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Battling Flood in the Midst of Covid-19:  
The Plight of Assam

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# **Battling Flood in the Midst of Covid-19: The Plight of Assam**

Ananya Gogoi

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## **Abstract**

While the rest of India has been fighting the deadly Covid-19 pandemic, the state of Assam, located in the northeastern part of the country, has been battling the twin menace of the coronavirus along with a flood fury. With the mighty Brahmaputra and its tributaries overflowing every year during the monsoon season, floods are an inevitable reality in Assam. However, the additional threat of Covid-19 made 2020's flooding particularly destructive as well as challenging. This work examines the plight of the flood affected population of Assam living through a deadly pandemic whilst being rendered homeless and left without any means of livelihood. This essay also elaborates on how the socioeconomic politics behind the Covid-19 pandemic in India has amplified the scale of destruction brought about by the annual floods in Assam, a disaster that has been notoriously under-covered by the country's mainstream media.

**A**ssam is one of the eight sister states located in the north-eastern part of India. Bounded on three sides by the Naga-Patkai and Eastern Himalayan mountain ranges, a narrow stretch of land in the neighbouring state of West Bengal connects Assam and the seven other northeastern states with the rest of India. Assam shares international borders with two of India's neighbours, Bhutan and Bangladesh. The state serves as the gateway to both her seven sister states and to South East Asia for the rest of the country. The capital of Assam, Dispur, a locality of the metropolitan city of Guwahati, is both the commercial and communication hub of the northeastern region of India.

The drainage system of Assam is composed of the Brahmaputra and Barak Rivers. A trans-boundary river originating in Tibet, the Brahmaputra enters Assam from one of her sister states, Arunachal Pradesh, and flows through Bangladesh before finally entering the Bay of Bengal. In Assam, the river is simultaneously both a creator as well as a destroyer. In fact, the state owes its creation largely to the fertile sediments deposited by the floods of the mighty Brahmaputra River and its multiple tributaries. While the Brahmaputra River is important for inland navigation, irrigation, and the generation of hydro-electricity in the state, it is also notorious for its disastrous annual floods. In fact, compared with the national mark of 10.2 percent, Assam's total flood prone area stands at a staggering 39.58 percent. Out of the total area of 7.9 million hectares of the state, 3.1 million hectares are flood prone.<sup>1</sup>

The Brahmaputra River has also been a cause of friction between India and China for decades. At the heart of this friction is a strategic power-play between the two neighbours, underscored by factors such as livelihood and flood security, shared water resources, and border disputes, among others. The two countries have already been to war over the region located in the Brahmaputra's vicinity known as Arunachal Pradesh in India and South Tibet in China. China's dam building and water diversion projects, undertaken on its part of the Brahmaputra, is another point of contention between the two countries due to both apprehensions and actual instances of potential dam bursts, which create landslides and flash floods.

## A Historical Overview Of The Flood Problem In Assam

While Assam is a naturally flood-prone state, the monsoon season in that state is characterised by heavy rainfall and especially severe flooding. Every year, Assam is ravaged by three to four deadly waves of floods. There are multiple reasons behind this annual flooding, and at their heart lies the Brahmaputra River. Even though data pertaining to the sediment load and the water discharge capacity of the Brahmaputra are classified due to its trans-boundary character, the river is estimated to have the second highest sediment load yield per square kilometre globally, after only China's Yellow River.

The sediment load carried by the

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1 "Flood & Erosion Problems," website of the Water Resources Department, Government of Assam, updated 10 January 2020, <https://waterresources.assam.gov.in/portlets/flood-erosion-problems>.

Brahmaputra tends to vary across its length. At its origin in Tibet, the melting glaciers that erode the soil lead to sediment deposition of approximately 150 tonnes per square kilometre, which increases to about 1,495 tonnes per square kilometre once the river crosses the Himalayan mountain range and reaches the town of Pasighat in Arunachal Pradesh.<sup>2</sup> As the Brahmaputra flows through Assam, two of its tributaries, the Dibang and the Lohit Rivers, further contribute to its sediment load, which increases to about 1,513 tonnes per square kilometre. During the monsoon season in Assam, the average daily sediment load of the Brahmaputra increases manifold, reaching approximately 2.12 million metric tonnes. A large proportion of this load gets deposited in the flat plains across the state thereby, resulting in over-flowing water and large-scale soil erosion.

In addition to the activities of the Brahmaputra and its tributaries, other rivers flowing down from the neighbouring hilly states of Meghalaya and Arunachal Pradesh wreak havoc during the rainy season. Often, cloud bursts in the catchment areas of these neighbouring states lead to deadly flash floods in Assam. Unplanned development and construction, moreover, play a critical role in exacerbating floods in major urban centres of the region.

Traditionally, in Assamese society, the Brahmaputra is worshipped and revered as the lifeblood of the people. There are many folk songs dedicated to celebrating and praising the abundant rivers flowing through the state, particularly the mighty and majestic Brahmaputra. From the scholarly point of view, there is a consensus that the fertile alluvial deposits of the

Brahmaputra River and its tributaries in the Assam valley are essential for the survival as well as the flourishing of the region and its population. For instance, the riverine ecosystem of the Kaziranga National Park, a UNESCO World Heritage Site that is home to the largest population of one-horned rhinoceroses in the world, thrives to a great extent from flooding. The annual floods play a critical role in maintaining the diversity of the natural landscape of the park, which is composed of grasslands, wetlands, and semi-evergreen deciduous vegetation and forest cover. The floodwater replenishes the park's water bodies, which are breeding grounds for a variety of fish species. The receding floodwater carries away some of these fish, which then become part of the Brahmaputra's ecosystem. The annual floods also prevent the park from turning into a woodland by clearing away unwanted and invasive aquatic plants such as the water hyacinth.

However, the annual floods, which have plagued the state for decades now, have become a notorious menace, bringing along a wave of destruction along in their path each year. For instance, the wildlife fleeing from the flood-submerged Kaziranga National Park often stray into the nearby villages located on the park's periphery thereby, creating many instances of deadly man-animal conflict. The floodwaters also destroy agricultural lands, livestock, and standing crops. With many settlements submerged underwater, hundreds of thousands of people are rendered homeless and are forced to seek shelter on roadsides or poorly managed government-operated relief camps. All this in turn has a detrimental impact on the rural agriculture-

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2 Jogendra Nath Sarma, "What Use Is Dredging the Brahmaputra," *The Wire* 21 May 2019, <https://thewire.in/environment/what-use-is-dredging-the-brahmaputra>

based economy of the state.

The Government of Assam's Water Resources Department has estimated that since the 1950s, approximately 7.40% of the total land area of Assam has been eroded due to flooding.<sup>3</sup> Annually, the state loses about 8,000 hectares of land on average to floods.<sup>4</sup> Even more alarming is the substantial rate at which the Brahmaputra has been widening over the years owing to soil erosion.



## Flood In Assam Amidst The Coronavirus Pandemic

In 2019, about 45 million people across 31 of the 33 districts in Assam were affected by floods.<sup>5</sup> Hundreds of thousands of displaced people rescued from these submerged districts had to be accommodated in relief camps. While many were injured or lost their lives due to rain and flood-induced landslides, others succumbed to acute encephalitis syndrome and Japanese encephalitis. With about 1.73 million hectares of cultivable land, including many with standing crops, submerged under floodwaters, the agricultural sector of the state was severely hampered. Even the Kaziranga National Park had to bear the brunt of the flood. As about 95% of the park became flooded, many wild animals residing within the park perished or drowned. Others became road kill for speeding vehicles while trying to flee the submerged Park to escape

to higher ground.

All of this chaos and devastation, however, pales in comparison to the wave of destruction brought about by flooding in the year 2020. The on-going coronavirus pandemic amidst waist-deep flood waters magnified the annual recurring crisis. In its wake have come an unprecedented set of challenges for government authorities, public health personnel, flood relief front-line workers, and the general populace.

In 2020, Assam experienced three major waves of flooding. Simultaneously, the state earned a spot in the top 10 worst Covid affected states in India.<sup>6</sup> Unsurprisingly, the number of coronavirus cases in Assam began to increase rapidly following the onset of the annual floods.

Year after year, the brave public health personnel of Assam have traversed neck-deep floodwaters, sailed across submerged settlements on temporary rafts made from trunks of banana trees, and walked over makeshift bridges. There have been many instances of health care workers who were injured on the job after being poked by sharp objects floating on or underneath the water. Many have been bitten by wandering insects and reptiles, while others have died from electrocution. Any health care worker in Assam knows these life-threatening risks that come with their job profile. Yet, the pandemic has added another layer of complexities to their already difficult jobs.

Throughout 2020 and into 2021, in addition to battling personal life-threatening

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3 "Flood & Erosion Problems," website of the Water Resources Department, Government of Assam, updated 10 January 2021, <https://waterresources.assam.gov.in/portlets/flood-erosion-problems>.

4 "Flood & Erosion Problems," website of the Water Resources Department, Government of Assam, updated 10 January 2021, <https://waterresources.assam.gov.in/portlets/flood-erosion-problems>.

5 "10 more people, 3 rhinos killed in flood-hit Assam," *The Hindu* website, 17 July 2019, <https://www.thehindu.com/news/national/10-more-people-3-rhinos-killed-in-flood-hit-assam/article28503328.ece>.

6 Assam Covid-19 Dashboard, COVID-19 Advisory, Government of Assam website, accessed <https://covid19.assam.gov.in/>.

injuries on the job, frontline health care workers now have to risk infection from the deadly coronavirus. Prior to the pandemic, an army of accredited social health activists, multipurpose health workers, community health officers, auxiliary nurse midwives, lab technicians, and physicians had been conducting routine annual check-ups for both vector-borne and water-borne diseases, common occurrences during the monsoon season among the flood-ravaged population of Assam. Following a rapid spike in coronavirus cases in Assam on May 7, 2020, however, the Assam Government launched the Assam Community Surveillance Programme to survey and detect individuals with symptoms of severe acute respiratory infections and influenza-like illness. This programme occurred on a door-to-door basis across all villages in the state, with the primary purpose of detecting and preventing community transmission of the virus.<sup>7</sup> Additionally, under this programme, health care personnel have now begun conducting door-to-door checks covering one hundred percent of the population in rural areas to detect other diseases like malaria and Japanese encephalitis.

There have been many instances of blood pouches, personal protective equipment kits, masks, syringes and other hazardous medical wastes discarded from Covid-19 Care Centres, and other health facilities floating through floodwaters, pollution that risks infecting frontline workers and even members of the general populace. Despite reports of several such instances

by the Assam State Disaster Management Authority, as well as similar complaints raised by members of the general public residing in flood-inundated parts of the state, the situation unfortunately persisted. Although government authorities have responded by assigning the responsibility of collecting and destroying hazardous waste material to private agencies, the problem has not stopped, and this hazardous waste continues to be dumped in the open.

On March 30, 2020, the Government of India's Ministry of Health & Family Welfare had announced and implemented a scheme called "Pradhan Mantri Garib Kalyan Package: Insurance Scheme for Health Workers Fighting Covid-19." Under this scheme, all frontline health care providers and workers, both in the public and the private sector, are provided with personal and accidental insurance of 5 million Indian rupees, provided to their beneficiaries in the event that death followed the contraction of the deadly coronavirus while treating infected individuals.<sup>8</sup> Although this comes as a relief for health care workers across the rest of the country, their counterparts in Assam—who are battling the twin menace of floods and the coronavirus—continue to plea for practical measures and initiatives that would help them provide undeterred and fearless service. For example, many frontline health workers have requested proper rafts, contending that this simple measure would do much to ensure their personal safety while they traverse the treacherous floodwaters. These appeals,

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7 "Community surveillance program launched in Assam to contain COVID-19," World Health Organization website, 22 June 2020, <https://www.who.int/news-room/feature-stories/detail/community-surveillance-program-launched-in-assam-to-contain-covid-19>.

8 Anya Bharat Ram "Central government's response to the COVID-19 pandemic (Jan 2020 - Apr 7, 2020)," The PRS Blog, 8 April 2020, <https://www.prsindia.org/theprsblog/central-government%E2%80%99s-response-covid-19-pandemic-jan-2020-apr-7-2020>.

however, have largely fallen on deaf ears.

The general populace of Assam, too, has had to bear the brunt of the dual menace of flooding and the coronavirus. On the one hand, the flood has displaced hundreds of thousands of people, who have now become homeless. The cramped and overburdened flood relief camps that provided shelter to these displaced people have become notorious for the spread of the novel coronavirus. Those forced to set up camp at roadsides have not fared any better in this regard. On the other hand, countless families have lost their agricultural lands, livestock, and standing crops to the floods. Prior to the outbreak of the coronavirus, those sections of the population that were primarily reliant on the agricultural sector for their livelihood had resorted to working as daily wage labourers to support their families. However, the nation-wide Covid-19 induced lockdown, together with the strict social distancing protocols and curfew, rendered many of these low-income groups jobless and others penniless. Hence, the halting of most income-generating activities, together with the shutdown of many commercial establishments ranging from big corporations to small, local businesses during the prolonged lockdown period, have proven detrimental to the socio-economic welfare of the flood-ravaged sections of the population.



### Government Response and the Attitude of the Mainstream Media

The Assam government's go-to response for handling the flood situation has remained unchanged over the years. It involves two primary measures: the creation

of embankments and dredging. The former practice can be traced back to the British colonial period in India (1858 to 1947). The British colonial rulers had started the practice of cultivation of cash crops in the fertile regions of Assam and Bihar. In order to protect crops and reduce the damage caused by flooding of the Brahmaputra River and its tributaries in the Assam valley, the colonial government resorted to constructing embankments. There are speculations that this practice may have in fact been undertaken by the native rulers in India predating even the colonial period.

Since India's independence in 1947, successive governments have continued to undertake this centuries-old practice. Following the devastating earthquake of 1950 that rocked the state of Assam, the state government enacted the Assam Embankment and Drainage Act in 1953, with the sole purpose of constructing and maintaining embankments in the flood-prone areas of the region. What public authorities have failed to take into account, however, is the fact that in the past 70 years, the Brahmaputra (like several other rivers in India), has changed in terms of its hydrology. As a result, the creation of embankments in the 21st century is no longer as effective as it was in the past. In fact, in recent years, the strong current of the river water has regularly breached existing embankments. Moreover, containing the river within embankments is in itself challenging since the Brahmaputra tends to frequently change its course. Additionally, the pressure of the river's strong current imposes a considerable cost, as it requires frequent repair of these embankments. Dredging, too, has proved to be insufficient and mostly unsuccessful as the rate of sediment deposition of the Brahmaputra reduces the river's water



retention capacity to a great extent, especially during the monsoon season.

The fact that Assam is ravaged by floods year after year stands as testimony to the ineffectiveness of these flood control and prevention measures. Experts believe that while such measures may provide temporary relief to the flood-ravaged region, in the long run, they may completely change the course of the river, which in turn may have disastrous consequences. Further, they contend that global warming and the resulting climate change may substantially increase the ferocity of floods with each passing year.

Prominent public figures and organizations in the state, spearheaded by the All Assam Students' Union, have been protesting this state of affairs for decades, demanding that this recurring disaster be recognized as a national problem. The central government, for its part, has been merely content to provide funds to temporarily manage the recurring disaster, without committing to more comprehensive preventative measures. The citizens of Assam have been frustrated by both the ineffectiveness of flood control measures and the dismal attitude of the central government towards this catastrophic calamity of epic proportions, often resorting to taking the matter in their own hands, undertaking the repair of damaged roads and embankments and the building of makeshift bridges all by themselves.

To make matters worse, the national media, the fourth pillar of democracy, has

been negligent and apathetic towards the plight of Assam. While water-logging in metropolitan cities such as Mumbai has become a heated topic of discussion and debate within the Indian media, the annual menace of floods in Assam receives little air time or news coverage by mainstream media. In 2020, while Assam was reeling under the devastation of heavy flooding, the national media was far more concerned with covering the water-logging in the millennium city of Gurugram, a major technological and business hub, located in the North Indian state of Haryana.

In August 2018, Indian politician and serving Member of Parliament Shashi Tharoor tweeted about the Delhi-centrism of the national media in India, implying that the further away one is from the nation's capital, the less coverage one receives, no matter the gravity of a situation.<sup>9</sup> Tharoor made this remark in response to the negligent and apathetic attitude shown by the national media with regard to the then-on-going severe flood situation in the state of Kerala. Noted Indian journalist Rajdeep Sardesai had expressed similar sentiments, criticising mainstream media's lack of coverage of events in the north-eastern and southern parts of the country, as compared with its considerable coverage of events occurring in the capital of New Delhi.<sup>10</sup> Major media houses tend to assign no more than one or two news reporters in Guwahati, Assam's capital city, to cover the entirety of northeast India, despite the diversity of the region. Major national newspapers, on

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9 Shashi Tharoor, "The flood situation here in Kerala is really bad. The national media coverage has been grossly inadequate compared to the gravity of the situation here. It is a sad reflection of the truism that the farther you are from Delhi, the less you matter in today's India," Twitter, (15 August 2018, <https://twitter.com/shashitharoor/status/1029728827755257856>).

10 Rajdeep Sardesai (@sardesairajdeep), "If 'tyranny of distance' means sadly limited coverage of north-East, 'doorstep journalism' means max coverage of Delhi! Doubled edged sword," Twitter, 11 June 2015, <https://twitter.com/sardesairajdeep/status/608878050491531264>.

the other hand, refrain from publishing a separate edition of their paper specific to this part of the country, while others merely lump together all news and events pertaining to the region within a single page or section of their publications.

It is ridiculous that in today's digital era of globalization, Assam in general and north-east India, in particular, remain so

neglected by the Indian sub-continent, despite the region's clear strategic significance as the gateway to South-East Asia. Hence, this essay has been composed with the sincere hope to generate awareness about the neglected plight of Assam which is struggling to cope with the twin menace of the annual floods together with the on-going deadly Covid-19 pandemic.

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