

The Future Frontier

It is 2017, and Riton and I are at a development fair (Unnayan Mela) in Mongla city. Mongla is a comparatively small but rapidly growing urban area. When I first visited it in 2007, it was a sleepy port town, known primarily as Bangladesh's tourist gateway to the Sundarbans. It remains a tourist hub today. The city's walls are plastered with posters and billboards for forest trips and touts gather at transit points promising jungle adventures, luxury eco-resort stays, and close encounters with Sundarbans wildlife—perhaps, even, the elusive king of the jungle, the Sundarbans tiger. Since my first visit, the city has changed dramatically. Where once it was a sleepy port town, it has now become a frontier boomtown, bustling with change and possibility.¹ Indeed, over the past decade, Mongla has begun preparing for radical transformation—for a future of economic prosperity and sustainable growth.

Mongla is a city defined by its relationship to water. To its west, the expansive Pasur River flows, draining upstream water and sediment into the Bay of Bengal. Ships are anchored across the wide river, waiting to be unloaded in Mongla's port. The city itself is divided by Mongla River, a much smaller and narrower channel that flows east from the Pasur and divides the city into north and south. On the north side of the city is its industrial zone. The port and port authority are located here, as is the expanding Mongla Export Processing Zone (EPZ)—a commercial hub where reduced tariffs and taxation rates entice foreign businesses to set up garment, textile, and other kinds of factories. The heart of the city—its residential areas, its shops, its government buildings—all lie to the south. Thousands of people commute back and forth across the river in small ferry boats that, for a handful of taka, carry you on the five-minute journey over the water.

It's a cool winter evening and I'm underdressed, sore from a day of traversing the delta's unpaved roads, and fighting off a cold. We've been out in Mongla's



FIGURE 22. Unnayan Mela, Mongla, 2017.

countryside and have ridden home on the back of Riton's motorcycle in the dark, leaving me chilly and grumpy. As we enter the mela, my eyes are dazzled by the light, my occasional claustrophobia triggered by the crowd and the noise. It's a strange event, a mix of cultural performances, carnival rides, and booths detailing the geography, technology, and facilities that promise to make Mongla a centerpiece of Bangladesh's future.

We run into a journalist friend of ours who subsequently introduces us to Mongla's Upazila Nirbahi Officer (UNO), a man who has the difficult task of navigating the turbulent waters of development for Mongla.² Tonight, he is in high spirits. He is both a force behind the fair and one of its guests of honor. He enthusiastically whisks us into his entourage. We take tea together and chat over the din. I ask the UNO about Mongla's future. The future is assuredly bright, he tells me. Driven by the growth of Mongla's port, the city is booming. It has been identified by the Awami League government as a "development role model" and is on a trajectory toward meteoric growth.

"But what about climate change?" I ask. "What kind of impact will it have on all of this?"

I must look skeptical because the UNO frowns, then grasps my arm and takes me on a walking tour of the fair. The fair is packed with people. There are a handful of rickety, hand-operated carnival rides of the type that are often found at melas

in Bangladesh. Children queue to ride small Ferris wheels and to purchase fried sweet treats. But the majority of the fair is given over to brightly lit booths, each showcasing a dynamic that heralds Mongla's growth. It is an arcade of the future—a collection of relics of a social and economic order yet to come.

Fairs, arcades, and melas offer rich matter for interpreting social history. Walter Benjamin's unfinished opus, *The Arcades Project*, for example, reveals the Paris arcades of the nineteenth century as material evidence of past social transition—a historical juncture where consumption triumphed over production.³ To the degree that this fair showcases the Mongla to come, it is an arcade of different temporal orientation—one in which production and consumption are drawn back together. The booths at the mela foreground the intimate relationship between industrial growth, future wealth, and the political will to bring rosy futures into existence. Some booths offer quotidian displays of information—posters with charts detailing fishing catches from the Pasur River, photos of important figures in the Awami League government making official visits to Mongla, and so on. Some offer a glimpse of the prosperous middle-class lifestyle such future progress will enable—modern interior rooms created in booth form, bathed in soft colored lights. There are exhibits celebrating Mongla's schools and their students' scholastic achievements (advertising a capable and skilled future workforce), displays highlighting regional crafts and artisanal production (signaling cultural depth and dynamism), and booths on municipal and marine safety (demonstrating the resources available to ensure safe riverine commerce and development).

We finally reach a string of stalls showcasing Mongla's port. These are the centerpiece of the fair. Here, the UNO introduces me to a representative from Mongla's port authority. This man sits in front of a series of posters charting the recent and future growth of the port. Before disappearing back into the fair, the UNO looks at me, smiles, shakes my hand, and gestures toward the booth. It is here, he seems to be saying, that my questions will be answered, my skepticism put to rest, my imagination of Mongla's future put on the right track.

THE FUTURE AS FRONTIER

The vision of Mongla's future on display in the mela runs markedly counter to the one posited by many NGOs, researchers, and international organizations working in the delta. As previous chapters have explored, such entities often imagine the delta as an imperiled ecological zone or immanent climate wasteland. The mela, in contrast, renders a more optimistic future vision, one of growth and prosperity, where visitors and residents can marvel at the emergence of a resilient and prosperous city—a key site in the making of Sonar Bangla (a Golden Bengal) and a jewel in the delta crown.

The delta is awash in different imaginations of how the future might unfold in the face of climate change. In the preceding chapters, I have traced the ways

that these competing imaginations shape the delta's present. Imagining the delta as a future climate wasteland from which footloose climate refugees might spill over proximate and remote borders conjures strategies that seek to address climate security by emplacing bodies in the delta's landscape. Imagining the Sundarbans as a critical infrastructure in need of preservation for the good of humankind demands a set of policies and practices that regulate anthropogenic change within the forest. These are only a few of the visions of possible climate futures for the region. All of them assemble the delta as a climate frontier in cumulative, if not coherent, ways. The logic of development on display at the mela highlights yet another, radically different vision of the future. Here, the delta emerges *also* as an engine for industrial growth in an era of climate change. This frontier vision mines the future as a resource. It figures an optimistic horizon for the delta both in spite and because of climate change. In so doing it opens new possibilities for growth and development in the present.

This chapter asks how that imagination brushes against, interacts with, and reshapes these other competing possible futures and projects of bringing them about. It inquires into the possibilities and consequences of figuring visions of an optimistic future as frontier material in the present—of framing a space where industrial development unfolds both regardless and because of the probabilities of climate risk. That there should be multiple visions of a region's future—especially a region so central to global imaginations of planetary threat—is no surprise. But in the delta today, futures of capitalist development *and* climate resilience *and* conservation are all being brought into being at the same time, though not necessarily in coherent or conjoined ways. There is a palpable density of future projects flooding into the same space. Each of these futures is internally diverse, complex, contradictory, and varied. Yet the relationships between them are even more complex. Sometimes they are imagined as convergent—as we will see, planners today imagine a future where climate displacement can become a driver of Mongla's growth. As often these futures are incommensurate. What I mean by this is that these futures are profoundly out of proportion with each other. Squaring their competing logics and demands produces profound challenges.⁴ They posit futures that cannot all come to pass in the same place or time. Contradictions and distortions abound, particularly as these competing futures are superimposed onto a delta present that increasingly struggles to bear their weight.⁵

My goal here is not to offer a normative account of the future—to predict how the future will emerge. Rather, it is to reflect on the manifestations of these often incommensurate futures in the present. Things like the mela shimmer in the delta siltscape, conjuring a future that may, perhaps, come to pass. They offer bright, colorful, perhaps even sublime visions of the delta not just as viable but as a success. To employ a Benjaminian metaphor, they seem to conjure the angel of the future into the present, to pave a path not of ruin but of accomplishment.⁶ They conjure a population not of unskilled laborers, peasants, and fishermen working

the delta's land and reluctant to abandon their homes and fields, but of development, comparative affluence, and aspiration. Yet these visions are constructed on the delta's damp siltscape—its rapidly silting rivers, its increasingly saline soil, its imperiled mangrove terrain. If multiple visions of the future produce the future as frontier in the present, they thus also raise questions about whether any such vision can come to pass and to what ends.⁷

FRAMING SONAR BANGLA

In the delta, the challenges posed by climate change are never far from government officials' and planners' minds. Any such official or pundit in the region is ready and willing to discuss the "challenges" of climate change. Yet over years of work in the delta, I have noted that such discussions typically lack the apocalyptic tone of international development organizations. More often, they see climate change as a challenge to be worked around or bypassed in order to see the delta as a zone of opportunity. In other words, climate change is less often posited as an existential threat and more often as a set of technical challenges that can, and must, be navigated to secure future growth.

Some of these delta opportunities are imagined through the lens of disaster capitalism—short-term openings in the present to trade on long-term anticipated ecological degradation.⁸ But others look beyond crisis narratives entirely. One commentator, reviewing recent scholarship on climate change in Bangladesh, quips, "The extraordinary attention paid to Bangladesh's vulnerability to climate change is puzzling, especially when compared to other countries situated along the South Asian coastal littoral. . . . It is as if climate change has picked a personal feud with the people of Bangladesh."⁹ Put another way, Why is it that the challenges of climate change are seen as so marked in Bangladesh, particularly by the international community, when global warming poses similar challenges for many countries around the Pacific Rim?¹⁰ And what if the "feud" that nature has seemingly picked with the delta and its future obscures other possibilities and outcomes nascent in its present? What forms of future otherwise might be imagined in crisis's stead?¹¹

The catastrophist vision of the delta's future is dissonant with another imagination of Bangladesh as entering a new era of economic prosperity. This narrative of Bangladesh's economic arrival has become central to politics in the country, particularly since the end of emergency rule in 2008 and the return to power of the Awami League, the party of Sheikh Hasina—daughter of Sheikh Mujibur Rahman, first prime minister of the country and "father of the nation."¹² Bangladesh's economic ascendancy is captured in the Awami League's Vision 2021 plan, the political doctrine that the party rode to victory in the 2008 elections. This "vision" was, in part, for Bangladesh to reach "middle-income" status by 2021, the fiftieth anniversary of its independence.¹³ But Vision 2021 offered more than a finite economic goal. It was also fashioned as a manifesto for a triumphant future for the country—an era where rapid industrialization, technology, and investment would

herald a long-deferred age of prosperity, stability, and regional import—an era of Sonar Bangla.¹⁴

The phrase “Sonar Bangla” comes from Rabindranath Tagore’s 1905 poem “Amar Sonar Bangla” (“My Golden Bengal”), written amid the first Partition of Bengal. Its first few stanzas, set to music, comprise the national anthem of Bangladesh. The gold in Tagore’s Sonar Bangla refers to the color of the ripe waves of rice that blanket agrarian Bengal in the weeks leading up to the harvest. In the post-Liberation War moment, Sonar Bangla became a rallying cry for Sheikh Mujib’s development plan, which sought, amongst other things, to raise standards of living for Bangladesh’s (at the time) largely agrarian population.¹⁵ The notion of Sonar Bangla has remained a sort of promissory note in nationalist, and especially Awami League, discourse—a catchphrase summoning the end of “Bangladesh-as-basket-case” and the rise of the country as regional success story.¹⁶ Today, it is often used to invoke the country’s economic liberalization and steady growth rate (6 percent over the decade leading up to the economically turbulent 2022), its success in maintaining a robust export economy (rooted in garment manufacturing and, to a significantly lesser extent, shrimp), and the policies that continue to foster international investment in the region through a series of mega-projects and infrastructural developments. The gold in Sonar Bangla is no longer rice; it is capital.

Sonar Bangla means achieving prosperity both in the midst of climate change and in spite of it. As Bangladesh’s ambitious Delta Plan 2100—which was formulated in 2018 and is in many ways the successor to the Vision 2021 plan—has it, Bangladesh’s climatological challenges can be managed to facilitate continued growth and prosperity, allowing the country to reach upper-middle-income status by 2030 and to become “a prosperous country beyond 2041.”¹⁷ The plan foregrounds economic development first, outlining a plan for massive economic growth in the short-term and subsequent strategies to address what it calls “the longer term challenge of sustainable management of water, ecology, environment and land resources in the context of their interaction with natural disasters and climate change.”¹⁸ The country’s economic success hinges on the development of new infrastructural investments that will allow Bangladesh to capitalize on its comparative strengths: cheap and abundant labor power and geography. That is to say, Sonar Bangla hinges on making the country’s coast not into a climate catastrophe but into a gateway between interior Asia and the rest of the world. It relies on the delta figuring not as a place of disaster but opportunity.

PORT AUTHORITY

If Bangladesh stands on the doorstep of Sonar Bangla, it is regional transport and shipping that will pull it over the threshold. There is huge economic potential in the country. But Bangladesh has a port problem. To serve as a regional shipping hub, it needs port capacity to keep large ships flowing into and out of the coastal zone. The country’s largest port, Chittagong, is situated in the country’s far east,

close to the border with Myanmar. But Chittagong is not equipped to handle either the country's projected or even present shipping needs.¹⁹ The port is not deep enough to service many of the newest and largest container ships.²⁰ Nor does it have the facilities to keep pace with the demand to load and unload ships coming to port, causing delays and demanding that ships often remain anchored in the harbor for days waiting to be unloaded.²¹ Private investors, international development agencies, and the Bangladesh government have scrambled to address these issues through infrastructural development. In the east, they will construct a new deepwater port in Matarbari, which will expand the capacity of and take pressure off Chittagong.²² Further, Payra Port, situated in Patuakhali between Mongla and Chittagong on Bangladesh's coastline, opened in 2016.²³ But demand for port capacity remains high. There are thus tremendous opportunities in the muddy delta zone.

As a port, Mongla has long been a distant second to Chittagong, not only in capacity but also in national and regional importance. Yet as the delta zone is reimagined as an engine for economic growth, its actual and potential import has grown. As the stall I have been brought to at the Unnayan Mela makes clear, business is booming and the future is bright. The man staffing this booth demonstrates this to me in a series of posters charting the meteoric growth and expansion of the port over the past decade. In 2008, the average monthly arrival of ships in the port had fallen below nine. Today, it has risen to 79. In the Pasur River, dozens of ships are anchored, waiting for loading and unloading. In the last five years, the port's cargo handling capacity has more than doubled to 120 million tons. That number is projected to triple by 2041.²⁴

Much of the projected expansion of Mongla's port is intimately tied to the completion of the upstream Padma Bridge megaproject, which has made Mongla the closest port to Dhaka. Up until recently, the movement of goods from the delta was constrained by the necessity for trucks to cross the Padma River by ferry. Wait times for such a crossing could be as long as twenty-four hours during busy periods. In 2022, the long-awaited Padma Bridge opened, integrating the delta into the country and region at large in one fell swoop.²⁵ The Padma Bridge has huge implications for shipping and industrialization in the delta. Not only is it now quicker and cheaper to transport goods from the delta to Dhaka; the bridge will also shorten the transport time from the Bangladesh side of the delta to Kolkata, in India.²⁶ Mongla now is also the closest seaport to landlocked Nepal and Bhutan.

In 2020, before the opening of the Padma Bridge, I spoke with the port authority's Deputy Chief of Planning about the impacts of the bridge. He told me that the port authority was projecting that 10 to 20 percent of Dhaka-based trade would ultimately shift from Chittagong to the delta.²⁷ To prepare, the port authority was in the process of planning and executing a range of infrastructural development projects to increase capacity ahead of demand. Most notably, there were plans afoot to construct six new jetties in the port to handle the increased traffic. But



FIGURE 23. Off-loading at Mongla Port.

the port authority was also carrying out, or seeking governmental approval for, new investments in equipment, the purchasing of new pilot boats to guide ships to port, and massive dredging projects to increase depth in the Pasur River shipping channel, thus allowing larger vessels to make it to port. Today, many of those proposals proceed apace.²⁸ With the Padma Bridge completed, Mongla stands at the cusp of becoming a critical node for global and regional economic integration.

There is more at stake in the development of Mongla's port than just economic expansion. In addition to a shipping hub, Mongla has become as a node in a broader geopolitical struggle for regional hegemony between India and China.²⁹ In the previous decade, the Chinese government made significant investments in development within the country. For example, following the withdrawal of the World Bank from the Padma Bridge project in the wake of a corruption scandal, the Chinese government offered a loan for bridge construction, and the bridge was constructed by a Chinese engineering firm.³⁰ More recently, China has invested more than \$3 billion USD in the Padma Bridge Rail Link Project, which will pass through the bridge and create a transportation network that will further integrate the southwest delta.³¹ Such investment is consonant with a vision that sees Bangladesh as strategically important in securing Chinese hegemony in the region.

Beyond the Padma Bridge, China has also invested in Bangladesh's ports. In Chittagong, the Chinese government has funded new port infrastructure. It also plans to construct a rail line that will connect Chittagong to the landlocked Yunnan Province.³² The presence of Chinese investment in the delta region is evident as well.

Chinese companies have increasingly begun to bid on and manage development projects in the delta—reconstructing sluice gates in polders adjacent to Mongla, setting up a factory to construct the tetrapod structures that are used to reinforce existing coastal embankments, and more. In Mongla, the Chinese government has committed \$400 million USD toward jetty construction in the port. This investment is part of what the Bangladesh government refers to as “the Mongla Mega Project”—which involves the development of Mongla Port, the expansion of Mongla’s EPZ, and the construction of a new international airport that will serve the delta region.³³ In investing in the region, China is making a geopolitical play to make Mongla a node in its broader Belt and Road Initiative (BRI), a project designed to knit together land and water ports into a vast regional transportation network. Indeed, in recent years, Bangladesh at large has emerged as a key site in the BRI.³⁴

The Chinese government is not the only interested player in the development of the delta region. Indeed, the delta has emerged as a site where the Indian government is at once invested in countering regional Chinese hegemony and in making Mongla into its own gateway city. Mongla could provide a balm to India’s own port woes—serving as a location for the transportation of goods to and from both sides of Bengal.³⁵ To that end, India has invested the equivalent of over a half-billion US dollars to construct a new road and rail network running from Mongla to the India-Bangladesh border.³⁶ Moreover, it is competing with China to invest in the construction of Mongla Port—a contest that will play out in coming years.³⁷ India has also invested heavily in the construction of the Rampal powerplant (more on this below) as a means of developing regional energy security and as a market for Indian coal. In short, Mongla is not just an emergent hub of trade; it is also an object of desire in Indian Ocean geopolitics. Thus if climate change seems to tell one story of geography-as-destiny for the delta region, narratives of Sonar Bangla tell quite another.

CLIMATE URBANISM

Port expansion is not the only thing booming in Mongla. The first time I returned to Mongla after almost a decade, in 2015, I was shocked to see how much the region had transformed. Spanning north along the Mongla-Khulna Highway was an expansive industrial corridor where previously there had been only countryside. On the west side of the road, flanking the Pasur River, a wall of industrial development had sprung up. New cement factories, LPG storage facilities, and other industry filled the space between the road and the Pasur River. Each of these plants and factories had their own jetties on the Pasur for loading and unloading goods. Viewed from the river itself, these factories were a wall of industrialization growing steadily northward from the port to the delta interior. The road connecting Mongla to Khulna was in a state of disrepair, buckling and sinking into the siltscapes from the constant passage of overloaded trucks carrying construction materials and workers from Mongla to these sites. The region was caked in dust kicked up by these trucks as they labored by.



FIGURE 24. Mongla's industrial corridor seen from the Pasur River.

This corridor only expanded over the years as I conducted this research. On the east side of the road, an export processing zone was growing, ideally positioned to take advantage of proximity to the port. Here, jute-processing factories could turn jute into thread and, subsequently, bags. They would then place them directly onto ships bound for destinations beyond the delta. An Italian-owned marble factory off-loaded massive blocks of marble straight from the Port and cut them into high-end fittings for bathrooms and kitchens. This marble work was then put back onto ships bound, often, for the Middle East. There was room to grow in the EPZ, and through the period I conducted research much of the space remained open. Plans were in the works to fill this space with industry requiring unskilled and semi-skilled labor. As several officials told me, these jobs would be filled by, amongst others, climate migrants who were moving to Mongla from other parts of the delta.

The notion that Mongla will become a hub of climate migration has become central to contemporary discussions of the city. In 2011, Mongla had a modest population of forty thousand. That number has tripled since, largely with people migrating from other places in the delta. Here, in keeping with the ethos of Sonar Bangla, this in-migration is understood not as crisis but as opportunity. The projected growth in employment through the port and the EPZ promises to provide opportunities to those seeking work in Mongla, and the in-migration of climate refugees will fuel growth and expansion. Such growth is seen as crucial not just for Mongla as a gateway to the region but for the future of coastal urban life

in a warming world. Mongla, and midsize and secondary cities like it, are a possible answer to the challenge of climate displacement—an obverse and alternative vision to dystopian climate security outlined in chapter 1.³⁸

This is an argument that has been forcefully made by, for example, the International Centre for Climate Change and Development (ICCCAD), the premier institution for climate change research and advocacy in the country today.³⁹ Noting that midsize regional cities such as Mongla have been largely ignored in discussions of climate change and urban planning, researchers at ICCCAD have identified Mongla as a test case for regional resilience and livability. Mongla has tremendous potential for employing new migrants to the region. It has a number of challenges—perhaps most notably its exposure to storms from the Bay of Bengal and its limited and diminishing access to fresh water. But its small size makes it comparatively easy to tackle infrastructural change that will help to secure its future in the face of climate transformation. Accordingly, Mongla is framed as a success story that could become a model for urban adaptation more broadly.⁴⁰ As Saleemul Huq, director of ICCCAD and noted international expert on climate change, has observed, “Now, we expect to replicate the Mongla model to at least two dozen other coastal towns across Bangladesh as safe home for climate refugees.”⁴¹

To see cities like Mongla as solutions to climate crisis involves a certain Schumpeterian acceptance—acknowledgment that ecological degradation can serve not just as disaster but also as more creative destruction fueling urban growth. That is to say, Mongla’s success is partly predicated on the erosion of habitability within the region at large and the seemingly inevitable displacement from and dissolution of agrarian space. In many ways, it is a recapitulation of narratives that see the closing of agrarian commons as the operative condition for industrial growth, development, and capital accumulation.⁴² Here, climate change figures not as a new iteration of the agrarian question but rather as an answer. But part of what makes Mongla so appealing as a climate solution is its location in space—situated at a transport chokepoint where de-peasantized migrants might provide a labor force in a time of climate devastation.⁴³

Mongla’s growth might be termed a new form of climate urbanism—urban growth predicated on satisfying a need for housing and employment of the climate displaced in the Global South. Whether Mongla’s success is replicable in cities without booming ports and burgeoning industrial zones is an open question. But within the city, the promises of successful growth in the face of the delta’s challenges lead to a palpable sense of excitement and opportunity. It is in the air. The mela is but one example of this. Another is the giddy rebranding of Mongla municipality not just as a migrant receiving zone but as a “smart city.”

SMART GROWTH/CLIMATE GATEWAY

Over the course of the time I worked on this project, people in Mongla—particularly those working for the city, in its EPZ, and in the port authority—increasingly

began describing Mongla as a “smart city.” The reference puzzled me. I understood the notion of a smart city to refer to the integration of digital technologies into urban governance as a means of encouraging growth in high-tech sectors, digitizing urban infrastructures, and implementing new forms of digital surveillance in urban space. Yet in Mongla, while the port was unquestionably going through a boom cycle, most of the investment seemed to be encouraging more traditional manufacturing rather than high-tech growth. What, then, was smart about Mongla’s smart growth?

The man behind much of Mongla’s transformation from sleepy town to smart city was Mongla’s mayor, Md. Zufikar Ali. Ali, a member of the opposition Bangladesh Nationalist Party, was a populist politician whose claim to power resided in a range of infrastructural projects he put in place to protect the city from the impacts of climate change. Amongst these were a new embankment/seawall—constructed with earth and silt dredged and dug up from around the city perimeter—and a sluice gate to protect the city from storms and to allow for easy evacuation of water from the city in the event of flooding, a rainwater collection plant to help address the shortage of sweet water in the region, and more. Evidence of this infrastructure work was everywhere to behold. Over the years I worked in Mongla, for example, much of the surrounding countryside adjacent to the Mongla and Pasur Rivers was filled in with silt dredged and sprayed onto the shore by dredgers working to keep the rivers flowing. These silt fields were subsequently excavated and repurposed in the construction of the raised banks that would constitute Mongla’s seawall. Ali was also a controversial and somewhat embattled figure. Throughout his term, he faced continual pressure from the ruling party officials who filed a number of legal cases against him—including one for smashing of a picture of Prime Minister Sheikh Hasina.⁴⁴ Yet his populist leanings and zeal for resilient infrastructure kept him in power from 2011 to 2021, when he eventually lost his seat to an Awami League party stalwart.⁴⁵

Mongla’s government offices are situated in a somewhat dark and imposing concrete structure at the heart of the city. When we visited in 2020, we were greeted warmly and hurried into the mayor’s office on the top floor. The office was comparatively modest in size. Unlike many offices for those high in government hierarchies in the city, the mayor’s office—filled with piles of paper and crowded with bustling factotums—seemed largely like a place of work rather than a place to impress visitors. Prominently displayed within the office was a bank of CCTV screens showing street corners around the city. These were explained to us as the vanguard of Mongla’s smart city project—a dashboard surveillance system to make the city safe for economic expansion and development.⁴⁶ The screen showed sixteen views positioned across the city. The coverage was hardly panoptic—it showed only a tiny fraction of Mongla’s street life. But it gestured toward a possible broader system of digital regulation and observation.

I told the mayor that I had come to learn more about the rise of Mongla as a “smart city.” The mayor immediately launched into a much more expansive



FIGURE 25. Dredge discharge pool on the banks of Mongla River.

discussion of the public works he had engaged in and the possibilities that climate migration opened for the city. Ali noted that the Padma Bridge would herald a series of infrastructural transformations in the region (road, rail, and airports) that would further make Mongla the heart of the delta. Much of the work that his administration had engaged in was to prepare the city to take advantage of the opportunities that would flow from the opening of the region and the migration that it would further herald. After listening to this by-now-familiar narrative, I asked Ali directly what a “smart city” meant for him. He told me,

Smart city means that my city will always have good communication. It will be a totally safe area. It will have a camera monitoring system. There will be seventy to eighty CCTV cameras working. And on the other side of Mongla River, there will be another thirty cameras working. . . . One time the city was full of drugs. I made it free of drugs. Because of the CC Camera, many crimes have been stopped. We have an announcement system in nine wards. After making an announcement from here in my office, Mongla’s citizens will be able to hear messages like, “You need to pay taxes. Someone has died. Someone has lost something.”

The smart city is a concept that has a certain resonance in South Asia. It denotes, amongst other things, a vision of shining and ordered urban development that uses technology-driven infrastructure to usher in a future of prosperity.⁴⁷ In India, a



FIGURE 26. Mongla, a smart city in action.

formal Smart City Mission (SCM) was launched in 2015 as a means of integrating a wildly diverse and uneven range of urban zones into a future driven by imaginations of networked communications, surveillance, and flexible economic growth. There is no parallel SCM program in Bangladesh. But the discussions around smart cities in the region resonated with its logic. Duncan McDuie-Ra and Lauren Lai note that smart city initiatives are strategies, on the one hand, to integrate urban frontier spaces into national territory and, on the other, to recalibrate such urban spaces as new gateways for capital investment and accumulation.⁴⁸ They further argue that local authorities in such frontier cities have more often used SCM bids to shore up conventional infrastructure rather than using them to develop “smart” digital infrastructures—an observation that could similarly be applied to Mongla on Bangladesh’s climate frontier. Smart city initiatives in South Asia’s peripheries, as such, signal a suit of strategies designed to integrate peripheries into both centers and capital flows—even if smart city technologies fall far short of delivering the panoptic power they promise.

This seemed very much the case for Mongla, where the (to date) modest expansions of digital infrastructures are paired with infrastructural investments in industrial development—ports, EPZs, cement factories, LPG storage—and urban resilience—sea walls, rainwater harvesting plants. Here, in other words, smart cities were grafted onto already existing imperatives for regional integration through

industrial development and shipping. Yet as Shannon Mattern points out, grafting, whether in gardens or in urban design, is itself a form of poises—a process of bringing into being.⁴⁹ If Ali's vision for a “smart” Mongla was largely rooted in common governmental fantasies of observation, communication, and control, it was also crucially paired with a vision seeking to recreate Mongla as not only an engine for economic development for the country at large but a fortress city that would achieve resilience through cheap labor power and infrastructural defense against impending storms. The bank of CCTV screens in the mayor's office gestured toward an integrated vision of Mongla as a place that will thrive not in spite of climate change but because of it.

SUBMERGENT CHALLENGES

There are many reasons to see the narratives of Mongla-as-climate-success presented by the Bangladesh government as a useful balm to narratives of the delta-as-disaster-foretold that are common in international visions of Bangladesh in a warming world. Yet even as Mongla prepares for futures of economic and population growth, other incommensurate futures are also on the march. Many of these have already been explored in these pages. For example, the same challenges of fluidity and phase that structure the delta's siltscape also trouble visions of Mongla as gateway city. Mongla is not a deepwater port. There is simply not enough depth in the Pasur River to accommodate the Panamax- and neo-Panamax-class ships that are the global standard for transoceanic shipping.⁵⁰ This fact alone prevents Mongla from becoming a durable answer to regional shipping needs. Moreover, while Mongla is typically described as a coastal city, it does not sit directly on the open coast. The port is a hundred kilometers upstream from the mouth of the Bay of Bengal. To get to the port, ships must travel up the Pasur River, past Dublar Char, and through the Sundarbans reserve. Larger ships must anchor twenty kilometers south in the midst of the Sundarbans at the Harbaria anchorage. There they are off-loaded onto smaller vessels that can make their way for the remainder of the journey upstream. This is a costly and time-consuming proposition. It is also a dangerous one.⁵¹ Such off-loadings can be fraught with accidents, including the occasional foundering of ships. The risks inherent in this process manifested in April 2018, when a cargo vessel carrying 775 metric tons of coal foundered on a submerged embankment in Harbaria, spilling its cargo into the river.⁵² This was just one example. There have been at least nine commercial ships that have sunk in the Sundarbans since 2013, including the *Southern Star VII*, which led to the Sundarbans oil spill discussed in chapter 2, and seven vessels carrying coal or fertilizer.⁵³ This transportation of coal through the Sundarbans has only increased with the completion of the Rampal power plant (see below).⁵⁴

The port authority has engaged a number of dredging projects to deepen this channel and make it safe for bigger vessels (there is currently a plan in place to

increase the depth to ten meters).⁵⁵ But keeping the river open and flowing is a continual challenge, particularly as downstream flows decrease and upstream tidal incursions cause more and more silt to deposit in the delta's rivers and canals rather than in the bay. The challenges of siltation and Mongla Port's growth are not confined to the Passur River alone. As noted in chapter 2, the Bay of Bengal itself is shallow from the millennia-long process of transferring the Himalayas into the ocean by river. Silt banks at the mouth of the Pasur, known as the "outer" and "inner" bar, pose their own challenges to navigation. To address this, in 2018 the port authority contracted with a Hong Kong-based dredging company to undertake a massive dredging of the outer bar. The dredging project involved bringing industrial dredgers to the bay, which could be seen from miles away. The work on this was completed in December 2020, and the same company immediately began work on dredging the inner bar, with work scheduled for completion in 2022.⁵⁶

Such large-scale dredging projects raise questions about the long-term viability of the channel itself. Dredging, effectively a process of digging a deep trench in the submerged siltscape, is hydrologically never complete. As the trench is dug underwater, currents immediately begin eroding its banks, leading to the filling in of the dredged passageway over time. Dredging thus begets and necessitates more dredging, particularly in active delta basins such as the Bay of Bengal.⁵⁷ If the movement of ships through the Sundarbans itself poses threats to the mangrove forests, dredging does as well. Dredging will increase turbidity and sedimentation. Such transformations can have significant impacts on marine life.⁵⁸ As Ashley Carse and Josh Lewis note, "Because conventional cost-benefit analyses are designed to evaluate direct impacts, they can externalize political-economic and ecological problems not conceptualized as such. Indeed, dredging can be politically and ecologically consequential in ways that are difficult to trace, quantify, and litigate."⁵⁹ Cost-benefit analyses of dredging, particularly in ecologically sensitive zones such as the Sundarbans, struggle not only with the question of unpredictable outcomes but with the quandary of how to situate the "value" of nature against the demands for industrial development.⁶⁰

Dredging highlights one set of incommensurabilities between projects seeking to actualize various futures in the delta and the materiality of the delta's siltscape. Seeing the Pasur as both an ecologically vulnerable waterway (flowing through the Sundarbans) and an industrial shipping channel highlights the ways that multiple future expectations are crowding into the material space of the delta present. It is not the only such example. The industrial corridor discussed above expanding northward from Mongla presents an equally dramatic challenge. All of the factories in this industrial corridor lie, formally, in the Ecologically Critical Area (ECA) of the Sundarbans, an area within which industrial activity is prohibited by the 1995 Bangladesh Environmental Conservation Act.⁶¹ Yet these new factories have all received special permission from the government for construction.⁶² All of these plants also rely on the Pasur River for transport. Materials either



FIGURE 27. Dredging the outer bank in the Bay of Bengal.

move back and forth to them from Mongla Port or they load and unload directly onto private jetties. These plants also raise pressing questions about the future of the Sundarbans. Each releases additional waste in the Pasur. Each involves additional shipping traffic through the port with its attendant environmental impacts. And each carries its own probability for future accidents.⁶³ Yet nowhere are these risks more apparent than in the Rampal power plant project.

POWERED FUTURES

The plant, known formally as the Maitree Super Thermal Power Project, is a recently completed 1,320-megawatt coal-burning plant twelve kilometers upstream of Mongla Port and fourteen kilometers upstream of the Sundarbans. Since it was first proposed in 2010, the plant has been the subject of constant protest by environmental groups in Bangladesh and beyond. Organizations such as UNESCO have condemned its construction, arguing that it will have catastrophic effects on the Sundarbans.⁶⁴ The potential risks are multiple. Water used in the cooling processes at the plant threatens to raise water temperatures flowing through the Sundarbans. Particulates from the coal that the plant will burn threaten to dramatically increase air pollution in the mangroves.⁶⁵ Both of these could hasten degradation within the forest and have dramatic impacts on fauna



FIGURE 28. Power station construction site, Rampal.

within it. Beyond the risks of industrial pollution, the specter of more immediate accidents loom. The delta region sits on a seismic zone—the Eocene Hinge Zone—that many argue is overdue for a massive earthquake.⁶⁶ Such a quake could conceivably topple the plant and spill toxic byproducts, such as mercury, into the mangroves.

Within the Bangladesh government, such concerns have largely fallen on deaf ears. The plant is central to the government's vision of energy security in the twenty-first century and to regional economic integration—to Sonar Bangla.⁶⁷ A large-scale but grassroots protest against the powerplant, founded by a group of local landholders whose property was grabbed in the initial acquisition of land, gained momentum within the country, culminating in a series of long marches, strikes, and protests. A central rallying cry for the movement was the protection of the Sundarbans. But though the movement gained significant national and international attention, it was largely unsuccessful in halting or even slowing the plans for construction.⁶⁸ As a former landowner turned anti-Rampal activist told us, "We have completely failed. There is nothing left to do for this movement."

When I first visited the plant site in December of 2016, nine hundred acres had been cleared and a large perimeter fence built around them. An additional seven hundred acres have since been secured for future expansion. The fence enclosed a vast and eerily empty space. Within it, only a handful of temporary structures

had been raised, along with a monument commemorating the laying of the plant's foundation stone. A ten kilometer-long, raised four-lane highway (constructed on silt dredged from the Pasur) had been built, connecting the plant to the Khulna-Mongla Highway. People who had previously lived in the area had been displaced into landless encampments surrounding the plant and now lived in the shadow of both the perimeter fence and the elevated highway. Jobs were scarce. Insult was added to the injury of the displacement by the fact that the construction companies working in the power plant and on the road were importing their labor rather than hiring locals.

The plant stands as a monument to regional integration and cooperation with India. It is a joint partnership between India's state-owned National Thermal Power Corporation (NTPC) and Bangladesh's Power Development Board. The official name of the company that will run it is the Bangladesh-India Friendship Power Company. When we first visited Rampal in 2016, Riton and I were warmly welcomed by the director of plant construction, Mr. Chowdhury. He gave us a tour of the perimeter walls, taking us up into the watchtowers at the corner of the construction site. From there we looked out over the vast silt bed of the plant and the sun-washed Pasur, where barges with construction material were docked. Mr. Chowdhury, over tea and snacks, patiently answered our questions, assuring us that based on environmental assessments carried out by NTPC, the plant would have negligible impacts on the ecology of the mangroves.

When we returned in January of 2018, much had changed. The plant construction had raced ahead. Where a year before there were only a few scattered buildings, now the plant was emerging. The roads were being expanded from a four-lane to an eight-lane highway. In our previous visit, we simply walked into the plant. Now, there was a check-post preventing visitors from entering the site. In the land around the power plant, rumors were circulating that the government would acquire even more land and force people living near Rampal to move once again. As one woman, who operated a tea stall catering to construction workers on the plant, told us, "Many people have been forced to move on the road like beggars. We will soon have to do that too. We have no alternative."

The Rampal power plant is exemplary of the incommensurate futures in the delta at the current juncture. There is a pressing need for Bangladesh to achieve greater energy security to facilitate ongoing economic development. This is a point that every activist I spoke with in the region impressed on me. As our friend Anis, a prominent opponent of the plant, put it, "We are not opposed to development, but building this plant so close to our Sundarbans is a mistake." The reasons for the plant's location near the Sundarbans are uncertain.⁶⁹ Access to the Pasur River for transportation of coal is one often cited reason. Others argue that the Rampal area was chosen because it is an Awami League stronghold. While there may be dispute over the actual impact of the plant, the location itself is profoundly problematic. The Pasur, upstream of Mongla, becomes increasingly shallow. To get coal to the

plant will require more large coal ships to anchor in Harbaria and off-load onto barges for transportation upriver to Rampal. The increased traffic this will cause puts additional dredging pressure on Mongla's port authority, the organization in charge of the Pasur River, and raises the stakes in keeping the channels free.

These immediate challenges point to the broader contradictions embodied in the pursuit of multiple futures in the delta. The Rampal plant, the industrial corridor of which it is part, and the plans to turn the delta into an engine of economic development all threaten the ongoing existence of the Sundarbans. Indeed, as numerous environmental impact statements and activists warn, the Sundarbans, the rivers that flow through it, and the surrounding landscape may not be able to metabolize the outcomes of industrialization in the delta region. At the same time, without the Sundarbans as a buffer, all of these projects would be exposed to the full force of cyclones from the bay. The very projects that threaten the forest's existence rely on its survival.

The Rampal power plant, then, epitomizes the dilemma of navigating future incommensurability in the present. Despite the existential questions that it poses to the Sundarbans and the region at large, industrial development proceeds, and likely will continue to proceed, apace. The Rampal plant will provide an energy-secure future for the region. In the Sundarbans, dredging allows a city that is a hundred kilometers inland to be a booming coastal port. Mongla Port will continue to develop to allow more and larger ships to travel up the Pasur River. Alongside these developments, environmental degradation will continue. Tectonic shift will build toward a seismic event that could conceivably liquefy the very terrain on which these developments are being constructed. Climate change will herald more environmental transformations for those living in the delta's siltscape. All of these futures appear to be unfolding simultaneously in the delta. There is no clear way to evaluate their individual or cumulative risks. That all these futures happen on incommensurate temporalities—time frames that unfold simultaneously but toward radically different end points—suggests the very real possibility of them reaching an impasse, of coming to a point where the delta cannot allow all of these futures to advance. In other words, they collectively risk arriving at a juncture where different visions of the future reach a catastrophic convergence for the delta and its residents.

NEGOTIATING INCOMMENSURABILITY

We are having a cup of tea with our friend the UNO. We have waited for this meeting for almost an hour, watching as he signs various petitions for a crowded room full of people. Now, it is lunchtime and the office has cleared out. The UNO has kindly invited us to stay and talk. Since meeting the UNO at the Unnayan Mela, I've been thinking about his place in the balancing act of industrial growth and conservation in the Sundarbans region. While, as we've seen, the politics of each

different future imaginary bleeds across scales, the man in front of us is perhaps most directly responsible for navigating these competing futures on the ground. As we settle into our lunchtime conversation, the UNO patiently outlines the problems and opportunities apparent in the Sundarbans region—declining resources like fresh water, ecological degradation, riverbank erosion, industrial growth, further anthropogenic change, et cetera. I ask him if it's possible to navigate the challenges and, if so, what the future holds for communities adjacent to the mangroves.

“First,” he tells me, “you need goodwill.” What he means by this, he explains, is a willingness on the part of residents to meet the challenges of comanagement in the Sundarbans. Communities must be prepared to bear some of the costs of conserving the forest—more restrictive fishing policies, more vigorous policing of the mangroves, and so on. This is simply a reality of contemporary life in the delta. “But,” he continues, “we need much labor here in Mongla. There are lots of construction opportunities here. You need skilled labor for this, but you also need unskilled. So there are opportunities for people who work in the Sundarbans.” This is undoubtedly true. Construction in the industrial corridor of the Sundarbans is vigorous. There are opportunities here for work, provided one can contract with a company that will hire locally.

As he speaks, I think of my friends who work the mangroves—capturing natural resources while navigating other forms of capture, human and more-than-human, under the mangrove canopy. I struggle to imagine Jolil or Goni Miah working in such a formal setting. But perhaps the future of capture by industrial labor and its attendant disciplines is coming for them too. Though, as the UNO makes clear, there are other possible employment opportunities for those who know the mangroves. “Third, there is tourism. Many people here will depend on tourism in the future.” This is a refrain I have heard often. For all of Mongla's development, the city still advertises itself as the gateway to the Sundarbans. The tourism industry in Bangladesh has, historically, struggled to bring visitors in from outside.⁷⁰ But more to the point, the tourism industry relies on people with boats large enough to accommodate groups of tourists in relative luxury and the armed guards required by the Forest Service to enter the Sundarbans. These are resources far in excess of what most who live and work along the Sundarbans's borders can manage. Moreover, it relies on the ongoing existence of the Sundarbans itself.

The UNO is aware of and openly acknowledges these challenges. But given the range of competing projects, interests, and investments in play in the delta, what else could he say? The projects crowding into the delta at present appear to be heading toward an impasse, where the narrow aperture of future possibility in an era of climate change *and* industrial growth may be closing and projects seeking to actualize these competing futures choke each other out. The material and ecological realities of the delta already auger significant challenges for those who struggle to make a living within them, even as they offer other imaginative opportunities

for those who seek to reframe land in the delta to other possible ends. Given this, one could interpret the UNO's response to my question as a commentary on the ways that peasant communities are devalued and erased within possible futures of conservation and/or industrialization. But another possible interpretation of his commentary is the sheer difficulty of coming to terms with the incommensurability of the futures crowding into the delta's present. The delta may conjure multiple futures, but its damp ground may not be able to support the contradictions at hand.