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Beyond (Un)Stable

Chars as Dynamic Destabilisers of Problematic Binaries

Abstract: Until recently, river islands have been neglected in island studies and river/water scholarship. We address this research gap by focusing on the 'fluidscape' of the Lower Ganga Basin, West Bengal, India. Drawing empirical insights on chars (river islands) of the River Ganga, located upstream and downstream of the Farakka Barrage, we present lives and livelihoods in this 'ever-shifting landscape' and demonstrate how the barrage project led to transplantation–obliteration–resurrection of chars in repetitive cycles and activated ambivalence among choruas (communities inhabiting chars). Our fluid tales of everydayness in the volatile river islands show how these 'muddyscapes of hazards' become 'muddyscapes of opportunities' along 'situated adaptive practices' and contingent adjustments pursued by choruas. We establish chars as the most significant metaphor of destabilisation, dislodging widely held ideas about rivers, vulnerability, adaptation, among others. The deployment of 'volatility' as the theoretical-conceptual traction allows us to perceive chars beyond vulnerability and instead as viablescapes.

Keywords: char, Farakka Barrage, fluid, Lower Ganga Basin, political ecology, volatility

Prologue: the elusive Hamidpur

The three-hour long journey through the River Ganga during the summer of 2011 was tiring. As a team from Kolkata, we were involved in an IUCN project documenting ecosystem services in chars (river islands) of Bengal. When we spotted Hamidpur Char from our boat, it appeared like a green-brown patch of solid mass, bifurcating the river into interlacing channels. The extreme heat and dehydration could not bother us for long; the gentle breeze during the evening was pleasant. The villagers embraced us spontaneously and we were ready to weave information from rounds of (more formal) focus group discussions and informal exchanges along transect walks or idle sitting-chatting hours during the afternoon for the next three days.

> When the massive flood of 1971 eroded part of the Hamidpur Village and we lost our homes, land and everything, we had no other option but to migrate and settle on the newly formed Hamidpur Char that emerged in the middle of the river. After some years, when the char was swallowed by the river current, we migrated again and settled five kilometres north of the Hamidpur Char and these migrations are now an integral part of our lives and livelihoods. (Extract from Mukherjee's field diary, May 23, 2011.)

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I remained utterly confused during a long interview with an elderly villager, accompanied by other elderly members of the village and children.[1] Even after repeated and arduous attempts, I failed to figure out the geographical-locational attributes of Hamidpur. I had no clue why the old man kept on referring to virtually every patch of land – both on the mainland lost to erosion and newly formed and dissolved lands in the middle of the river – as Hamidpur. After detailed investigations and probing, I could apprehend and discern that Hamidpur is not a bounded place – it is a shifting habitat, yet an unchanging cultural space. The char is a cognitively constituted cultural space, forging collective identities among choruas (char inhabitants), who keep naming their shifting habitat Hamidpur. Hamidpur symbolises the continuity of chorua cultural identity, transplanted–obliterated–resurrected in repetitive cycles along river island archipelagos dotting the upper stretch of the Lower Ganga Basin.

Introduction

Chars destabilise binaries that valorise one over the other. They demolish the idea of a nature–culture binary. Indeed, as observed by David Demeritt (1994), the world cannot be 'denatured'. Putting a sharp focus on human ways of seeing that renders nature – as a force in its own right, beyond social constructions – illusory does not do justice to chars. Chars are diminutive islands that rise, through the accretion of sediments, from the beds of rivers throughout the Indus–Ganga–Brahmaputra–Meghna floodplains in South Asia. As the chars emerge above the water level, within a few years they become covered with coarse grass and reeds, the organic breakdown of which helps to slowly facilitate the fertilisation of these lands. The apparent solidity and fecundity offered by growing vegetation cover transmute the char into cultivable, inhabitable land. This article presents chars – the ever-transforming river islands of Bengal – as powerful metaphors of destabilisation. By their very existence, chars demolish several widely held ideas about rivers as carriers of only water. Chars also subvert notions of people as essentially sedentary and land as permanent, and they disrupt the view of land and water as fundamentally separate. Finally, and most crucially for a volatile world, chars also dislocate the notion of 'adaptation' as choruas adjust on a daily basis to make the best out of their shifting environments.

To understand chars as destabilisers, it is important to first go beyond established geographical notions of what rivers are and what they do, to understand how chars come into existence. Fluvial geomorphologists claim that chars are large 'sandbars' or islands of various types – 'attached' to the banks of rivers or extending as pieces of land from the edges into the beds. The emergence of riparian islands of the Lower Ganga Basin can be attributed to the interplays among seasonal hydrological regimes, sediment type and river migration pattern across the floodplain. We empirically validate that chars are also the products of history, not just the results of physical processes in floodplains. Kuntala Lahiri-Dutt (2014a) has shown that the history of land and water management in deltaic Bengal played a crucial role in the formation of chars. The capricious tropical rivers of the Indian subcontinent, flowing only seasonally and shift-

ing their courses at their whim, seemed utterly strange and ferocious to the colonial rulers, who considered them purely as natural elements in need of control. The modernist views they had brought with them, derived from a temperate climate, provided templates of what land and water ideally are and what they should be, and how they need to be tamed. Like other colonial contexts such as the Brisbane Delta, Australia (Strang 2023: this issue), the cumulative results of these taming interventions in colonial South Asia have been disastrous.

The colonial legacy of large-scale interventions on tropical deltaic rivers, with its long-term and large-scale socionatural implications, continued during the decolonised context through complex processes of making, unmaking and remaking of volatilities in the fluidscape of South Asia. To substantiate our argument, we present empirical evidence from chars located on the Ganga near the Farakka Barrage in Bengal. Through first-hand investigations, we aim to present a reinvigorating, yet not romanticising, conceptualisation of volatility and present contingent adjustment as a way of living as against the established idea of permanence. Advancing Krause and Eriksen's (introduction, 2023: this issue) argument that volatilities exist at different scales, we demonstrate differentiated velocities of volatilities shaping the muddy materialities of Bengal. We argue that fluid tales of everydayness and 'situated adaptive practices' along the wide spectrum of (overlapping) perils and possibilities are a disabler to declensionist narratives entailing chorua livelihoods. The choruas live off contextually designed and deployed (alluvial) 'tactics' (Ivars 2020), manoeuvring opportunities from these (otherwise perceived as) ephemeral hazardscapes, continuously emerging and dissolving in the middle of the river, yet crafting enduring cultural identities among islanders. Through the conceptual traction of 'volatility', we perceive chars beyond vulnerability and instead as 'viablescapes'. Efforts to fix fluidscapes have disrupted ecologies, impacting livelihoods – the reciprocal feedback loops generating poverty cycles for communities inhabiting the volatile islands yet entirely deriving their (ecosystem-dependent) livelihoods from these ephemeral geographies.

Fluid Epistemologies

South Asian social science – and more specifically water history scholarship has exposed us to the dangers of fixing tropical fluidscapes, dislodging the colonial land–water binary where 'Land exorcised of water was transformed into property, to be then elaborated as socio-economic-legal objects. Flowing waters telescoped into contained channels . . . were revealed principally as engineering visions' (D'Souza 2009: 3). Thus, 'land as permanent property emerged as the fixed and stable opposite to the impermanence of currents, ebbs, volumes and flows' (2009: 4). Soaked lands, wild marshes, swamps and wetlands were considered 'unproductive' as these disrupted the colonial calculus of rule based on the 'fixed rent' regime. 'Modern' hydrology that developed in Renaissance Europe (Cosgrove and Petts 1990) was transplanted in colonial India, causing manipulation, re-ordering and realignment of southern and eastern Indian deltas to suit bureaucratic revenue interest motives. Environmental historians of South Asia have discussed ramifications of hard inter-

ventions on Indian deltas and rivers – the Ganga (Mukherjee 2011, 2018), the Mahanadi (D'Souza 2002, 2003), the Kosi (Mishra 2008; Singh 2008, 2011) and the Brahmaputra (Saikia 2019).

Kuntala Lahiri-Dutt's (2014) work on the island archipelago of the Sundarbans Delta demonstrates how the British also passed laws to optimise profits in volatile landscapes like the Lower Ganga Basin. While the Permanent Settlement Act of Bengal 1793 was geared to 'fixed' revenue generation from durable lands, the Bengal Alluvion and Diluvion Regulation Act of 1825 empowered the British colonialists to establish claims on lands emerging out of accretion and erosion. Against payment of fixed and continuous rents, the state ensured the ownership rights of the person/family on realluviated land.

Emerging scholarship on 'hybridity', 'wetness' (Lahiri-Dutt 2014, 2017, deriving from Appadurai and Breckenridge 2009) and 'rhythmcity' (Krause 2017a, 2017b) interrogates the land–water binary, with historians, anthropologists and geographers unpacking sediments as social sites of interactions (Mukherjee and Ghosh 2020). Flore Lafaye de Micheaux, Jenia Mukherjee and Christian Kull (2018) have captured complex political–economic imperatives in the making of 'muddyscapes' in the Lower Ganga Basin, enriching the 'hydrosocial cycle' (Linton and Budds 2014) into the 'hydro(sediment)social cycle'. Scholarship on 'sedimentary ways' (Bremner 2021) of 'living on the edge' (Zaman and Alam 2021) has gained momentum, of which explorations on chars of the Brahmaputra and Barak Valleys of North-east India (Baruah and Mukherjee 2018; Chakraborty 2012, 2013; Goswami 2014; Parveen 2018) and deltaic Bihar and Bengal (Datta 2018; Datta and Basu 2018; Mukherjee 2011) are worth mentioning. However, the narratives entail declensionism focusing on 'political ecology of survival' (Basu et al 2018) in 'riskscapes' (Frick-Trzebitzky 2018). In this article we go beyond these reductionist portrayals of marginalisation and deprivation and use 'political ecology of contingency' to explicate how choruas accept and adjust to uncertainties along an array of context-specific adaptive strategies and tactics.

Chars of the Lower Ganga Basin

Rising from the tectonically active Himalayan belt, the Ganga and Brahmaputra rivers contribute about a billion tonnes of sediment annually to the Ganga–Brahmaputra Delta (Nishat 2019). The south-western section of the Delta, of which the Lower Ganga Basin is a dominant constituent, extends to the state of West Bengal, covering an area of around 25,000 km^2 (Kuehl et al 1997). The Lower Ganga Basin is criss-crossed by intricate channels of interlacing streams, abandoned meanders, braided river reaches, inlets, tidal creeks and marshes. At Farakka, a prominent delta distributary, known as the Bhagirathi–Hooghly, stems out from the right bank of the Ganga and converges with the Bay of Bengal through Kolkata (Figure 1). Situated within the Malda and Murshidabad districts of West Bengal, the northern section of the Lower Ganga Basin constitutes the active stretch of the river, which is highly sinuous with acute meander hooks and cut-offs over the sediment-laden floodplain.

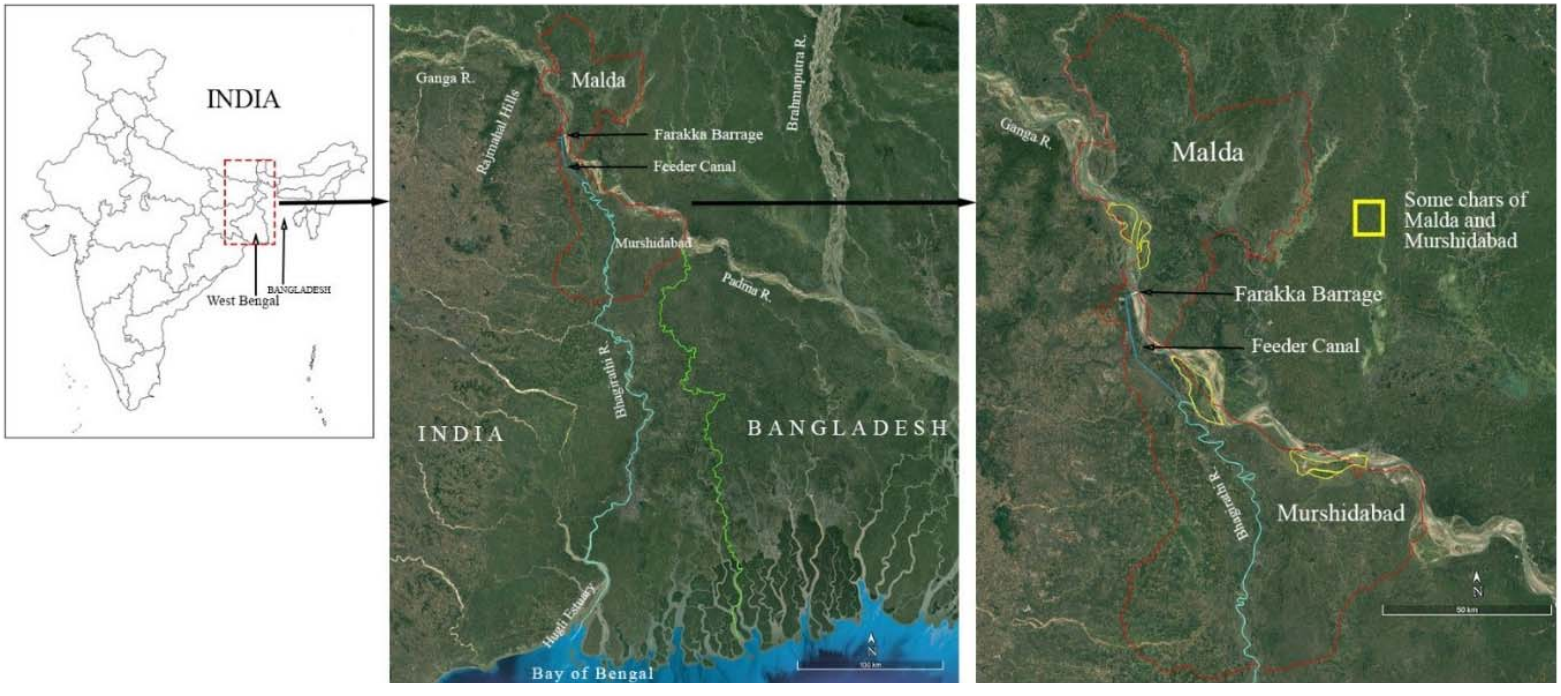

FIGURE 1. The Lower Ganga Basin.
Source: Authors.

Char formation is an age-old phenomenon in the lower stretch of the Ganga. Old scriptures, administrative records, travellers' accounts and Bengali literary depictions shed light on the constantly evolving island ecosystem in flux. Land erosion and subsequent emergence of chars drew colonial attention where contradictory moments of bureaucratic awe, amazement, anxiety and apprehension continued against constant cycles of alluviation and diluviation of land (Colebrooke 1801; Hunter 1877; Sherwill 1858). As unpredictable flows and unmanageable overflows in tropical rivers hindered the colonial 'fixed rent' regime, technological fixes were legitimised to control the volatility of dynamic deltas.

The Disruptive Moment

We argue that with the construction of the Farakka Barrage on the upper stretch of the Lower Ganga Basin, the equilibrium of non-equilibrium river island ecologies has been disrupted. Failing to acknowledge fluid materialities in tropical deltas, the attempt to stabilise the unstable has been catastrophic. The Farakka Barrage Project, one of the longest barrages in the world (2.6 km long) and with 109 lock-gates, is a major rupture in the hydro-geo-ecological regime (Mukherjee 2018) and hydrosocial relations in Bengal, with far-reaching consequences spatially (up to Bangladesh) and temporally (up to the contemporaneous). Hydrological, geomorphological and development research attest that Bangladesh as the downstream region bears the major brunt of burden, with severe annual losses incurred in different sectors like agriculture, navigation, irrigation, fisheries and forestry. The ever decreasing dry-season flow has intensified the excessive river bed situation, increasing the number of hazardous monsoon floods downstream. And flood phenomena are often tangled by the hydro-geopolitical animosity surrounding the control of Farakka lock-gates upstream.

The commissioning of the contemporary project has historical roots. Kolkata (or Calcutta) was the imperial capital and the most viable port city catering to colonial commercial interests. The Bhagirathi–Hooghly River was the primal gateway to facilitate trade. Hence, aggressive dredging operations were conducted by the Kolkata Port Commission to keep the river free from siltation and augment revenue earnings by increasing the tonnage capacity of vessels through the river. Comparative assessments of maps designed by the Dutch cartographer Matheus van den Broucke and the British map maker Major James Rennell depict that the seventeenth and eighteenth centuries were periods of great alterations marked by the decline in the volume of water in the Bhagirathi–Hooghly and increase in the united mass of waters in the Padma, the left bank distributary of the Ganga flowing through erstwhile East Bengal or present Bangladesh. With limited impacts of costly dredging operations and the colonial-capitalist techno-chauvinist conviction that 'Nature required more assistance' (Frederick Dumaye, cited in O'Malley 1914: 8–9), there were discussions in bureaucratic circles on artificially regulating the river flow and controlling navigability by creating a barrage and a feeder canal to flush more water into the Bhagirathi–Hooghly River, on the banks of which stood Kolkata Port. Though the plan surfaced in several reports between the 1850s and 1940s, it was only materialised in independent and partitioned India.[2]

The Farakka Barrage Project was completed in 1975, costing a staggering US$208 million. The volatile geopolitical situation – the Indian government extending its economic assistance to East Pakistan in the War of Liberation and lending its political support to the newly formed country of Bangladesh – were determinants in pacifying the latter's criticism of the project, chiefly designed to accomplish Indian economic and political motives, rooted in her 'dam building spree' between the 1950s and 1970s (D'Souza 2003). It is also interesting to note how development interests facilitated political bargains, evident in the Boundary Commission's deviation from the partition principle that contiguous Hindu majority areas should form India – Murshidabad (with a Muslim majority), where Farakka is situated, remained in India, and in exchange the non-Muslim majority district of Khulna went to former East Pakistan (present Bangladesh).[3]

Modified Materialities of Muddyscapes

When, in the early 1960s, the then superintending engineer from the Irrigation and Waterways Directorate of the West Bengal government, Kapil Bhattacharya, warned against the Farakka Barrage Project, he was vilified as a Pakistani spy and was compelled to resign from office. Being clairvoyantly critical of dam constructions on the River Ganga, he beseeched consideration of flood-tides and tide-borne silts in the lower riverine stretch (Bhattacharya 1973). Stubborn debates among engineers and officials flooded Bengal bureaucratic circles and the Central Water Commission secretariat when plans to construct large dams like the Damodar Valley Corporation on the Damodar River in the Lower Ganga Basin concretised (Klingensmith 2007). Ardent opponents of 'big' hydraulic infrastructures referred to William Willcocks, the British civil engineer who wrote extensively about the advantages of what he understood as 'overflow irrigation' (Willcocks 1930). Pre-colonial agrarian imaginations and practices were adaptive to the fluidscape of Bengal, where floods were perceived as blessings and not as a curse that had to be controlled through the deployment of hard interventions. In the 'overflow irrigation' system, nutrient-rich, silt-laden monsoon floodwaters from the upper regions of various rivers flowing into Bengal were distributed evenly over the delta, watering and fertilising fields, spreading fish over the countryside and sweeping away malaria-causing mosquitoes. Floodwaters were directed through a system of wide, shallow canals with minimal embankments, in which, at an appropriate time during the yearly monsoon, breaches were made to allow more even flooding. The local water boards that worked with cultivators were in charge of the proper distribution of this water. The canals also drained the land, preventing water-logging (Klingensmith 2007; Mukherjee 2018; Willcocks 1930).

It is now evident that the Farakka Barrage Project is not only an 'evil' emblem of hydraulic modernity for Bangladesh but also severely disruptive for the Lower Ganga Basin. The drying up of the Indian Sundarbans Delta and the consequent saline water intrusion in the delta region can be attributed to the streamflow depletion due to sedimentation in Farakka and rising sea levels (Ghosh et al 2020). The project has triggered huge sedimentation, increasing flood intensity and an aggravating tendency of

bank failures in Malda (upstream) and Murshidabad (downstream of the barrage). In Malda, the total eroded land between 1979 and 2004 was 4,247 hectares. New or 'running' (i.e. more ephemeral) chars have emerged with the general rise in river bed level and the formation of a deep narrow thalweg on the left side. [4] They are outcomes of the disrupted flow regime of the Ganga. The Farakka Barrage Project has crafted changing patterns of riverine erosion and sedimentation with repercussions on the formation, consolidation and dissolution of chars. Repetitive rhythms of settlement–displacement–re-settlement–re-displacement (Mukherjee 2011) among the Bengali choruas have been expedited through constant cycles of emergence–submergence–re-emergence–re-submergence of chars in the Lower Ganga Basin during the post-Farakka phase.

Living with and through Volatility: Political Ecology of Contingencies

Kedar Mandal, in his 80s, is not ready to leave Hamidpur and sell his land, even though he now owns a *pucca* (concrete) house on the mainland of Block Kaliachak II, Malda. 'Is it possible to sell land in this char as it is not officially recognised as *payasti* (habitable revenue land)?' Mandal's less vocal response and a more gestural etiquette conveyed through his big eyes and smiling face, when we interviewed him during our latest field trip conducted at Hamidpur in March 2021, hinted at the existence of muscle power and political nexus controlling and modulating transactions in land and several other economic practices like trade-trafficking, prominent in this volatile landscape. This old and wise man's tactful yet frank deliberation blunts the edge of the 'political ecology of survival' (Basu et al 2018) narrative, enabling the deployment of a more flexible and situated 'political ecology of contingencies' framing to explicate the messy materialities and socialities of these muddyscapes.

The degree of transience in the chars, evolving and dissolving in the middle of the river, deprive them of infrastructural interventions along with choruas' non-entitlement to government welfare schemes, which is vindicated by the administrative vilification of these ephemeral scapes. With repetitive cycles of floods and erosion, the lives of choruas remain precarious as continuous migrations lead to an oversupply of agricultural labour force, stressing wages to low levels. Moreover, migration, trade and land conflicts, lack of public utilities such as roads, communications, hospitals and maternal health facilities are major constraints shaping vulnerabilities and affecting the wellbeing of choruas.

There are instances of people migrating four to sixteen times between the 1970s and the 2000s from the villages of Hamidpur Char due to severe erosion led by eastward shifting of the Ganga. With the re-emergence of the char in 2003, it was again settled by people. While the more marginalised choruas inhabiting the edge of the char shifted to its inner western core, slightly better off choruas could migrate to the mainland of Malda and other nearby districts. Mohammad Rabiul Alam, presently a teacher at a primary school in Hamidpur, recalls his emotional ties with the former (submerged) lands of the vacillating Hamidpur char. For Alam, aged 35, it is more than a mass of soil that is engulfed by the river; he remembers his delightful days on

the disappeared land with his big family, including parents, sisters and three brothers. Due to the eastward erosion, they had to migrate to the western part of the char along with a dislodged troop of 2,150 choruas. But then again, the stay could not last long. The entire family re-migrated towards the east due to the westward erosion during the 1990s. Alam described their treacherous journey through clayey and often inundated paths involving risks and uncertainties at every step. Alam is now better settled in his new homeland; he teaches in a primary school that accommodates around 350 students. Alam narrated how the school was set up with support from local government through series of mobilisation tactics deployed by a young group of choruas including him. 'We do not disregard the char like the politicians do'. There is also a Higher Secondary School catering to 240 students. When personally probed, Alam conveyed his gratitude for growing up in chars and repeatedly discussed the potency of the silt-laden chars in enriching lives of choruas on the move.

However, there are multiple realities shaping chorua livelihoods and differentiated sagas of struggle and sustenance. Due to the chars' *shikasti* (non-revenue land) status, many choruas are denied voters' cards and (food) ration allotments by the government. Chars metamorphose into a 'hazardscape' due to their frequent exposure to floods and riverine erosion on one hand and the ironic absence of appropriate policy-driven crisis response networks and mechanisms assisting inhabitants on the other. However, there are instances of choruas transforming these 'muddyscapes of hazards' into 'muddyscapes of opportunities' through movement and mobilisation, drawing support and involvement of the academic community and activists. Hamidpur is such an (exceptional) example. When the Hamidpur *Gram Panchayat* (village council) was eroded in 1971 (see the Prologue), the villagers migrated to the newly emerged charland. The choruas migrated from one char to the other, which they kept naming Hamidpur. The denial of property rights and associated absence of welfare schemes in the newly emerged *shikasti* spearheaded a grassroots movement in the late 1990s in which the choruas asserted their citizenship rights. In 2011, they received voters' cards and could access public welfare measures, including health schemes and other economic benefits. Today, Hamidpur is bestowed with the dual advantage of being *shikasti* on one hand and accruing economic incentives and public social benefits on the other. Though this 'particular case of a successful grassroots movement shows the potentials and possibilities of moving terrain' (Lafaye de Micheaux et al 2018: 657), this is not the norm. Numerous chars dotting the upstream and downstream river of the Farakka Barrage continue their existence as administrative orphans. However, the dire absence of state-induced policy-driven initiatives has facilitated slow yet steady evolution of community-led needs-driven enterprises enabling choruas to live with and through impending crisis. Few chars in the last three decades had received flood relief in the form of distributed food, *tripal* (sturdy cloth tied to bamboo poles and used as a roof to provide shelter during floods), emergency medicines from grassroots organisations such as Child Rights and You, Future Achievement, and Ganga Bhangan Pratirodh Action Nagarik Committee. Against long-term exposure to risks in these dynamic landscapes, choruas have pioneered contingent and frugal adjustments, which we conceive here as 'situated adaptive practices'. Choruas construct temporary makeshift storm-resistant houses made from *jiyal* trees, the roots of which remain deeply entrenched in the soil

(Figure 2). Since during floods all other routes of communication are disrupted for several days in water-logged charlands, locally designed and manufactured boats made of tin sheets called *donga* or *chui nouka*, with a capacity of two people, ensure internal mobility (Figure 3). When longer periods of water-logging affect regular accommodative patterns, the choruas inhabit the *machas* (rooftops) of their houses, living off previously stored and stocked dry food like *cholar chatu* (gram flour), muri (puffed rice) and *gur* (sweet balls made of jaggery).

FIGURE 2. Houses made from *jiyal* trees.
Source: Prithwinath Ghosh.

Chars epitomise more-than-human entanglement and empathetic relationships with cattle, manifested through protection and care-based ethics to cows, buffaloes and oxen, which are carefully transported to nearby chars or the mainland during high floods. Delegated volunteers look after cattle in pre-identified and selected locations like the top of (mainly) concrete embank-

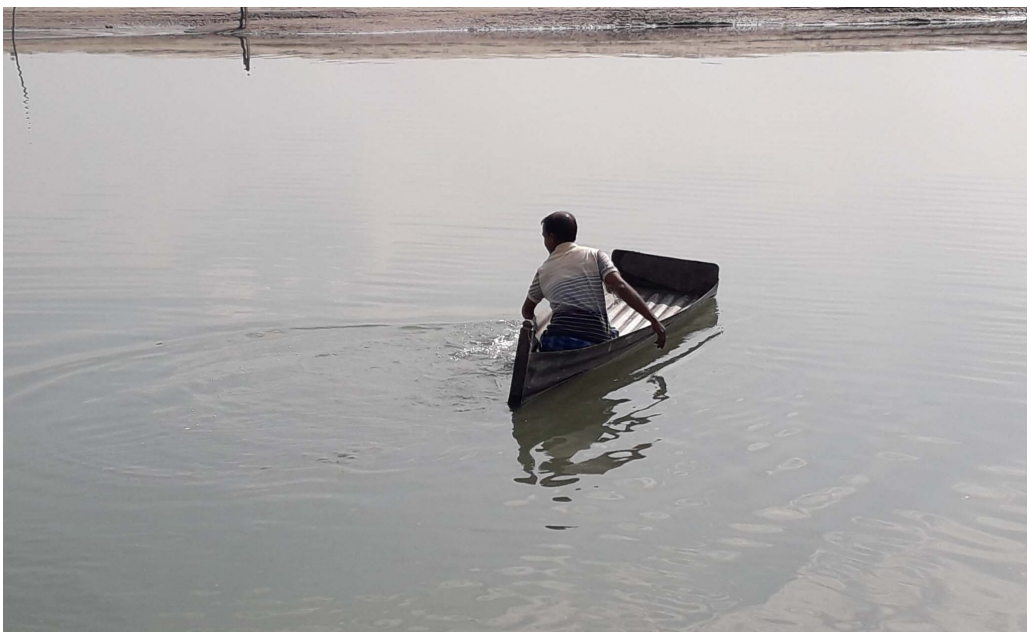

FIGURE 3. *Donga* or *chui nouka*.
Source: Prithwinath Ghosh.

ments, vacant land and houses of relatives and acquaintances. In some cases, an unfortunate need-based compulsion dominates the generally care-based ethics when choruas are compelled to sell cattle to *fonre* (local agents) at meagre prices as an alternative economic practice against crop losses during floods. These agents manage to transport and sell cattle in mainland markets from where they further travel through more elaborate networked routes. In some chars (like the Nirmal char of Murshidabad), illegal cattle trafficking to Bangladesh is pursued along the operation of a nexus consisting of local political leaders and mafias who earn lucrative profits, taking advantage of the trans-boundary porous border. Choruas explain how seasonality and floods, which last for three to four months annually, are significant variables determining the illegal cattle trade and trafficking across the international border. During heavy monsoonal downpour and foggy winter mornings, it becomes difficult for the Bangladeshi Security Force to catch professional middlemen making way for cattle migration from Indian to Bangladeshi chars following the river route. In her article on cattle smuggling across the India–Bangladesh border focusing on the Indian north-eastern state of Assam, Malini Sur (2020) provides a passing reference on the chars of West Bengal. She argues how imposed cattle ceilings and newly introduced identity cards for animals that need to be grazed close to the border 'have realigned the political power between village headmen and prominent community members who desire cattle passage across their villages and the Indian border forces', creating new forms of 'brokerage and control' (Sur 2020: 558).

Coming back to the story of Kedar Mandal about his reluctance to dissociate and disconnect himself from his char village is a provocative teaser to test some conventional narratives entailing these ephemeral fluidscapes. Does the 'chorua culture' (different from 'mainland culture') emanate and get strongly imbricated in the mind, mentality, ethos and morality of choruas, shaping their identities and making them entirely entrenched in chars, too rigid to shift and settle elsewhere (i.e. on the mainland)?

The consolidated older alluvial layers are flooded by a newer silty veneer during the monsoon months (June to September) that contributes to the intense fertility of chars. The flood water drains out from the char area after a month of monsoon, rejuvenating land with fertility. When flood water recedes, chars transform into 'fluid gold' due to their silt-laden, high-yielding value. However, soil composition varies across different chars; for instance, Nirmal Char is dominated by sandy and sandy-loam soils and Hamidpur Char is constituted of loamy soil. Post-monsoon fertile land is cultivated twice a year: wheat, pulses and rice are produced between March and April as *chaitali* crops, whereas jute, rice, pulses and maize are cultivated during the monsoon months stretching from June to September. *Kartiyali* crops are cultivated during the onset of winter, with Hamidpur soil offering the ideal scenario. [5] Additionally, *ekani* (a type of crop often used as fish food) is cultivated during monsoons by the choruas of Hamidpur. Notably, chars with sandy soil are not conducive for vegetable production. Cow dung is applied as manure and cultivation methods involve the adoption of simple, soil-rejuvenating traditional methods. For instance, monsoon floods help to replenish the char lands with silts, proffering a fertile ground for agriculture.

As extensive chars remain fertile for most of the year, cultivation is accomplished without prior large expense for land preparation. Rarely, in some chars during dry seasons, is diesel-driven pump irrigation practised. Here hazard translates into opportunities, with

choruas reaping benefits from farming along the dual levels of subsistence and commodity production using an evolved network of trade, connecting chars with the mainland. Rabiul Alam of Hamidpur mentioned the price differences between char markets and mainland markets for food products that are used daily. Prices of some food and cooking items reaching the local char markets from mainland town markets are valued higher because of transportation difficulties. On the flip side, rice, maize and pulses, which are cultivated in the chars, are sold at comparatively affordable prices to the choruas.

Surrounding agricultural practices, intricate social and hierarchical relations have evolved along divergent social groups such as: landless crop collectors, small-scale farmers with rented land, medium-scale farmers with personal land and middlemen. Field insights from Nirmal Char confirm the existence of a political nexus determining occupation and distribution of lands based on strong networks of influence and affluence and their cyclical connection. The situation has striking similarity with land allocation, reallocation and negotiation tactics in the alluvial islands of the Ayeyarwady River 'which depend on the maintenance of political coalitions' (Ivars 2020: 64). Landless and marginalised choruas often lease land to meet agricultural and accommodation needs. Conflicts and contestations relating to land ownership and cultivation entitlements get determined by an array of (geo)political and economic variables. Nirmal Char in Murshidabad, for instance, shares a boundary with the Rajshahi district of Bangladesh. Due to acute poverty, especially after floods, competing claims among the farmers of the two countries get intensified when choruas from both sides of the border are keen to set up farming operations in the officially designated 'no man's land'. Despite security restrictions imposed at the border, violations continue, sometimes leading to the outbreak of violent clashes between Indian and Bangladeshi farmers.

The riverine ecology offers fishing as another economic mainstay for the choruas, especially during rainy seasons. At least around 10 percent of choruas of habitable chars are fishers. The fishers catch rich varieties of locally available freshwater fish, mainly from two watery reaches: deep thalweg pools of the main channel of Ganga and natural, low-lying canals or *bils*. Large nets are used for their diurnal catch in the rivers, whereas small gill nets are deployed in the *bils*. Furthermore, some women engage in small-scale agro-based production, livestock rearing, manufacturing fuel using jute sticks and cow dung, and the production of bidi (roasted tobacco wrapped in locally produced *kendu* leaves, used for smoking) (Figure 4).

The location of chars influences networks of value chain operations. The dry Ganga riverbed during winter months, when some chars can be accessed easily from the mainland, ensures the use of cost-effective bullock carts to transport crops and fish varieties to mainland market centres, from where these are distributed to different parts of the country. However, with the mediation of the middlemen, crops and fish are sold with pre-fixed rates approved by the state government. For a few other chars, which are encircled by perennial channels throughout the year, the scenario is different. For these chars, boat traffic is the only mode of communication for commodity transportation; boats are used to transport agrarian produce and fish to the mainland, from where tractors and trucks are used to haul commodities to local mainland markets. Longer routes and more complex and plural modes of communication imply a lower margin of profit for the inhabitants of these 'floating' chars.

FIGURE 4. (Left) Cow dung on jute sticks is used as fuel (top left); women engaged in preparing bidi from *kendu* leaves (top right); pastoral activities by women (bottom).
Source: Prithwinath Ghosh.

Conclusion

Chars, by their volatile existence inside river channels, defy a clear-cut classification as either land or water, and thus destabilise this conventional categorisation that is fundamental to our ecological understanding. The obsession with permanence and stable land and the land/water binary has been questioned in emerging scholarship on hybridity. Yet, chars are not hybrid in an essential way. The hybridity of chars allows us to invoke the conceptualisation of the 'third space' (Bhabha 1990), not necessarily a mixed identity, but rather an identification, a fluid and uncertain process of identifying with and through another object. This is true for chars – non-equilibrium ecologies that are dynamic, unstable and unpredictable – environments that can morph from one into another and can fuse into each other.

Taming interventions on tropical rivers of South Asia, targeted to fix fluidscapes, have shaped and aggravated volatilities by impacting on the lives and livelihoods of marginalised communities inhabiting fragile ecosystems. We have demonstrated here how the Farakka Barrage Project has manipulated muddyscapes in the Lower Ganga Basin, triggering settlement–displacement–re-settlement–re-displacement along constant and complex processes of transplantation–obliteration–resurrections of chars. Our empirical investigations of everyday life in chars exemplify that 'volatility' can be a crucial vantage point to advance why chars of Bengal or South Asia should not only be perceived, portrayed and projected as emblems of uncertainties, but also as zones of possibilities, guaranteeing livelihood provisions for choruas who continue experimenting with contingent adjustments and frugal innovative practices to deal with environmental risks in chars. Sur's provocation that chars are 'not only ecological fragments; their locational fuzziness also make them economically productive sites' (2020: 552) justifies why, irrespective of gaining an upward mobility through years of struggle and in spite of owning land and a permanent house on the mainland, Kedar Mandal has no intention of selling his land in Hamidpur. Lucrative economic opportunities offered by fertile chars and incentives of instability and porosity, and a (more or less) comfortable-consolidated grip gained over a prolonged phase of experiences of living with and through volatilities are crucial vignettes influencing choices made by choruas like Mandal. However, this is not true for others, as the chorua community is stratified in terms of material and social hierarchies along different land tenurial rights, duration of inhabiting charlands and location of chars inhabited by them, that is, distance from and access to the mainland. Finally, through our empirical frame of analysis, we advocate that as the most potent metaphor of destabilisation, chars destabilise their own materialities as homogeneous–analogous entities and restabilise that each char has its own narrative along folded and unfolded trajectories of socionatural specificities. In this larger realisation, we argue that chars should be perceived as polymorphic patches, awaiting microcosmic ontologies. We argue that the choruas neither 'appreciate' (Krause 2023: this issue) nor 'embrace' (Scoones 2023: this issue) but (are compelled to) accept and adjust to uncertainties. The volatile chars shape volatile lives and livelihoods where 'volatility' signifies 'a way of life' reliant on an array of dynamic and flexible coping tactics to manoeuvre and harness opportunities from these (otherwise conventionally perceived and projected) hazardscapes. We argue that our framing of 'political ecology of contingency' gains ground to attest how chars destabilise sacrosanct mainstream binaries between crisis and opportunity, vulnerability and resilience. The deployment of 'volatility' as the theoretical-conceptual traction provides us with the edge to perceive chars beyond vulnerability and instead as viablescapes.

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Notes

1. Here, 'I' refers to Jenia Mukherjee.
2. India achieved independence in 1947. This incident is also associated with her partition, when Pakistan (comprising mainly Muslim-dominated northern and north-western states of India) emerged as a separate nation. In 1971, East Pakistan became Bangladesh – another nation state – formed on the basis of (Bengali) linguistic principle.
3. Transboundary and inter-state conflicts on water sharing have flooded the international and, more significantly, the South Asian scene, including clashes over the Teesta, Indus and Brahmaputra rivers between upstream and downstream countries like Nepal, Pakistan, India, China and Bangladesh. There are perennial struggles among south-western Indian states on the Cauvery and Narmada rivers. However, there are also positive stories, such as organisations like

the Nile Basin Initiative, which acts as an inter-governmental agency expediting the sustainable management of the shared water resource among eleven countries of East Africa (Mukherjee 2011a).

4. 'Thalweg' implies a line connecting the lowest points of successive cross-sections along the course of a valley or river channel.
5. While March–April corresponds to the Bengali month *chaitra*, October–November corresponds to *kartik*.

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Au-delà de l'(in)stable: Ou comment les îles fluviales déstabilisent les problématiques binaires

Résumé : Jusqu'à récemment, la littérature académique des rivières et espaces aquatiques s'est peu intéressée aux îles fluviales. L'existence de ce qui est « fluide » - c'est-à-dire, au-delà de la démarcation entre le « solide » et le « liquide » - en Asie du sud deltaïque n'est pas reconnue comme legs du savoir hydrologique colonial. Afin de combler ce vide, cette article présente les résultats d'une enquête empirique conduite sur les îles du bas Gange, en amont et en aval du barrage Farakka. En proposant la notion de « fluidscapes », nous nous attacherons à décrire les vies et modes de vie dans ces espaces toujours en mouvement et montreront comment le projet de barrage a provoqué une rupture sans précédent dans l'écologie de la rivière qui a transplanté, oblitéré et ressuscité des îles fluviales en cycles répétitifs. Il fera également écho à l'attitude ambivalente des Choruas, ces communautés qui habitent les îles fluviales. Ces histoires fluides de la vie quotidienne dans des îles fluviales volatiles nous permettent de mieux comprendre comment ces « espaces boueux dangereux » peuvent devenir des « espaces boueux d'opportunité » par la mise en œuvre de pratiques d'adaptation et d'ajustements contingents de la part des Choruas. Nos enquêtes ethnographiques nous ont conduits à voir dans ces îles fluviale une métaphore de la déstabilisation significative, renversant largement les idées préconçues sur les rivières, la vulnérabilité, l'adaptation, etc. Le recours à la « volatilité » comme concept théorique est fécond dans la perception de ces espaces insulaires spécifiques comme offrant un au-delà du vulnérable vers des espaces de vie qui sont bien viables, au contraire.

Mots-clés : barrage Farakka, bassin fluvial Gange, écologie politique, fluide, île fluviale, volatilité