ibid.). Therefore, individual, and community's survival may be difficult due to the combinations of certain social, environmental and economic factors. Several dis-enabling factors that restrict a community's sustainability and that disproportionately affect the poor have been disclosed by ethnographic accounts of environmental injustice (ibid.).

In Bangladesh, polluting infrastructures are located in areas which are low-income neighborhoods' area. These poor communities live near polluting facilities that release poisonous toxic chemicals and waste into their area, live in toxic places and poor housing, and work in unsafe places. Under the neoliberal policy, when industrialized nation's polluting

industries were transferred to developing countries, Bangladesh was one of their destinations. The government, state bureaucracy, and environmental policy placed textile, ship-breaking, and other polluting industries in low-income neighborhoods in the country. The Buriganga River's neighborhoods are home to thousands of textiles, dyeing, leather, and other polluting industries where poor migrated rural people work. The agricultural land has been converted to industrial space, and public property like water has been severely polluted. The environment and wildlife have changed. People whose livelihoods depended on agriculture and water sources have been displaced from their work. Moreover, they are enduring the consequences of pollution on their physical and mental health, and their social life. Their environment and social life are not separated. Consequently, we must understand their environment as the space in which they create their communities, live their lives, and have a chance of surviving on Earth, rather than viewing it as something separate from them and their communities (Di Chiro, 2008).

### 1.3 Time, Toxicity, and Slow Violence

There is a dialectical relation between temporality and toxicity (Davies, 2018). He argues that time is a crucial component in determining the extent of bodily harm that a toxic substance might cause (ibid). He states that “the longer an individual is exposed to a toxic substance, the more likely he or she is to be harmed” (ibid. p.1538). However, time creates profound ambiguity in daily life. According to Murphy, in time and space, toxic substances have the ability to delay their detrimental effects, creating uncertainty between toxic risk and its affected people (Murphy, 2013). Toxic materials, as they are accumulated in human bodies over their lifetimes, may be attritional and exponential (Auyero and Swistun, 2009). As Murphy asserts “the effects of the toxic material are not necessarily felt at the moment of the exposure, but later, in the future” (Murphy, 2013, p.142). He further highlights that the temporal pace of toxicity is slow and delayed (ibid) what Nixon (2011) calls ‘slow violence’. Nixon defined slow violence as “a violence that occurs gradually and out of sight, a violence of delayed destruction that dispersed across time and space, an attritional violence that is typically not viewed as violence at all” (Nixon, 2011, p.2). Their slowness, persistence, growing accumulations, and latency are part of this temporal aspect of toxicity. It is “this temporal dimension of toxicity- their slowness, their persistence, their creeping accumulation, their latency” (Murphy, 2013, p.136) that this portrait of the Buriganga River and its surroundings stresses. As for Murphy, latency is a shift from the past to the present, even to the future (ibid.), so the effects of toxicity pass from past to future and even in between. In positing slow violence, Nixon emphasizes the temporal aspect of slow violence that “violence is decoupled from its original causes by the working of time [and] time becomes an actor in complicated ways” (Nixon, 2011, p.11). Therefore, time manipulate the impact of toxicity on human and the environment. Nixon thought of slow violence as a type of harm that is not immediate nor overtly dramatic but has disastrous consequences (Davies, 2022). Nixon emphasizes that pollution has the power to accumulate damage for a longer period and defer its damaging effects (Nixon, 2011). Violence is less about specific actions or practices than it is about what they achieve over different time periods (Arcari, 2023). Indeed, toxic chemical's toxicity accumulates gradually and remains for lengthy periods of time, creating a continual health hazard (Custodio et al., 2020). However, in the case of Nixon (2011), slow violence is about more than just time; it is also about inequality (Davies 2021). As Nixon (2011) pointed out the impact of the slow environmental violence disproportionately affects underprivileged groups.

However, time also manipulates people's perception of toxicity. “Beliefs about pollution are constructed in time [and] time gives the experience of contamination, its form and meaning” (Auyero and Swistun, 2009, p.11). Moreover, time is crucial when it comes to

people's perception and experience of pollution, as well as the need for political action on an environmentally altered world (Davies, 2021). Davies (2022) suggests instead of accepting the standard definition of slow violence as 'out of sight', he highlights 'out of sight to whom?' "Violence is only 'slow' and 'out of sight' from the perspective of those remote from its effect" (Arcari, 2023, p.2). However, Davies argues that slow violence is not necessarily 'out of sight' to the people it impacts, but can instead be made knowable through what he terms 'slow observation' (Davies, 2022, p.411), the capacity to gradually observe the accumulation of environmental change for a long period of times. Therefore, time becomes a method for people to understand the impact of slow environmental violence and at the same time to counter it. Time and slow observation provide essential mechanisms that would enable the communities, who are exposed to pollution, to understand, and even find ways of fighting, ongoing pollution in the environment (Nixon, 2011). However, Davies' (2022) argument is on (in)visibility of slow violence, where, I want to include the noticeability of slow violence. By noticeability, I mean observing pollution and toxicity, as this brings attention to sensuous experience as well as the manifestation of slow violence. As Davies (2022) pointed out slow violence is noticeable and knowable through "slow observation" (Davies, 2018). This slow observation allows the people, living with toxicity, to bear witness to the pollution and be conscious of living with toxicity. "People who live with the symptoms of slow violence are often able to gradually observe the incremental changes to their local surroundings" (Davies, 2022, p.419).

## 1.4 Biopolitics to Necropolitics, and Environmental Classism

To theorize the slow violence of pollution, I draw on Foucault's biopolitics and then move toward Mbembe's necropolitics. Moreover, this research engages with Bell's (2020) environmental classism in explaining the slow violence of environmental pollution. For Foucault (1978), the traditional idea of power has gone through a significant transformation and moved toward a new form of power. For him, this new use of power aims to safeguard, regulate, and promote lives (Lekme, 2011). Biopolitics refers to the management of the population by using government institutions (Danaher et al. 2000), which have the power to ruthlessly deny access to healthcare to unwanted populations (Davies, 2022). "This modern shift away from direct and fast "make die" violence (Sparke, 2014), such as the "murderous splendor" of capital punishment (Foucault, 1978, p.144), toward a subtler, more controlled and incremental form of governance, closely echoes the covert and gradual nature of slow violence" (Davies, 2022, p.1539). Therefore, environmental pollution might gradually deteriorate the health of disadvantaged populations in a "bloodless, technocratic, [and] deviously neutral" (Nixon, 2011, p.163).

Davies (2022) asserts that slow violence, in contrast to biopolitics, arises from "a labyrinth of forces at work" (Mbembe, 2001, p.174) rather than from one exclusionary sovereign power. In the age of globalization, the causes of environmental damage are frequently distributed and intertwined in a complicated web of corporate power, state power, and capitalist accumulation system (Davies. 2022).

Drawing on the work of Berlant (2007), Davies argues that the logic of neoliberalism itself can lead to a gradual deterioration of the entire population's health (Davies, 2022). Berlant's concept of "slow death", like slow violence, does not reside in disconnected time-framed events that can appear as immediate and tangible violence, but rather in long-term forms of harm, "whose qualities and whose contours in time and space are often identified with the presentness of ordinaries itself" (Berlant, 2007, p.759). Cantor points out that "certain lives are disposable or dispensable-lives as "wastages"-is also a biopolitical concept" (Cantor, 2017, p.1206). Drawing on the work of Butler's (2009) idea of "grievable life" and Berlant's (2007) "slow death" he argues that both are linked to the way in which a certain

proportion of the population and life is systematically wasted by means of capitalist accumulation (ibid.). In terms of environmental injustice, “wearing out of population and the deterioration of people” (Berlant, 2007, p.754) through slow exposure to pollution and toxic materials over a long period of time is not a deliberate biopolitical act, but it does cause the uneven, and racialized experience of pollution (ibid.).

This research provides useful insight into understanding the pollution experience of the residents of the Suvadda in the Buriganga river area through Mbembe’s (2003) work on “necropolitics” and Bell’s (2020) work on “environmental classism”. Mbembe described necropolitics as “the subjugation of life to the power of death” (Mbembe, 2003, p. 39). Davies contends that “this is more than the Foucauldian idea of the right to kill but rather the right to expose people to the possibility of death” (Davies, 2022, p.1540) and also rather than make die but what Li (2010) calls “let die”. For Li, letting die is “a stealthy violence that consigns large numbers of people to lead short and limited lives” (Li, 2010, p.67). This nuance contrast between “make die” and “let die” violence helps to understand the experience of slow violence caused by unlocatable, scattered, and contested polluter (Davies, 2022). Therefore, anyone’s life is not wiped out deliberately by pollution as an act of biopolitics. Communities that are “designated expendable” (Nixon 2011, p.151) are, one the other hand, permitted to endure the attritional violence of environmental pollution, frequently due to “violent inaction” (Davies et al. 2017, p. 1281) by regulators (ibid).

In relation to colonial slave plantation, Mbembe present necropolitics as a more brutal form of violence in relation to colonial slave plantation. Mbembe stresses the ways brutality was administered to the colonized body in these spaces. He proposed that violence in this colonial space involve gradual deterioration and wounding of individuals, rather than directly killing. Consequently, some groups or bodies are exposed to condition in which they are “kept alive but in a state of injury” (Mbembe, 2003, p.21). Davies (2022) argues that this permanent physical injury to the population, without instant and intentional death, reflects how slow violence affects disadvantaged and contaminated bodies: the “casualties of accumulative environmental injury” (Nixon, 2011, p.144). Under the process of colonial domination, Mbembe’s colonized bodies remained in a condition of gradual injury. In the same way, Nixon’s slow violence indicates the ways in which unequal expansion of globalization and pollution puts disadvantaged populations in a state of wounded body (Davies, 2022). Therefore, environmental wounding like exposure to toxic substances is “driven inward, somatized into cellular dramas of mutation that-particularly in the bodies of the poor-remain largely unobserved, undiagnosed, and untreated” (Nixon, 2011, p.6).

The unintended effects of polluting industries expose marginalized groups or people to the experience of environmental violence that results in physical, social, and mental suffering. This is a slower, more covert, and less visible type of harm rather than highly obvious or spectacular killings (Davies, 2022). Those who are the most sufferer of the effects of pollution, whose harm is invisible and incremental, are “subjected to conditions of life conferring upon them the status of living dead” (Mbembe, 2003, p.40). In spite of the fact that slow violence delays harm, persistent social inequalities tend to reinforce it and make some groups more susceptible to pollution than others (Davies, 2022).

For Bell “environmental classism refers to policies and practices that impact less favorably on working-class individuals and groups with respect to the quality of their living, working and leisure environment” (Bell, 2020, p.3). The wealthy, in class society, are less likely affected by environmental pollution since they can shift their residence, work, and other parts of their life (ibid.). However, poor and powerless people are unable to stop and eliminate structures and activities which is environmentally harmful. Government and industry often place harmful polluting industries in the area where marginalized communities reside. This is because marginalized communities are rarely able to organize effective resistance

because of the dearth of funds, time, skills, contact, and information (ibid.). Due to their underrepresentation in political and administrative bodies, these people have less power to shape policies regarding environmental planning and activities (ibid.).

Bell argues that “discrimination is the explanation for environmental classism [and] the reason for the location of toxic facilities in their communities” (Bell, 2020, p169). Discrimination indicates a socio-spatial correlation between certain population groups and the locations of polluting facilities (ibid.). It could be that poor and marginalized people move to near polluting facilities for the reason that housing is less expensive. This means that “correlations between low-income communities with toxic facilities are the result of rational government and corporate actors simply weighing up costs and benefits, finding cheaper land in poorer area, rather than intentionally discriminating” (ibid. p.169). Therefore, it appears that economic factors and discrimination are interconnected. Low income limits one’s choices for place of living and work, and makes it difficult to stay away from toxic spaces, whether or not they are intended to be discriminatory (ibid.). He argues that environmental classism would not be possible without the social disparities that give rise to social class (ibid.). Therefore, not only does inequality foster environmental classism, but it also causes to environmental harm. As a result, the burden of environmental pollutants falls unevenly on working-class, low-income, and low-status groups (ibid.).

I use slow violence to understand how pollution slowly affects the residents of Suvadda which is incremental over time. Using the idea of slow violence, I look at the long-term social, environmental, and health impact of residing in toxicity in the surroundings of Buriganga River. Moreover, I use Bell’s environmental classism to examine the disproportionate distribution of pollution in the poor community of Suvadda. I also use necropolitics to examine how poor people in Suvadda are allowed to suffer the consequences of pollution and are exposed to and subjected to the possibility of death world.

## 1.5 Research Question

How do the inhabitants of the Suvadda experience the pollution in the Buriganga River and its surroundings, and respond to it?

To address this research question, I further formulate the following sub-questions:

- 1) How do pollution is placed in Suvadda and how the residents are exposed to pollution?
- 2) How does pollution impact the resident's life and their living environment and how do they notice it?
- 3) How do they respond and react to the pollution in their living environment?

## 1.6 Justification and Relevance

The significance of studying the area of environmental injustice particularly environmental suffering disproportionately experienced by people of low-income communities and how the slow and fast temporality of environmental harm impacted their life and environment should be understood in the context of environmental violence and injustice in the socio-environmental context of riverine people in the sub-urban area of Bangladesh and a review of literature on the field of environmental violence.

Studies show that those who live near the water bodies in urban areas of Bangladesh encounter environmental suffering and most of these are people of poor communities. These studies also focus on the fast temporality of environmental harm on the people. Living near polluted water sources cause damage to public health (Hasan, Shahriar and Jim, 2019), and pose risk

to local occupational groups and traditional livelihood the in Bangladeshi context (Mallick, 2013). Dewan's (2020) study on environmental violence in the context of the ship-breaking industry in Bangladesh aimed to explore the lived concerns of residents and workers in the ship-breaking industrializing zone who are subject to toxic exposure both at home and at work. He showed that the uneven economic development made the place a sacrifice zone had exposed its residents to environmental pollution in their everyday lives both at home and work. Halder and Islam's (2015) study emphasis on pollution conditions in Turag River as well as the health issues of people living near the river. They found that the water quality of the river is not good enough to support aquatic life and the residents have a range of health issues.

In this contextual background, the relevance of this research stands on two logical grounds, primarily considering the river as the main narrative point to explore how the slow and fast temporality of environmental harm due to water pollution affects their life, and living environment over time. Finally, the political ecology of toxicity in the poor communities and how they respond and react to it.

## **1.7 Methodology and Methods**

I first visited Buriganga in 2008 when I migrated to Dhaka. At that time, when I was crossing the river over the Buriganga Bridge, the stench from Buriganga River pollution got harder on my stomach. Every time I crossed the river, I smelled the same stench from the river. After almost eight years since 2017, I have been working in an institution which is located close to the Buriganga River. Therefore, I got several chances to visit the Buriganga River and observe the pollution and the surrounding area. These encounters with the river remained in my thoughts. However, thoughts of going back to the Buriganga River immediately crossed my mind after a few years, while working on my RP project. Participatory observation was expected to be conducted in investigating the research topic and research question. However, my admission to MA program of ISS is self-funded. As my amount of money is fixed, I could not go back to Bangladesh in person to do fieldwork due to financial constraints. It was both an ethical and epistemological challenge for me. Considering this challenge, I took advantage of the chance to think about the idea of 'field' and 'fieldwork'. Therefore, I hired a research assistant to collect primary data from the field for my research.

### **1.7.1 Research Assistant**

Throughout my personal connection, I hired a research assistant, Md. Azizul Hoque, is 26 years old and has completed his Bachelor's and Master's from Jagannath University, Dhaka. Since 2017, he has been living in the old town of the city which is close to Buriganga River. During his student life, he has worked with some daily newspapers. As a part of his work, he prepared a few reports in a daily newspaper on Buriganga river pollution. He knows the place and people around the Buriganga River very well. After our initial conversation, we exchanged our email and WhatsApp number and our regular conversation became part of my daily life. Our ongoing communication started to become a normal part of my daily life.

Indeed, I looked for a research assistant who has completed at least graduation from a university and has some research background. Azizul has experience conducting fieldwork as part of his bachelor's and master's thesis. Moreover, he has previous experience working as a research assistant with academic researchers. In addition, as Azizul has been living near the river for six years, he is very familiar with the physical and social environment of this area. Due to my physical absence, people like Azizul are in a better position to explain the physical environment, as he has previous experience writing a report on Buriganga river

pollution. He also has good communication skills because of his experience of working with newspapers.

In the beginning, Azizul and I talked about the pollution in the Buriganga River, polluting infrastructure, and the physical and social environment. Following the initial conversation, we had a more in-depth discussion about my research topic and question, as well as how this research might be carried out. Though he has experience conducting research, we discussed how to conduct in-depth interviews, how to observe participants during the interview and how to observe the field, how to take field notes and prepare field reports, and so on. In addition, I provided him with the interview guide for this research in order to successfully conduct the interview with the residents.

### **1.7.2 Interview and Internet**

A total of 15 interviews were conducted by my research assistant. The data were collected from August 10 to August 22, 2023. Nine of the 15 participants are men and six are women. Among them, there are four boatmen, five small traders, and six housewives and all of them are residents of the studied area. The participants were selected through purposive and snowball sampling. The participants were selected on the basis of a minimum of 25 years of living experience in the area. After each day of conducting interviews, my research assistant shared his field experience and interview with me through the Zoom platform. As I was not present in person in the field, the internet helped me to contact Azizul every day during and after the interview as well as imagine my field site. I downloaded a map of the Buriganga River and Suvadda and printed it. When Aziz shared his daily interview experience, where he visited, what he observed, and with whom he conducted the interview, I used to watch the Google map and imagine the field site. These cartographic imaginations helped me to think about the site in a more creative way. I was able to conceive more creatively about the site because of this internet technology.

### **1.7.3 Ethical Issues and Challenges**

Throughout the research procedures, all required steps were taken in order to ensure the ethical norms. The participants were asked to confirm the time and place before every interview. Verbal consent has been taken before the interview and recordings. With the exception of the research assistant's name, all names used in this research are fictional. As Azizul accepted the terms and conditions as a research assistant, he was required to sign a non-disclosure agreement. Azizul clarified to the participants that this research was for academic purposes and would not bring any material benefits to them.

Being unable to observe the field, and the people in their actual physical and social settings adds important challenges to my research as this research is about environmental violence that local people encounter and experience. Despite the fact that conducting fieldwork in a specific place gives the researcher the feeling of 'being there' (Borneman and Hammoudi, 2009), the fieldwork was conducted entirely without my direct in-person engagement in the field. Foote and Bartell explained that "the positionality that researchers bring to their work, and the personal experiences through which positionality is shaped, may influence what researchers may bring to research encounters, their choices of process, and their interpretations of outcomes" (Foote and Bartell, 2011, p. 46). Without observing people in person in their physical, social, and environmental settings, I completely depended on my research assistants' observations which affected the research and interpretations of the outcomes.



# Chapter 2

## People, Place, and Toxicity

### 2.1 Introduction

Socially disadvantaged populations are linked to the presence of polluting industries and waste disposal sites (Chakraborty and Basu 2019). In Dhaka, locations of Polluting infrastructure and waste facilities are associated with working class and poor populations. The majority of the available studies indicated that the Buriganga River basin area is experiencing extreme river pollution events (Uddin and Jeong, 2021). Polluting facilities in the Buriganga River area are situated in low-income neighborhoods. These communities that reside close to the polluting infrastructures are exposed to harmful pollutants produced by industry, urban sewage and waste, residential garbage, dockyards, and other sources. Moreover, the widespread conversion of previous agricultural terrain into industrial and working-class residential areas created a distinctly unequal dispersion of toxic risk. Furthermore, on a larger scale transfer of polluting industries (readymade garments, textiles, tannery, shipbreaking, and garment-related industries) to Bangladesh especially in the low-income neighborhood in Dhaka is a form of environmental racism which can be described as “toxic imperialism” (Walker 2012, p.95).

In this chapter, I will highlight how polluting infrastructures has been placed in low-income neighborhood like Suvadda. I will explain that necropolitics and environmental classism play a significant role in locating the polluting infrastructure in poor communities. This chapter will also focus on the exposure of people in Suvadda to toxicity which is perpetuated by water, air, and noise pollution.

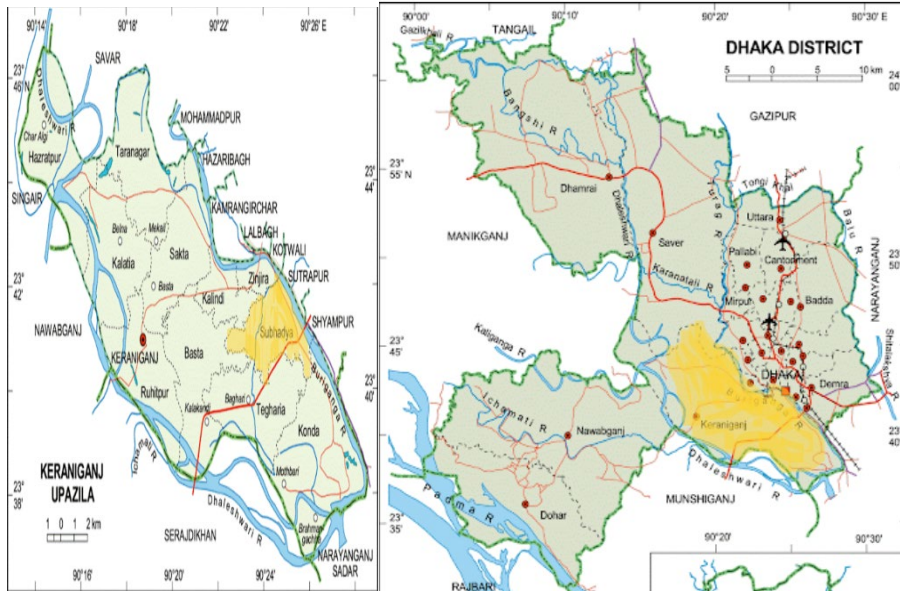
### 2.2 The Place

Suvadda, a sub-urban area, is a union in Keraniganj sub-district under the Dhaka district, Bangladesh. Suvadda is located on the south side of Keraniganj along the river Buriganga. The total area is about 14.70 square kilometers with a population of 225865 with 25,887 households with 1,24,2255 females and 1,01,640 males according to the 2011 population census. Suvadda is divided into 6 mouzas and 9 wards. The Buriganga River separates Suvadda from the capital city. On the north side it is surrounded by Buriganga River and the south and east side is surrounded by Aganagor Union.

Participants informed that Suvadda once was an agricultural landscape and there was a dozen canals. Now there are four canals, Suvadda Canal, Kaliganj Canal, Char Mirerbagh Canal, and Khejurbagh canal. All these canals have a lean flow of water. The Suvadda Union is home to some 5000 garment factories, both small, medium, and big, and they are responsible for drying up the canals because they have been dumping waste in them for years (Alam, 2008). Moreover, there are 33 shipyards on the Bank of Buriganga River in Suvadda union that span about three kilometers (Fattah, 2023), and locals notified that there are more than thousands of dyeing factories in Suvadda. While repairing the ship, hundreds of tons of hazardous chemicals from these dockyards are released into the river water. During the monsoon, some areas of Suvadda flooded as the rainwater could not flow through the canal because the canals were filled with waste and garbage.

There are thirteen primary schools, five secondary schools, two colleges, and thirty madrasas. The entire union is constricted by industries, houses, market complexes, and

dockyards. Though once the entire union was devoted to agriculture, now only a small portion of Suvadda's land is used for vegetables cultivation.



[Map 1: Suvadda, Dhaka, and Keraniganj,]

## 2.3 The People

There are mainly two categories of people based on landownership; one is the landless class and another one is the landowner class. The land-owning class converted their land into small industries, market complexes, and residential houses. Most wealthy households are involved in small and medium factories (garment, dyeing), small and medium local ship repair and building industries, and market-complex businesses. Another segment of the land-owning class is landlords. There are two types of landlords, a large segment of landlords are the owners of residential buildings, where the majority of tenants are garment workers, and small traders, and the smaller segments of landlords have large market complexes, where the majority of renters are textile factories and garment traders. Moreover, some landlords have small and medium market complexes that they lend to small and medium traders. The textile and dyeing industries and wholesale clothing stores hire landless class workers. The small industry and market complex owners.

Among the landless class, there are garment workers, workers in dockyards, small traders, workers in dyeing factories, boatmen, day laborers, and others. Most of the workers here have migrated from rural areas of the country. The majority of the migrated people are garment workers. The majority of migrant workers live in a one-room rented apartment and share a kitchen and toilet with other tenants. These garment workers, day laborers, street vendors, and boatmen live near the polluted canal because the rent is lower there. Furthermore, the workers in the dockyard and the boatmen live near the dockyard and the river.

In addition, a small number of local landlords live near the canal as their residential property is located there. However, the wealthy class and the major portion of medium-class people live away from the canal and the river.

Socio-economic hierarchy is based on ownership of property (factory, market complex, residential buildings, and dockyard), ability to invest capital, income, and political power

and connections. Not just economically, but also in terms of political influence, the textile and other industries elite and big landlords occupy a higher position in society. People of this class live in a better place and environment than the working class. Some of them do not live in Suvadda, they live in the capital city

While women from well-off families do not work in the outside, women from poor households work mostly in garment factories. In addition, some women work as 'chuta bua' (temporary housemaid) in well-off families. However, women in the landlord families grow vegetables and fruits in their roof gardens for household consumption.

## 2.4 Community and Toxicity

To understand the relationship between community and toxicity, it is important to understand the factors and network of actors behind placing toxic facilities within certain communities. Before the establishment of polluting infrastructure in Suvadda, people were engaged in farming, fishing, and other activities. Most of the farmers were medium and small landowner classes. There were some big landowners who gave their land to the landless for sharecropping. There was also landless peasant who were sharecroppers and worked as agricultural laborers. Moreover, the medium landowner hired the laborers and the small landowners cultivated their land themselves. Furthermore, among the landless class, some were engaged in fishing. After the advent of the textile and leather industry, most of these industries were placed near the riverside. Buriganga is one of the homes of leather and textile-related industries. As Dhaka's high-density of population could not provide space for these industries anymore, these polluting industries were placed in the city's neighborhoods like Suvadda and other places. At the same time, Dhaka's urbanization expanded to Suvadda. Therefore, the advent of these polluting industries and the expansion of urbanization in Suvadda and Buriganga river areas simultaneously brought changes in the agrarian world and in the formation of community.

Consequently, dispossession happened in Suvadda due to the establishment of the textile industry and the rapid expansion of urbanization. It is found that two types of dispossessions happened in the river area of Suvadda: one is public land grabbing during the booming of textile and other industries, and urbanization by industry owners, powerful local politicians, and even the government. There were many public lands in the riverbanks and public water bodies like canals that had been grabbed. It was understood by talking to the local residents who grabbed this land and how it was done. Ramjan Uddin said that "factory owners and politically powerful local influential have grabbed the public land and build factories, and markets. The government itself grabbed the canals and built roads; everybody knows that". The encroachment of public land on the riverbank and the waterbodies like canals and rivers are used for factories, dockyards, markets, and public movements by industry owners, local influential, and governments have changed the agrarian formation and local environment.

Another important change in agrarian structure in Suvadda due to industrial infrastructure and rapid urbanization is depeasantization, landlessness, and displacement of fishermen and landless class. Moreover, the pollution in Buriganga rivers and its connected canals due to industries, and polluting infrastructure displaced fishing communities. Though there are still farming practices in some parts of Suvadda, there is no farming in the area near the Buriganga River. The reason for the decline of agricultural land is industry and housing which are more profitable than agriculture. Cultivating crops in small amounts of land is less profitable than building a house and renting it to the tenants. Even selling the agricultural land to the factory owners at a good price is more profitable than agriculture. Therefore, many landowners constructed industries and houses, and others who had less land, sold it

and moved away. The impact of depeasantization and displacement of the landless class has transformed them into industry workers, retail merchants, boatmen, street vendors, and day laborers in search of livelihood. On the other hand, land-less working-class people came to Suvadda as there are working opportunities in these polluting industries. During an interview, Rahamat Ali, a resident in Suvadda, said “The population here has increased a lot because people came here to work in factories, houses, and factories have been built on agricultural land”. Peasants, fishermen, and landless agricultural workers have transformed into factory workers, day laborers, boatmen, and small merchants which is an important aspect of community formation. Moreover, some portion of the landed class has become factory owners and small landlords. But those who are the owners of the factory do not live here. Therefore, the formation of the community here is based on landless working-class and small landlords who are living in toxicity.

## 2.5 Environmental Classism and Necropolitics of Place and People

Buriganga Riverbank settlement is home to low-income people who live in a congested, unhygienic environment that their low earnings allow them to afford (Hoque et al., 2021). While the economic growth's overall benefits are shared by the wider populations, adverse externalities of unregulated industrialization and unplanned urbanization have been disproportionately borne by those who have direct contributions to the growth (ibid.). Therefore, these low-income people are injured and become ill as a result of living and working in a poisonous and hazardous environment on a daily basis, mostly hidden from public view and understanding (Bell, 2020). Such a neighborhood are essentially invisible to government, urban planners, and civil society due to classism, becoming “unimagined communities” (Nixon, 2011, p.150) in the process. This is reflected in Majed Sheikh's statement, who is a boatman in the Buriganga River who lives next to the Rahman Dock. He explained-

“Most of the industries, in this city, are located in poor communities. Wherever you go in this city you will find industries in areas like us. You will not find these industries in rich people areas. The rich people are the owners of these industries, and the government is ruled by rich people. They never build industries in their area, because they know it is harmful.”

It is a prime example of a place where “cohabiting with toxins” (Shapiro, 2016, p.382) is an inevitable aspect of daily life. The environmental classism and necropolitics of this place manifest themselves in the lives of its people, who routinely worry about becoming ill and understand that the unavoidable threat of illness is “at the hands of inviolable polluters” (Davies, 2018, p.1544). The necropower of pollution is not limited to the bodies of these people, but also in their slow observation of their environment and in their memories of how the environment gradually changed over time (ibid.). During an interview, Rahamat Ali articulated “This pollution is stealing everything from us: the water, the air, the soil”.

The slow violence that the people of Suvadda in Keraniganj are experiencing is a kind of environmental injustice that could be more precisely read as environmental classism. Pollution is often located in the place of poorest resistance, close to populations with the least network of social, political, and economic capital (Davies, 2022). In Bangladesh, with the placement of the developed world's polluting industries such as textile, tannery, ship-breaking, and others as a part of neo-liberal domination, the poor resistance has implied toxics are put close to poor populations whose lives appeared less worthy of protection. Environmental injustice is the result of the interplay between social inequality and environmental pollution (Davies and Mah, 2020), and pollution is closely connected to the place of

low-income communities and marginalized populations (Bullard 1990; Walker 2012; Pulido 2017).

This discriminatory geography and distribution of pollution along the Buriganga River side echo Bell's (2020) environmental classism that policies and practices impact less favorably on low-income and working-class groups. This area is constricted by the textile and dying industry, dockyard, and other polluting facilities. The research participant described the geography of pollution as a discriminatory thing because all the city waste and industrial waste is dumped into the river. Mizan explained that "the government does nothing here, but they do everything good in Dhanmondi, Gulshan (residential area of the urban upper class)". It is rich people, the owners of these industries, who are continuously polluting the Buriganga and the landscapes of Suvadda. Moreover, the residents are also dumping their household waste into the water. Furthermore, the municipal sewage and waste are discharged into the river. Therefore, people of all classes are contributing to the pollution in Buriganga and the landscapes of Suvadda. Although the landed class, the owners of industries are significantly contributing to the pollution, it is the landless, the low-income residents who are being mostly affected by the pollution. During an interview, Rahaman said, "Everyone is polluting this place, the residents, the factory owners, and the government, but we are affected by it". So, discrimination is the reason for environmental classism, as Bell explains "discrimination is the reason for the location of toxic facilities" (Bell, 2020, p. 169) in low-income and working-class communities.

The toxic smells, chronic illness, and slow pollution have taken the place of more visible forms of violence, yet classism, racism, and necropolitical exclusion bind this brutality together (Davies, 2022). Living next to such a large cluster of industrial infrastructure, shipyards, and waste disposal sites that together pollute both the water system, the air, and the environment influences life in numerous ways not least in regard to health-risk perception. Dhaka, the capital of Bangladesh, was ranked as the second-most polluted city in the world between 2018 and 2021 (Raza et al. 2023). One of the participants, Shefali Begam-

"Around 70-80 percent of people here have skin irritation and coughing problems. We cannot breathe here, it's really hard during the dry season.... the environment gets more polluted and most of the people face breathing problems. If you live here, you cannot breathe, and seems you will die earlier."

As a result of the high accumulation of polluting infrastructure and discriminatory experience with pollution, the region has an infamous reputation for illness and chronic disease. The presence of such a high level of toxicity in such a concentrated and discriminatory geography (Davies, 2022) can be interpreted as "letting die" (Li, 2010). Thus, place, along with its complex socio-environmental entanglements of power, and class, exposes its inhabitants to the injuries of the threat of death in life (Davies, 2022). Participants expressed their perception of increased chronic illness for living in this region. During an interview, Shefali Begum stated-

"My husband is suffering from cancer. I do not know if he is suffering from cancer because of trading clothes next to Buriganga, or if the toxic environment is responsible for his illness. Cancer patients are increasing in our locality. Diabetics, stomach pain, heart disease, skin disease, and lung problems are very common here. Maybe it is because of the impact of pollution."

The polluting infrastructure in this area has created a widespread public perception of health risk encompassing a wide spectrum of illnesses, reflecting the wounding nature and the permanent damaging effects of necropolitics (Davies, 2022). The lives of these people are less valued because of their class position and because of their powerlessness. They are exposed to the toxic world in which they are letting to die slowly.

As Suvadda is a place of a low-income neighborhood, this place and its inhabitants are victims of discriminatory geographies of pollution. This discriminatory geography of pollution is the example of necropolitics and environmental classism. The state environmental policy placed this polluting infrastructure in the Buriganga Riverside which is residents of low-income people. However, the residents are also polluting their living places and the river. Therefore, it is not just about environmental classism, but more about all classes' engagement in polluting particular places where the consequences only fall upon the poor class.

## 2.6 Exposure to Water Pollution

The people in the studied area are exposed to water pollution in Buriganga River and its connected canal in several ways. Not all the people in this area have direct contact with polluted water. However, some people are physically exposed to water pollution. People, like boatmen and fishermen whose livelihoods are dependent on the river, experience direct physical contact with polluted water. Boatman during their interview expressed their concern about direct exposure to water pollution while bathing, and washing their clothes and boat. Rahamat Ali, a local boatman who has been boating in the Buriganga River for more than 20 years, stated-

“I bathed and I still bathe in the river because I have a boat, and I have to bathe. Now the water is clear as it is monsoon season. I have to wash my boat, take a bath, wash my clothes, I do it all here. When the dry season comes, I still have to use river water because I have to wash the boat every day. For this reason, I bathe and wash clothes during the dry season.

All the boatmen in the river go through this type of exposure to pollution in the river. The boatmen are boating in the river from morning to evening carrying passengers from one side of the river to the other side. Therefore, the river is also their place of eating daily meals. During the interview, the interviewer observed some boatman taking their mid-day meal on their boat and washing their hands with the river water. Karim Mia, a 60-year-old local boatman carries passengers from Oaizghat to Alam Market Ghat. He spends the whole day in the river, takes his mid-day meal on his boat, and uses the river water to wash his hands. He carries the drinking water in his boat that he collects from the nearby tap water source. He goes down into the river and cleans the boat with the river water. He expressed “Since I have a boat, I need to clean it myself, I need to go down to the river to clean the bottom of my boat”.

Boatmen, like Karim, spend the whole day in the river because of their livelihood and clean their boat in the river water. The situation becomes worse in the winter when water declines in the river and it turns black as well as becomes toxic. During that time, they go down into the river and clean the bottom of the boat because a type of black substance gets stuck on it. In the winter when they go down into the river, their skins burn and get blister on their body as well as their eyes become red due to contact with toxic water.

In addition, some people and children bathe in the river water during monsoon times because the water increases in the river and seems less polluted. During an interview, Karim stated that “in the monsoon time children and men workers in the industries near the river bathe in the river. Women also wash clothes in the river water”. The research participants explained that as this area is mostly a low-income neighborhood, many houses do not have water supply in their houses. They collect water from nearby public water tap points or from deep tube wells for drinking and cooking. Sometimes people stand in a queue to collect water. It is difficult to take a shower standing in a queue. Therefore, these people bathe in the Buriganga's water during monsoon but not in winter. As the capital city is on the other

side of the Buriganga River, people cross the river on a boat to go to the city. As the boat is small, water splashes on their body during river crossing.

Overall, residents have access to clean water either in their houses or in a public water tap. Boatman and other people who depend on public tap water are directly exposed to water pollution for bathing and washing. Moreover, people are also exposed to polluted water while they cross the river on the boat.

## **2.7 Exposure to Air and Noise Pollution**

Besides the direct physical contact with polluted water, people are exposed to the stench of polluted water. When people walk on the riverside, crossing the river on the boat, the stench enters their nose. The boatman also comes into contact with the stench of polluted water. As one boatman explained “We are boating in the river all the time, and when we boat, the stench enters the nose and feels like suffocation. When the launch goes on, the water moves more, and then the stench increases.”

This type of stench contact is common here when crossing the river and walking on the riverside. The participants expressed that the stench of Buriganga river water enters through their noses and face breathing problems. During the monsoon season as the water increases in the river, the smell of the polluted water lessens. However, in the winter, the stench of water increases so much that it is hard to breathe. As Rahaman, “If you travel this road all the way to Kaliganj, you won’t be able to breathe. The stench enters into my shop here”.

Moreover, people who reside next to the canal and river are exposed to the smell of the polluted water. Residents along the Buriganga river and its adjoined canal described the stench entering their houses. Majed Sheikh, a small businessman living next to Rahman Dockyard, expressed that “river pollution enters my house directly, the smell is stronger in the winter, and my family suffers from this”.

## **2.8 Conclusion**

I have shown and argued throughout this chapter that placing polluting infrastructures within poor communities is a form of environmental classism and necropolitics. Through industrialization and urbanization polluting industries have been placed in Suvadda and made it a toxic place. These toxic industries were placed in the poor communities by a complex network of forces including government and elite industrialists. Such kind of discriminatory geography exposes people to the possibility of illness and death. This chapter also highlighted the ways people came into contact with water, air, and noise pollution in their daily lives.

## Chapter 3

# Living in Toxicity and Noticing Slow Violence

### 3.1 Introduction

Shahid Ali was a fisherman who caught fish in the Buriganga River and its adjacent canal. Besides, he worked as a seasonal agricultural laborer during the crop season. Now he has been a boatman in the Buriganga River for 35 years. He caught lots of fish in both the river and canal during the low tide, earned a generous amount of money, and his family used to run smoothly. He had caught a variety of fish in the river and canals and seen different types of birds like heron, kingfisher, cotton pigmy goose, and magpie-robin. He and his family members had used the river water for domestic purposes like bathing, cooking, and washing. Moreover, his family had used the tube well for drinking water. Now they use the supplied water and boil the water for safety. This is because the groundwater level in Suvadda has been depleted. The river water started getting polluted in the late 1980s, the fish and other aquatic life in the river started to decrease and now it has almost disappeared in the river and canals. Once upon a time, his livelihood depended on fishing in the Buriganga River, but he has been displaced from fishing in the river and shifted to boating in the river. He is now suffering from chronic coughing, skin irritation, eye burning and itching, and breathing problems.

Like Shahid Ali, those who lived in Suvadda and the nearby area were peasants, agricultural laborers, fishermen, and small businessmen. Many people who once worked as fishermen, peasants, and mostly whose livelihood depended on the Buriganga River, have been changed due to severe pollution in the river. Fishermen like him in Suvadda and the neighborhood came to Buriganga by boat, stayed for some days, fished in the river, bathed in, and cooked with the river water. The farmers in Suvadda irrigated their agricultural fields with the water from Buriganga. However, as a result of severe pollution in the Buriganga river system from industrialization and urbanization, many people like Shahid Ali have been displaced from their livelihood due to pollution in the area. Residents like him are suffering from various chronic diseases such as skin irritation, breathing problems, eye burning and sight problems, lung problems, and coughing. The invasive pollution in the Buriganga River and water systems, the account of increasing illnesses such as skin disease, lung problems, and sight problems, and the once-thriving plants in the fertile soil are now fading.

This chapter deals with residents' experience of living in toxicity and the environmental change they have been noticing in the Buriganga River and the surroundings. The Buriganga River and the Suvadda have been experiencing pollution since the late 1980s and their ecology has significantly changed. Therefore, how the decades of pollution have affected their everyday life and livelihood, the ecology of the local environment, and how ecological changes are perceived by the residents of Suvadda.

### 3.2 Toxicity, Everyday Experience, and Environmental Sufferings

“Environmental suffering manifests as an embodied experience of biophysical pollution and emotions stemming from the degradation of one’s lived environment” (Perreault, 2018, cited in Heikkinen et al. 2023, p.5). People often adjust to the effects of pollution rather than actively opposing them, especially when pollution happens slowly over time (Auyero and Swistun, 2009). Here I combine an analysis of water pollution along with noise and air in



Suvadda, and their interpretation of pollution in their polluted places in order to clarify how about 35 years of slow violence have shaped their daily life, livelihood, health, and housing.

Up until the late 1990s, many residents of Suvadda and its surroundings were relatively supportive of industrialization and the expansion of urbanization. They hoped that it would bring changes in their living standard as industrialization and urbanization promised 'development'. However, little by little they were becoming worried about the impacts of industrialization and urbanization on their lives and environment. During an interview, Salma Khatun, a 55-year-old housewife, explained that "when cloth factories were built in these areas, people were happy that their income would increase, and many people's income increased, but these factories destroyed the rivers, canals, and the environment. People can no longer live happily." The textile and dyeing factories in Suvadda dumped their waste clothes and untreated wastewater into the canals that go directly to the Buriganga River. Moreover, workers have come from different parts to work in these factories and this place has become densely populated. As a result, the amount of waste has increased manifold. The canals are filled with plastic and clothes. Therefore, industrial waste, municipal sewage, and household waste have contributed to water, air, and noise pollution in the areas. These combinations of pollution have shaped their daily life and understanding of toxicity and ecological degradation.

The people in Suvadda are experiencing every day, slow, and long-term physical suffering because of water, air, and sound pollution. Physical suffering varies from person to person as it depends on who is exposed to what and to what degree. There are some physical sufferings that are very common among the residents because of the common exposure to specific pollution. The most common problems that the residents have are eye burning and itching, respiratory problems, scabies, blister and skin irritation, black spots in the body especially on the hands, and coughing. Participants claimed that 90 percent of residents have itching problems in their skins". Hearing loss due to daily exposure to noise pollution from the dockyard industry. Chest burning due to daily contact with toxic air resulting from dyeing chemicals, dockyard chemicals and gas, and the strong stench of river and canal water. The boatmen have black spots on their hands and their nails turned black. Moreover, most of them have chronic coughing, respiratory problems, scabies and blisters, and eye burning and itching due to everyday exposure to water pollution and daily contact with polluted water for a long period of time. The residents expressed that this place is toxic that gradually affects their bodies over time. Karim Mia explained-

"Some have more problems, some less. I have itching in my hands, from my wrist to my elbows. Small blisters/scabies appear then they spread from one part of the body to another. As the water is black, when we go into the water and scrub the boat or take a bath, the fingers get black marks and the hands become black. Just as human hands turn black when burned, our fingers and nails turn black."

This kind of body wounding is visible to the residents of this area. They have noticed how people are becoming ill and their bodies are damaged by long-term exposure to pollution. Rahamat Ali expressed-

"There are many old boatmen who now have very little eyesight even the younger boatmen facing problems in their eyes. Here all boatmen get itchy, the itch slowly spreads all over the body. The air here is polluted, if we breathe in this air, the throat burns, the chest burns."

Living in a place that is constricted with industries shapes the everyday life of the residents in different ways. Continuous noise from the dockyard caused physical problems like headaches, migraines, and earaches for the residents. This noise pollution also causes mental problems such as sleeping disturbance and irritation. Rahamat Ali stated-

“I live next to the dock, and it hurts to be there, when the noise comes from the dock it hurts inside the ear, and the ears go numb. I feel a whizzing sound in my head, I feel something hitting my head inside. The noise continues from morning till evening sometimes the whole night and it feels like hitting my head inside.”

The impact of noise pollution from the dockyard in the Buriganga River is chronic. Many children whose habitats are close to the dockyard are grown up with hearing loss and earaches. Salma Khatun has one daughter and one son. She lived near the dockyard. Her son is now 14 years old. When he was 7 years old, she noticed that her son did not respond when she talked to him. She took him to a doctor and after the examination and knowing the fact of the dockyard, the doctor said that her son had hearing loss because of constant encounter with noise from the dockyard. The doctor advised her to change their residence and prescribed some medicine. After that, she changed her residence, and her son now is better but has not fully recovered.

Before the pollution in Buriganga, many residents used the river water for drinking because there was a dearth of tube wells in the area. People stored the river water in the earthen pot the whole night and the dirt used to lie at the bottom of the earthen pitcher and drink the clean water by separating it from the dirt.

While walking on the riverside road, the strong stench that comes out from the river is hardly endurable, especially during the dry season, and people often feel shortness of breath and even sometimes feel nauseous. Most residents are accustomed to these problems due to years of living and may feel less. During an interview, Rahman expressed that “the longer we stay here the less we perceive the physical problem. But we can feel the damages done to our bodies”. Moreover, people are also suffering from anosmia because of daily exposure to waste and polluted water. During the interview, most of the participants said that they are accustomed to the bad smell of waste and polluted water. However, in the dry season, it is hard for them to bear the smell because the stench from the river water becomes stronger. Rahaman articulated-

“I think my sense of smell has diminished from living next to polluted water and waste for so long. If not, why cannot I smell this polluted water and waste... I see you are covering your nose with your hand because of the smell from the waste and polluted water... getting used to it does not mean it's a solution, it means it is growing in my body.”

People of Suvadda have to cross the river either by boat or over the bridge to go to the capital city for various activities. For many people in Suvadda boat is the easiest option to cross the river because the bridge is far from their place. While crossing the river by boat they come into contact with stench coming out from polluted water which is difficult for them to endure. In particular, in the winter, the water in the river decreases and the smell becomes so strong. The water emits a foul-smelling gas that makes breathing difficult and even causes vomiting in many people. Moreover, when medium and large vessels' waves splash toxic water over the boat, it hits the passengers and causes skin irritation and blisters.

Those who reside near the canals and rivers are the worst sufferers of stench that comes out from the polluted water. It became worse for the women as they stayed in the home all the time. Shanzida Khatun has been living near a canal for 25 years. She stays at home all day. She used to sleep in the room next to the window, but now she cannot sleep there because of the smell of the canal. She stays in another room where the smell is less severe and closes the windows and doors all the time. She has an allergy problem in her body. She explained that “it's not only about the smell of the canal, the environment is toxic that I have an allergy problem, my children have allergy problem in their body. Sometimes the body itches so much that the body and hands and feet pain”.

Like Shanzida Khatun women who stay in houses near the river and canal all day and night face similar problems. They have been suffering from skin allergies, chronic coughing, and asthma. For them, it is difficult to eat food during mealtime because of the stench. During the interview, female participants said that they do not smell the aroma of food when they cook delicious and tasty food. Many women suffer from chronic headaches and breathing problems due to living with constant stench. This toxicity and stench of polluted water create more problems for pregnant women. Shanzida said that during pregnancy, women cannot properly eat and vomit. Her daughter-in-law often became sick and weak as she often vomited due to the stench of the canal. However, like Shanzida and her daughter-in-law, women have learned to adjust to toxicity because they do not have any other option.

As this place is heavily constricted by polluting industries, the temperature here is higher than the surrounding areas and the air is toxic and stinks. Consequently, residents experience breathing problems, and eyes and skin burning. The air is so toxic that the chest and throat of the people burn when breathing. My research assistant expressed that during the fieldwork he was facing breathing problems and his eyes and skin felt burning. Most of the participants noted that almost everyone's eyes here are red because of toxic air. The eyes of the boatmen, who worked in the Buriganga River, are very red. During the interview, it was observed that all the participants' eyes were red. All the participants said that everyone's eyes are red because of the toxic air and river pollution

However, regarding the connections between pollution and health effects, there is still uncertainty and ambiguity. In some of the interviewees, this uncertainty regarding the connection between pollution and health effects was also noticeable. Shefali Begum is also uncertain about the relationship between toxicity and cancer of her husband. She expressed, "I do not think he is suffering from cancer because of trading clothes next to the polluted Buriganga, or that the toxic environment is responsible for his illness".

It is very challenging to draw a specific link to the cause due to the slow nature of violence, since slow violence obscures its origin (Saleh et al., 2021). As Nixon argued "in the long arc between the emergence of slow violence and its delayed effects, both the cause and the memory of catastrophe readily fade from view, as the casualties incurred typically pass untallied and unremembered" (Nixon, 2011, p. 8-9).

However, the residents of toxic places can understand the devastating consequences of slow violence on their bodies when observing changes slowly. One of the participants, Rahaman, explained-

"I think my sense of smell has diminished from being here for so long.... I can see you are having trouble breathing, and holding your nose, but I am not having this problem. Getting used to it does not solve it, getting used to it means growing it in your body."

### **3.3 Displacement**

In Suvadda, depeasantization happened in two ways. Firstly, since the 1990s textile, dyeing, and dockyard industries have been constructed. To meet the residential demand of the growing workers and population in the area, numerous residential buildings have been built. Consequently, agricultural land in the area has declined significantly. As a result, previously those who were peasants and agricultural workers have been displaced from farming and agricultural activities.

Secondly, due to the construction of polluting industries in Buriganga riverside and the discharge of municipal sewage and waste into the river, the water system in the Buriganga River and its connected canals became polluted. This polluted water became unsuitable for irrigation of agricultural land. Many small and medium peasants were compelled to sell their

lands where textile, dyeing, and other industries had been built. Furthermore, some peasants built small industries and houses on their own.

In Suvadda there was a fishing community. According to the locals, the number of fishermen was between thirty to fifty. They used to catch fish in the river and canal, and sell them in the local and capital markets. From the 1990s the river started to be polluted and the number of fish in the river decreased. Since 2000, the river water has become toxic for fish to live and reproduce. Since then, the number of fishermen here has decreased and shifted their profession to boatmen and street vendors. The number of fishermen who did not change their occupations migrated to the Meghna River in Chandpur.

Moreover, most of the people in Suvadda used to catch fish from the river and canals as a part-time activity that would meet the need for fish in their daily meals. Apart from that they sold the rest of the fish to the market after meeting family needs. These people were small farmers, agricultural laborers, and workers. However, due to water pollution in Buriganga and its connected canals, fish have disappeared. As a result, they cannot catch and taste the fish of the Buriganga River.

For women in Suvadda, poultry rearing was a common practice. It was a source of income for female members of the family which added additional support to the family. Duck rearing requires water bodies, the canals, and the Buriganga River were the grazing grounds of ducks. The local women used conventional methods for rearing ducks and chickens. They would let the ducks and chicken out of the coop at dawn, graze outside throughout the day, and return to the coop in the evening. Nevertheless, due to water pollution in Buriganga River and canals, and the constriction of open spaces, traditional poultry rearing by households has been stopped.

Furthermore, women used to grow vegetables such as spinach, red spinach, gourd, and pumpkin in the house-yard and in the open space on the canal and river bank during the winter season. The water was clean and the soil was fertile which helped to grow the vegetables. People could eat fresh vegetables from their garden which met the nutritional needs of the family. However, the water has become toxic and the soil has turned black which does not help to grow vegetables there. Moreover, there is not much empty space where vegetables can be grown.

People have negative attitudes toward textiles, dyeing, and dockyard industries regarding the pollution of Buriganga, canals, and overall, the local environment that negatively affected their livelihood. When the participants were asked about the effects of pollution on their livelihood Ramjan Ali replied-

“Here many people will tell you that these industries have created work opportunities and these industries feed them. Most of these people are outsiders. But local peoples who were farmers, fishermen, and agricultural workers have lost their work because of river pollution and agricultural land grabbing by these industries.”

This attitude towards the displacement from their occupations shows a sense of unhappiness and distress. In fact, the way agricultural land and the Buriganga River have been transformed into a polluted landscape; has changed the livelihood, social relationships, and the sense of belonging to the place.

Participants explained how the toxic industry, chemical waste, and sewage have destroyed everything including water, air, and soil. Rahamat expressed “Now the yield is not good, because river water is polluted, the soil is not fertile, not pure, everything has been destroyed here... vegetables, fruits do not grow.” Therefore, the changes in the environment in Suvadda due to industrial chemical and waste, municipal sewage, and household waste created stationary displacement in Suvadda, whereby pollution “leaves communities stranded in a place stripped of the very characteristics that made it inhabitable” (Nixon, 2011, p. 19).

The local people in Suvadda are “stationary displaced” (Nixon, 2011, p. 19) from their environment.

### 3.4 Toxicity and Social Life

Mahamuda Begum, a 50-year-old woman and housewife, has been with his family in the bank of a canal for almost 33 years. Mahamuda had good memories of this canal. She spent many of his days chatting with other women on the bank of the canal. Women of the locality came to the canal to wash clothes and dishes, to bathe, and to collect water for domestic purposes. They used to share family stories with one another during work. As a result, there were friendships and good relations among women. During the interview, Mahamuda explained that “those days were joyful, I developed good relations with many women, and we used to see each other and share our stories. What beautiful moments I had with them on the banks of the canal”. Then she lamented “The canal is polluted, there are so many buildings here, so many people but I do not talk to anyone, I do not have a good relationship like before”

Like Mahamuda, other women are also socially disconnected from one another. There is no open place where they can sit and share their stories, and make good relationships. The toxic and constricted environment has destroyed the social relationships between people. Furthermore, because of this toxicity and polluted place, relatives and friends do not want to visit them. If people from outside visit them, but they do not stay. The participants described that guest cannot stay here with this toxic environment and the stench of the canal. During the interview, my research assistant encountered difficulties staying there because his eyes and skin were burning and he had breathing problems in there. Therefore, the pollution and ecological degradation due to pollution have changed this social life and their way of understanding it.

### 3.5 Noticing Slow Violence

Certain components of environmental violence are “literally hidden into the tissues of subaltern bodies” (Armiero and Fava, 2016, p. 79), for instance, cancers, and lung infections result in exposure to pollution. “Likewise, other aspects of slow violence too may remain hard to detect, with the very materiality of many toxic substances- such as radiation or a verity of industrial chemical- remaining beyond the grasp of human senses or understanding” (Davies, 2022, p. 418). In this sense, “slow violence can result from a lack of understanding of process, interactions, and effects” (O’Lear, 2018, p. 95). In Keraniganj, environmental violence is slow, incremental, attritional, and continuous which has characteristics of slow violence. However, slow violence is not completely unnoticeable or unrecognizable in the eyes and senses of the residents of polluted geography.

One of the main aspects of Nixon’s (2011) concept of slow violence is invisibility. Davies (2022) warns us not to ignore the practical knowledge that people who live in toxic environments possess and experience daily. Nixon (2011) pointed out that if people of polluted landscapes are unsighted, the environmental brutalities that happen before them remain invisible. However, the populations of the polluted landscapes who are exposed to slow violence are likely to be in a better position than anyone else to notice the devastating consequences of pollution slowly become apparent.

People who bear the effects of environmental violence might have the ability to notice the gradual changes that are occurring in their local environment. The residents of Suvadda have been noticing environmental changes and accumulation of pollution since the 1990s. There, Polluting infrastructures adversely affected the water system, the trees, and the wildlife and have completely changed the ecology of the area and ways of living. During the

interview, participants described trees and grasses nearly vanished, fewer fruits grown in the trees and small in size, and vegetables struggling to grow and are tasteless. Mahamuda Begum described-

“Polythene, pieces of cloth, and various types of waste are everywhere, there is no soil... so crops cannot be grown here. Now we have many kinds of trees and vegetable plants in our roof garden, such as lemon trees, small mango trees, sweet pumpkins, gourds, and sponge gourds, but nothing grows on the trees.”

Like Mahamuda, several participants remarked on the shifting hues of the leaves and grass and also described the green leaves changing to black and dry out, and the green grass turning to yellow. Mahamuda stated, “The leaves become shriveled and turn black”. The color of the grass has turned yellow and dries out. Residents claimed the polluted soil, water, and air are responsible for these types of changes in the plants.

Besides changes in plants and trees, there has been a significant decline in wildlife in the area. These changes have been noticed by the residents. Many participants mentioned that these changes in wildlife have occurred over the last thirty years. Birds, frogs, snakes, grasshoppers, butterflies, and other species are no longer visible here. Participants explained how they have noticed the surrounding environment changing gradually over time. To the residents, these types of changes were not visible in the early nineties because the changes was small at that time. However, in 2000, local residents noticed how the ecology was changing and how wildlife was disappearing. During an interview Rahamat Ali articulated-

“I used to see many birds here, many types of birds such as osprey, chill bird, kingfisher, pygmy goose, magpie-robin. There is no fish here, no birds come here, birds cannot live here, in this polluted water, and birds cannot live by drinking this water. There were many birds whose names I did not know, I do not see them anymore, and they have completely disappeared.”

Like Rahamat Ali, many people in Suvadda have noticed the changes in the local ecology and wildlife. But to the outsiders, these changes in ecology and wildlife are not visible. The locals know their environment more than any one because these slow and gradual changes are noticeable over time. During the interview, Rahaman explained that “you cannot tell what types of birds, and fish were here because you do not know what was here. I know what was here and what is not here. I noticed it all over all these years”. These types of changes in ecology happened due to water, air, and noise pollution in Suvadda and the residents have noticed that. For Nixon (2011) the slow violence is invisible. But the question is invisible to whom? It is invisible to the outsiders who are not bearing the consequences of it. However, as the local people are bearing the consequences of this slow environmental violence, they are noticing it over time.

Shahid Ali has lived in Suvadda his whole life. Over three decades he had witnessed how pollution gradually impacted the local area: the stench of polluted water, the changes in vegetation and plants, and the disappearances of wildlife. At times, he explained, “I have not seen frogs and snakes in this part of Buriganga for more ten to twelve years, if you go around 10 kilometers from here you can see that in the river”. Sitting in his home, he reminisced that “it was beautiful to live here before the construction of textile, dyeing, and dockyard industries. It really was a good place to live”. He recounted how his family used to grow a range of vegetables in the yard, much like other people in Suvadda, and now the pollution had altered the way the vegetables grew: “The soil’s color has changed, and the grass no longer even turns green as it once did” he described.

Accounts of the gradual accumulation of pollution in Buriganga River and its surroundings have changed the local ecology. These ecological changes have altered local people’s relationship with their environment and have shaped their understanding of ecological

degradation. Residents have less interaction with the environment and the wildlife. Participants mentioned that there was an increased number of birds, ants, grasshoppers, frogs, and snakes. Karim recalled his past memories of countless birds, he expressed “I saw kingfishers, pigmy goose, Indian pond heron in the river, now all these gone”. Participants also noted that insects were buzzing in their surroundings which was a feeling of peacefulness. Karim explained, “There were a lot of insects including crickets, and dragonflies. The whole area was resonating with the sound of buzzing crickets”. Now people rarely notice these wild lives in their locality. Because of the toxicity of the water, and the noises from the factory and docks, these insects no longer live here.

Although, the slow and incremental changes to the wildlife, flora and fauna, and aquatic species in Suvadda might appear to the outsiders in a “zone of ordinaries” (Berlant, 2007), as “uneventful, imperceptible, or invisible” (Davies, 2022, p. 1548), these changes are noticeable to the inhabitants of Suvadda. Despite the fact that their local ecology gradually changed through slow changes in birds, trees, fruits, vegetables, insects, fish, frogs, and other species, noticing the gradual changes in their environment has become a critical tool for identifying the effects of pollution.

### **3.6 Conclusion**

Toxicity due to water, air, and noise pollution, has negatively impacted the resident's physical, and social life and their livelihood. Some physical sufferings are visible to the residents and some are not visible because they are hidden in their bodies. Sufferings like eye burning, skin burning, and breathing problems are the fast temporalities of pollution. However, respiratory problems, chronic coughing, migraines, hearing loss, loss of sense of smell, changes in skin color, and cancer are the slow temporalities of pollution. However, people are also uncertain and ambiguous in establishing the link between pollution and health effects because it takes a long time for emerge consequences of pollution on the body to become noticeable. On the one hand, depeasantization and dispossession of fishing communities happened due to pollution, and on the other hand, people have been displaced stationarily. People also notice slow violence through noticing changes in vegetation, the color of soil and leaves, and the disappearance of aquatic and wildlife.

## Chapter 4

# Responses to Toxicity: Between Powerlessness and Resistance

### 4.1 Introduction

I have shown in the previous chapter, the people of Suvadda live in a toxic environment perpetuated by water, air, and noise pollution. I showed that toxicity impacted on their health, livelihood, and social life, and they noticed the changes in their environment through noticing changes in vegetation, soil, water, aquatic species, and wildlife. In this chapter, I emphasize the strategies they apply in their everyday life to adapt to water, noise and air pollution. I also highlight the power disparities and challenges that the inhabitants encounter in addressing and resisting the toxicity. It is challenging to deal with and resist toxicity, which creates tension between powerlessness and resistance. I will show how the sense of powerlessness leads powerless people to be inactive in resistance and lack community activism.

### 4.2 Act Upon Water Pollution

It is really difficult to keep this form of toxicity out of your life when people experience it every day. However, people have their own strategies to act upon toxicity that they encounter in their daily lives. Water pollution in Buriganga and its connected canal is a severe problem for them and their livelihood depends on the river. Tube wells were far away and fewer in number, so people boiled river and canal water for drinking. People stopped bathing and cooking in the river water after noticing the pollution. Now, most of the people use supplied water for drinking, cooking, bathing, and washing.

Parul is a housewife and living here for her entire life. She used the canal water to wash, bathe, and cook. She stopped using the canal water after 2000 when it became polluted. She explained, “There was no way to stop using the water from the canal, the water had a strong smell, chemicals from the dyeing, and household and human waste would float in the water”. Water had to be collected from a distance of half a kilometer. After around four years, many parts of the area were brought under the supplied water by the local government. Since then, her family has been using supplied water. However, according to her, this supplied water is not safe for drinking. Therefore, they boil the water and drink it.

On the other hand, for the boatmen, whose livelihood depends on the river, it is difficult for them to avoid contact with Buriganga’s polluted water. They need to wash their boat in the river, particularly in the winter season. After washing the boat in the river, they take a bath with soap in home.

During the interview with the participant, an interesting technique was found that is applied to avoid contact with toxic water while crossing the Buriganga. Mahamuda shared an interesting technique that she and her daughter apply while crossing the river to avoid contact with polluted water. She explained-

“I and my daughter always wear Burqa when we go outside of the home. We wear that the river water does not splash on our bodies because while crossing the Buriganga, the wave of the water splashes on our bodies.”

Not all women in Suvadda wear Burqa like Mahmuda. But for those who wear it as part of their religious practice, it simply saves them from contact with Buriganga’s water while crossing the river.



### 4.3 Act Upon Air Pollution

Avoiding these types of toxicity in the house appears to be more difficult. The residents look for practical solutions to lessen their exposure to air pollution, but they do not appear to have found any effective ones. Participants indicated that they keep the windows and doors of their houses closed in an effort to reduce exposure to air pollution. Parul expressed that “the air here stinks. It is very difficult to stay here because of the stench in the air. Most of the time I keep the doors and windows closed so that the stench enters the room less”. However, they found it challenging to live in a closed space all the time because closing the windows and doors all the time degrades the quality of air. The increased carbon dioxide led to suffocation and headaches in the enclosed space. Therefore, Parul applied a sort of middle ground, keeping the windows open when she was not at home so that the air could pass.

Keeping doors and windows closed does not appear to be effective in avoiding this type of air pollution in the home. Residents also applied other techniques to lessen the stench inside their houses. Parul explained that she uses perfume in her body, sprays fragrance in the room, and even burns incense in the house.

The temporary escape from air pollution is a further action which people apply. This entails, for example, taking a short break and leaving your home to travel somewhere with clean air. Some participants remarked that they visit their relatives in the countryside to escape from this toxicity for some time. During an interview, Majed stated that “I sometimes travel somewhere else for a few days to avoid this pollution”. After saying that he lamented “But when I returned, I feel like I am in torment again, I am in hell”. Such a temporary escape from air pollution is not possible for everyone in Suvadda. However, some people apply temporary escape from air pollution in a different way for example, during the day, Salma walks a little far away from her home to avoid the stench in her residents. Apart from that she covers her nose with her scarf while walking outside.

A further and more extreme strategy to get away from living with stench is moving. Relocating is a strenuous decision that not everyone can make, for example, due to budgetary constraints. Participants said that many tenants moved to other places because they could not adapt here. But people who are still living here cannot afford to move elsewhere for higher rents. The landlord and those who have their own houses also cannot move from here. Furthermore, many people have become habituated to pollution and attached to their living environment because of their work and social relations.

### 4.4 Act Upon Noise Pollution

Several participants described noise pollution as a kind of torment. Particularly the noise that comes from hammering and cutting irons in the dockyard affects the residents mentally and physically. Residents suffer psychological torment since they are deprived of their sleep due to noise pollution. The noise pollution erodes the sense of well-being, and comfort that comes with being at home and replaces it with a frustrated sensation. The research participants believe there is no way to avoid noise pollution because it permeates the entire neighborhood.

Residents act differently to noise pollution and perceive it in different ways. They do little things to lessen the impact of noise pollution on their daily lives. The majority of individuals made an effort to lessen their exposure to noise pollution by isolating their houses and closing windows and doors to keep it outside their houses. However, such an action does not seem to work at night when people sleep. Mizan discussed an interesting technique he used to apply while sleeping at night: “I use cotton in the outer part of my ear canals so

that I can sleep without noise interruption”. He also uses earphones and listens to music most of the time during the day time to adapt to noise.

In addition, escaping noise pollution is another technique some residents apply. Leaving home to escape the noise pollution is a form of “everyday resistance [...] which is a normal, often covert, and concerned largely with immediate de facto gains” (Scott, 2008, p. 33). But given that noise pollution is also present in the local vicinity, it is challenging to escape from it. Mizan explained that “wherever you go in this area you will experience noise pollution, it feels like there is no escape from it. It tortures you day and night”.

## 4.5 Between Powerlessness and Resistance

I discussed in the previous chapters, that the residents of Suvadda near Buriganga River live in a toxic environment. Here, I highlight the power disparities and struggles that the locals have in trying to address and resist this kind of toxicity which resulted in their inactivity. As For Gaventa (1980), the three dimensions of power are not separated but rather are interdependent. When the elite loses their authority over one dimension of power, the other dimension often consolidates control, leaving the populace powerless (ibid.). The absence of participation in resistance among the people in Suvadda is not because of their socio-economic position or indifference. These powerless people are inactive in the political process because they are afraid of the negative consequences of their dissent (ibid.). People in Suvadda who voiced protest were confronted with violence, loss of employment, and even forced eviction. Shanzida expressed that “the local politician has beaten residents who have protested. One day the local chairman beat our landlord for protesting”. Participants have expressed that there is fear among the residents those who work in the industry could lose their jobs if they dissent.

Research participants expressed a feeling of helplessness in the face of industries in Buriganga’s neighborhood, the government, influential local politicians, and residents whom they held accountable for the water, air, and noise pollution in their environment. In the age of globalization, it is difficult to identify actors since the cause of environmental pollution and degradation are “often dispersed and entangled in a complex assemblage of corporate power, state authority, local regulations and capitalist structures of accumulation” (Davies, 2018, p. 1539). I highlight here the fact that, despite appearances, there is more to the story of pollution in Buriganga and the surrounding area, especially Suvadda.

The research participants expressed that the action needed to be taken by the government to safeguard residents in Suvadda and Buriganga surroundings from toxins and to lessen pollution. As, the United Nations Human Rights Council (UNHRC) declared that everyone has the right to a clean, healthy, and sustainable environment (United Nations Environmental Program 2022), the government should protect them from toxicity and ensure a clean, healthy, and sustainable environment.

The problem is bigger than what someone can imagine. Many readymade garments, dyeing, leather, tannery, and other industries are located along the Buriganga River. The largest share of the foreign revenue comes from the garments sector in the country. The readymade clothing industry accounted for 83.5% of the country’s export revenues and 11.2% of GDP in Fiscal Year 2017-18, employing around 4 million people as a subsector of the textile industry (Hoque, 2021). In addition, the leather industries contributed to 3.5% of annual exports in the same fiscal year (ibid.). These industries largely contribute to the economy of the country. Apart from that as a part of neoliberal policy, the industrialized countries have relocated their polluting industries like textile, leather, tannery, and shipbreaking industries to countries like Bangladesh. The economic interest and the complex network of international actors characterize the textile industries and the government of Bangladesh as a

powerful entity. Therefore, the hegemony of garments and garments-related industry is such that “those who pay its heaviest price [have] little alternative but to support it” (Marston and Perreault 2017, cited in Perreault, 2018, p.238).

In addition, the Dhaka Water Supply and Sewerage Authority (Dhaka WASA) is responsible for treating sewage in the city, and Dhaka South City Corporation (DSCC) and Dhaka North City Corporation (DNCC) are responsible for waste management in the city. Dhaka WASA has a treatment plant that can cover only 10% of city sewage and it discharged all the untreated sewage water in Buriganga and the other two rivers in Dhaka. Moreover, as DSCC’s waste management is very poor, a large amount of waste and garbage is dumped into the Buriganga River. Therefore, in this regard the government is responsible for pollution in the Burganga River and people are helpless that they cannot force the government to take action. Moreover, the local land grabbers, who have grabbed land and water system, have constructed illegally infrastructure and polluting industries in Suvadda. These local stakeholders have strong political connections with the government and they are so powerful that the residents cannot resist them.

Thus, it is not only the polluting industries that are responsible for toxicity in the Suvadda and Buriganga, it is a network of forces in which the industries, the government, the international actors, and the local stakeholders are responsible for toxicity. The residents feel themselves in a powerless position to resist this network of forces. Rahaman explained that “nothing will happen with one’s step. If someone takes a step alone, he/she gets into trouble. Because businessmen are powerful and influential. Those who are involved in politics here also have huge interests. It is very difficult to protest.”

It is not only the network of forces that creates the feeling of powerlessness, but also the experience of inhabitants of the living environment that gives rise to this feeling of powerlessness. Mahamuda gave an example of such an experience during the interview. She said-

“One day there was an organized meeting in which the government official joined. They said that the government is planning to relocate the textile, dyeing, and dock industries from here and will demolish illegal settlements encroaching on the river. However, after the meeting nothing changed here, everything is going as it was. They just make promises but do not act upon it.”

These types of broken promises, deception, and the whole structure give the residents a sense of powerlessness. People lost hope that anything would be done to lessen the toxicity of their environment. The participants have claimed all the big industrialists are doing this pollution. All industrial effluents are dumped into the Buriganga River. The participants explained that the residents have adjusted to this toxicity because they know that they are powerless, their voice is not heard. Ramjan Uddin expressed,

“All the industrialists are untouchable because they cut the drains and dump all the untreated toxic water through the drains into the river without anyone noticing. The government itself is dumping all the waste of Dhaka city into the Buriganga through drains, who will be blamed, and to whom will we protest?”

This sense of powerlessness made to accept the toxicity and to be habituated to it. The research participants said that most of the residents here throw their waste into the canal and river, and the government itself discharges sewage into the river. There is no one to hear their sufferings and there is no one to be blamed for toxicity. Because everyone is contributing to making this place toxic. The problem is too big to solve claimed Karim. He expressed that “everyone here, the residents, the industries, the city corporation, is polluting the river and this place”. When asked about the solution, he replied “Everyone has their own interest...many people work in the industry, some have houses to rent to the workers, and others

have business here”. He also stated that “the government is helpless, the government itself dumping all the sewage in the Buriganga River”.

Environmental suffering is a tangible experience of biophysical pollution and emotions resulting from deterioration in one’s own living environment (Heikkinen et al. 2023). People often adjust to the effects of pollution rather than actively opposing them, especially when pollution happens slowly over time (Auyero and Swistun, 2009).

With all this sense of despair and the powerlessness to live in polluted space, there are endeavours to adapt to this toxicity. As the inhabitants of Suvadda are lower-income people, they are not able to move out to another healthy environment. Although the residents of Suvadda smell, sense, and feel the toxins in their environment, there is still no community activism or actions to address this issue. In the United States there are many ‘sacrifice zones’, i.e. places where communities live in close proximity to highly polluting industrial sites that have begun to unite and take action (Lerner, 2010). Due to the strong coalitions supporting these industries, the scope of local organizations is limited in Suvadda.

## **4.6 Conclusion**

In this chapter, in order to highlight the disparity in power and the difficulties the people face in addressing and resisting toxicity, I regard the toxicity in Suvadda and the surroundings of the Buriganga River as a form of slow and continuous violence that residents face in their everyday life and have been facing for decades. Violence through water, air, and noise pollution is perpetrated by industries, government, powerful local politicians and stakeholders, and the residents themselves. However, I showed, it is a complex network of forces that renders the people of Suvadda powerless and inactive for participation in resistance. Moreover, I also showed their everyday strategies to adapt to toxicity in their everyday life. Though this everyday strategy did not work as a practical solution for them, it helped them to adjust to toxicity.

## Chapter 5

### Summary and Conclusion

In this research paper, my endeavor was to answer the question “How do people in Suvadda understand, experience, notice, and respond to toxicity which is occurred due to polluting infrastructures in Buriganga River’s surroundings? I used slow violence, environmental classism, and necropolitics as my theoretical framework for how the network of actors situates polluting infrastructure in the low-income community of Suvadda, located along the way of Buriganga, which results in long-term consequences on their everyday living environment, their health, their livelihood, and their social life. Although the fieldwork for this research was primarily designed to be conducted in person, due to my budgetary limitations, I had to cancel it. Therefore, I hired a research assistant who conducted qualitative interviews with the local people.

Water, air, and noise pollution in Suvadda is not only contributed by garments, dyeing, leather, dockyard industries, and urban sewage but also by the inhabitants themselves. Although industrial owners, government, and urban authorities placed polluting infrastructures in Buriganga's low-income neighborhoods and these actors are the major contributors to pollution in Suvadda, the people of Suvadda are also responsible for polluting their own living environment. Industrialization and urbanization have changed the agrarian landscapes of Suvadda and transformed it into a toxic environment, displaced residents from their livelihood, from their safe living environment, and destroyed the local wildlife. Moreover, such environmental injustice in Suvadda allowed its people to suffer the long-term consequences of toxicity. It also allowed its people to experience toxicity in their everyday lives.

This research mainly looks at three aspects of toxicity in Suvadda: people’s everyday experience of living in toxicity and its consequences over time, the noticeability of slow violence, and responses to toxicity. The pollution in the Suvadda and Buriganga rivers has affected their body, livelihood, and social life. This research has found that respiratory problems, scabies, blister, skin irritation, black spots on the body, losses of sense of smell are common in the area due to water and air pollution. Furthermore, headaches, migraines, and earaches for the residents resulted from the noise pollution in the dockyard. Peasants and fishermen have been displaced from their livelihood because of polluting infrastructure, water pollution, toxicity in soil, and expansion of urbanization.

People in Suvadda understand and notice toxicity through their embodied knowledge which makes the residents perceive it as slow violence. While the toxic pollution in Suvadda manifests in temporal uncertain ways, residents are frequently able to observe this environmental suffering by using their sensory experience over time. They are able to notice the slow violence by observing changes in vegetation, soil, grass, water, birds, insects, fish, frogs, snakes, other species, and health. Noticing such gradual changes in their environment has become a critical tool for identifying the effects of toxicity. This research has also found that there is some uncertainty and ambiguity among the residents regarding the relationship between the environment and health. The changes in their environment due to polluting infrastructures and urbanization resulted in stationary displacement. They have less interaction with wildlife, trees, river water, and overall, with nature which has stationarily displaced them from the environment they live in before pollution. This situation left these people in a place that has every characteristic of inhabitable.

Living in toxicity and noticing the consequences of pollution might cause people to resist it. However, the power disparities and struggles that the locals have in trying to address and resist this kind of toxicity resulted in inaction. The people of Suvadda have a feeling of

powerlessness in the face of industries in their neighborhoods, the government, influential local stakeholders, and residents whom they hold accountable for the pollution in their environment. The economic interest and the network of forces in which the industries, the government, and the local influential stakeholders characterize the polluting infrastructure in the Suvadda and Buriganga river area as a powerful entity. It has also been found that everyone is responsible for making the toxic environment; the industries, the government, the local influential, and the residents. Therefore, there is a sense of despair and powerlessness among them. Residents have adjusted to the effects of pollution with their own mechanisms. It has been found that the residents act upon water, air, and noise pollution using their own strategies such as boiling drinking water, using alkaline soap to wash the body, spray perfume and fragrance in the house, burning incense, wearing masks, keeping the windows and doors of the house closed, and temporary escape of pollution.

Overall, this research shows that environmental injustice disproportionately falls upon poor communities. Because of their socio-economic condition, they experience environmental injustice in their everyday life over a long period of time and they bear the consequences of such environmental violence. However, noticing environmental violence over time might not produce resistance but can contribute to achieving environmental justice. The failure to see and define the environment as the place where these people live, grow, work, and build communities contributed to the disproportionate burden of environmental injustice upon them. This research paper suggests a shift in this attitude in order to address environmental injustice.

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## **Appendix 1: Interview Guide**

### **Contact with water, noise, and air pollution**

Do you use water from the river/canal for domestic use? Can you tell me more about that? Do you bathe or wash in the river/canal water? Can you describe further why you bathe/wash? Do you have alternative water sources and what are these? Do the stench of polluted water, noise, and air pollution enter your house? Is your daily activity related to rivers and canals and can you explain further? Do you have access to clean water and what are the sources? Do you experience noise pollution from dockyard or other industries at your home and outside? Can you elaborate on how you experienced that? Do you experience air pollution in your home and outside and how do you experience that?

### **Residents' Narrative of Causes of Pollution**

What are the sources of water pollution in the river and canal? Who pollutes the water most? What types of chemicals and waste are discharged into the water and who discharges that? How do these affect the river and canal? Who pollutes your living environment? How is your living environment polluted and its effect on the environment such as; air, soil, water, plants, trees, wildlife, house.

### **Witnessing the effects of pollution on the environment**

How was Buriganga before pollution: river water, aquatic life? How was the surrounding environment and landscape of Buriganga before pollution? What changes did you notice in the river? how and what changes have you noticed in the local environment; trees, grasses, vegetation, color of the soil? How and what changes have you noticed in the wildlife? What type of bird did you see in the river and in your locality that you do not see anymore? What type of fish and other aquatic life did you see in the river and canal water that you do not see anymore? How industry and other infrastructure have changed your landscape? What was the landscape before, what did people do here? What was your and other people's livelihood here? How pollution has changed your surroundings and environment and how did you notice that? How pollution (chemical, toxic water and air, plastic, waste,) have affected your house and surroundings?

### **Toxicity and health:**

What type of health problems do you face living in a toxic environment? Are you and your family members suffering from the disease from diseases like (asthma, cancer, skin disease, visionary problems, breathing problems, migraine, and others)? what is the experience, understanding, and explanation of the health problem you are going through? Are health issues related to pollution? Is anyone in your family suffering from chronic disease? Do you know anyone in your locality who is suffering from chronic disease? What type of problem are you facing because of noise pollution, can you explain your experience in this regard?

## **Resistance:**

Do you have any local activism against polluting activities? Is there any coalition among the residents for activism? Why/why not? Is there any organization mobilizing activism? Has any procession, human chain, or protest taken place? If yes, How, if no why? Are there any government activities taking place against pollution? If there is no activism, why residents do not form a coalition locally, and why has any activism/resistance taken place?

## **Living with toxicity**


How does water pollution affect your daily life? How does noise pollution affect your daily life? How does air pollution affect your daily life? How does pollution affect you mentally? How does pollution affect your social life? Why do you live here, why do not move from here? Have people been displaced from their land and livelihood? What kind of strategy do you use to adapt to the water, air, and noise pollution in your home and outside?

## Appendix 2: Non-Disclosure Form

I, Md. Azizul Hoque, will help Pavel Mahamud with the research study titled “Living in Toxicity: Slow Violence in the Surroundings of Buriganga River”, as a research assistant. My role will be to conduct interviews with the community people and act as a local coordinator during the research process.

As a Research Assistant:

- I will not disclose the names of any participants in the study.
- I will not disclose personal information collected from any participants in the study.
- I will not disclose any participant responses.
- I will not disclose any data
- I will not discuss the research with anyone other than the researcher.
- I will keep all the paper information secured while it is in my possession.
- I will keep all the recordings, and photos secured while it is in my possession.
- I will return all information to the researcher when I am finished with my work.
- I will destroy any extra copies that were made during my work.
- Other (researcher add items if needed)

  
.....  
Signature

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20/07/2023  
Date