

# CHARS

Islands that float within rivers<sup>1</sup>

KUNTALA LAHIRI-DUTT

Australian National University <kuntala.lahiri-dutt@anu.edu.au>

## Abstract

Chars are pieces of land that rise temporarily from river-beds in South Asia only to disappear at the whim of the Monsoon Rivers. Chars exist in the vocabulary neither of those who study rivers, nor those who study islands, and have largely remained beyond the mainstream discussions on nature/culture. As analytical constructs and as real life examples of hybrid environments, chars have the potential to extend several theoretical boundaries. This paper presents chars as both the products of ecological processes of floodplain processes and delta building, and the processes of historical developments in colonial and post-colonial land and water management, and offers an outline of char environments, their people and their livelihoods in South Asia.

## Keywords

Char, River islands, Tropical Rivers, Bengal, Hybrid environments.

## Introducing Chars

We tend to think of islands in isolation to land and the variety of physical elements they contain within them; by definition, land and islands would be quite unlike each other. There are, however, a different kind of island that are located well within land. In this paper I talk about these *different islands*, the *chars* or river islands. These diminutive islands rise from the beds of rivers throughout the Indus-Ganga-Brahmaputra-Meghna floodplains, but are more prominent features of Bengal. The focus of this paper is Bengal, a geographical unit made of soft alluvium brought down by rivers that flow through this muddy land. I will use the Bengali terms *char* or *charbhumii* interchangeably to imply those pieces of temporary lands that rise above the water only to submerge unpredictably. In middle Ganga plains of eastern Uttar Pradesh and Bihar states of India, these islands are known as *diaras* and are made of coarser sands and gravels. Diaras are spread all over the Ganga plains; Sharma (2010: 276) estimates that they cover nearly .9 million hectares in the state of Bihar alone. Farther down the plain, in the Bengal delta, the finer, sandy-silty alluvium builds more expansive chars. In the Indus plains in Pakistan, these lands are described as *kuchha* (wet and fragile, as opposed to *pucca*, or more permanent lands) and *baet* (rising like mounds between the two branches of rivers). As the chars emerge above the water, within a few years they are covered with coarse grass and reeds, the organic breakdown of which also helps to slowly facilitate the fertilization of these lands. Consequently, people move into the

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charlands to make their homes and build livelihoods. Figure 1 gives a map of the general region, where chars are more numerous and densely inhabited.

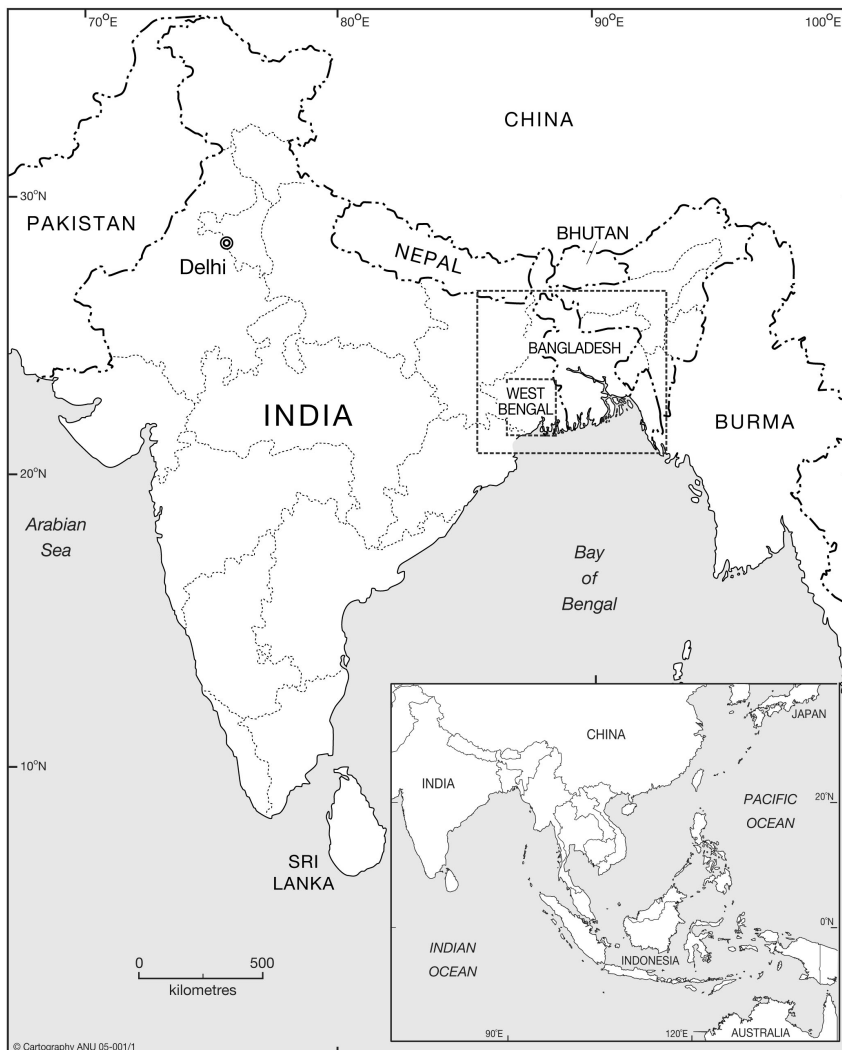


Figure 1: Location map of Bengal

It is important to note that chars are remarkably different from other wetlands such as marsh, fen, peat or land, nor are they water. The closest equivalents to char environments are the delta mouths where mangrove forests grow; the *haor* basins, which are saucer-shaped, interfluvial areas of Sylhet, Bangladesh, that are under water for a part of the year (Duyne-Barenstein 2008); the *yaere* surrounding the Lake Chad (Delclaux et al 2011), and Everglades National Park in Florida (Grunwald 2007). Yet, for those who have been to both the chars and one of the other wetlands, none of these wetlands are actually quite like the chars. Chars are not covered by the Ramsar Convention, the intergovernmental Convention on Wetlands of International Importance,

which provides the framework for national action and international cooperation for the conservation and use of wetlands and their resources, in spite of their use of a 'broad framework' in the definition.

In the richer countries, wetlands and river islands provide areas of unique and rare plants and wildlife and are ideal locations for environmental protection and public recreational activities such as boating, fishing, and game hunting. Awareness of river islands from a human habitation perspective has so far been restricted; they are generally equated with swamplands of the floodplains. Yet the Pantanal of Brazil or the Okavango delta of Africa are ecologically different from chars; culturally too they do not offer such complex material for a researcher. Some of the swamplands, such as the Tajik chars in the Pjäng river island of Khalton oblast, provided shelter to the 'lost people', the stranded Afghan refugees who were 'rediscovered' by the wider humanitarian and media world.

Bengal is widely known as a 'riverine' land, a land that in itself is the product of fluvial action, and is also a terrain characterized by the presence of innumerable rivers that crisscross one another. At the same time, Bengal is one of the most densely settled parts of the world with large numbers of people living on the deltaic floodplains. Consequently, a very large number of people live on and make livelihoods from chars; no detailed estimates exist to take into account all the people living on chars. Sarker et al. (2003: 61) report that in Bangladesh alone approximately six hundred thousand people live on chars. According to a more recent United Nations Development Programme (UNDP 2004) report, there are three million char dwellers in Bangladesh. In India, no such major study has been undertaken yet to give a reliable estimate of the numbers of people living on chars. However, the figure would be much higher than that of Bangladesh, especially if those people living within the embankments along the rivers are taken into account. However, one must remember that char population is truly "floating", and, hence, these numbers are no more than (informed) guesstimates.

More interesting to note, however, is the *kind* of people who live on chars. The unstable environments of emerging, virgin, chars give rise to subcultures that are distinctively different from the cultures of those living on the mainland (Zaman 1989: 197). Baqee (1998) thinks that this cultural distinction of the chars makes them the 'land of Allah *jaane*' (literally, 'God only knows', presenting an epitome of deterministic fatalism). Such nomenclature can be easily attributed to the risks and hazards of living on charlands. Baqee (1998) describes the chars of Bangladesh as being inhabited by "some of the most desperate people in the country." These char dwellers are locally known as *chouras* or *choruas* as they are called in West Bengal, comprising populations that are as fleeting as the lands they inhabit. The unstable nature of chars in Bengal makes them a no-man's-land, which in turn makes them immensely suitable for transitory settlers. Throughout the upper parts of the Gangetic plains and in West Bengal, chars are settled by the poorest and the most "wretched of the earth," such as homeless Bihari or Bangladeshi Hindu migrants who enter India without official documents. Let us first discuss how chars are formed.

How are chars created? The ecological explanation

Chars are a part of the ecological processes of the Indus-Ganga-Brahmaputra-Meghna plains of the Indian subcontinent. These rivers carry enormous amounts of silt and flow

sluggishly over flat plains for most of the year, only to rise during the monsoons to metamorphose into devastating torrents. As the roaring rivers descend onto the plains from the young Himalayan Mountains during the monsoon months, they almost choke with the enormous body of sand and other sediments carried in their waters. Carrying all these sediments off the mountains to the seas over a near-flat plain is tiresome, although we know that eventually all these materials, eroded over long periods of time, will ultimately arrive at the mouths of the rivers to extend the Bengal delta. But before they are brought onto the sea, much of this sandy, silty material gets stored temporarily along the way. The coarser (and heavier) sands get deposited first, while the finer, clayey alluvium may get carried well into the sea. Morisawa (1985: 116), an outstanding fluvial geomorphologist, says that the river stores the material in its own “banks”, that is, floodplains and channels. To start with, one can say that this is how chars are born: they originate as part of the *natural* fluvial processes in tropical areas such as South Asia and can be integral parts of the ecologies of almost all floodplains.

#### *River mechanics*

From a geomorphological point of view, chars are described as “sandbars” or river islands. Some bars may be “attached” to the banks of rivers, extending as pieces of land from the edges into the beds. When they form on the riverbeds, the river’s channel is divided, forming what geomorphologists call a ‘braided’ channel. Rivers store their sediments on floodplains and their channels for a number of reasons. The dumping of sediments can occur because of the weight of the sediment load itself, when the load becomes excessive for the river to carry it along. Sand also gets deposited owing to a sudden loss of velocity of the river as it descends onto the flat lands from the hilly terrain. Such a decrease in the pace of the river currents further reduces its efficiency in carrying the sediments. Geomorphologists agree that ‘divergent flow’, or the splitting of the channel into a number of branches, or ‘intricate braiding’, is an integral part of the flows in large rivers.

Morisawa (1985: 118) described the floodplains as “essentially ephemeral” because they are continuously constructed and destroyed by the river’s own actions. The deposits of vertical and lateral accretions are reworked as the rivers scour the channel or surrounding plains or migrate laterally. To understand the floodplains of tropical rivers this point is the key. Chorley et al. (1984) have attributed various names to such river islands: bars and river islands. The presence of channel banks, in their view, gives rise to these bars that are essentially a class of large-scale bed form, or ‘macroform’ (Jackson 1975). In this schema of scale-based categorization, the dimensions of the bars are controlled by flow, width, and depth as alluvial channel patterns evolve from straight, erodible channels to complex and braided channels.

Standard and established geomorphological texts view the alluvial channel as a neat category separate from land, as a geometrical unit; as chars appear within a river’s channels, these pieces of land seem to pose a problem to conventional geomorphology: Are they to be considered as part of fluvial dynamics or are they to be considered as units of land? In other words, conventional geomorphologists’ questions that are asked as starting points for their research assume an absolute and homogeneous physical world that can be exactly measured. The very existence of nomadic river islands would then arouse questions such as: Are braided channels a “normal” and natural occurrence? If the answer is yes, at what *stage* of a river’s evolution does braiding occur?

If chars were to be studied by asking such questions, one would end up developing a mechanistic view of chars, a view that is explicit in the most widely known geomorphic perspective that Bridge gives of midchannel bars: “If deposition is less rapid and/or more continuous, sheets of sediments are formed rather than discrete bars. The resulting accumulations of sediment in mid-channel, or forming the convex banks on the inside of river bends, are referred to as braid bars and point bars, respectively. Braid bars and point bars can be thought of as compound bars inasmuch as they are normally composed of parts of multiple bars” (2003: 145). In his subsequent analysis of the complex history of erosional and depositional modification of bars, the ‘stage dependence’ of channel pattern appears to be the most crucial factor. One of the early geographical works by Brice (1964) differentiates between midchannel bars and river islands based on the criterion of height, that is, whether or not they rise over water continually. In his plan of classification, midchannel bars are unvegetated and submerged at a bankfull stage (when the entire river channel is filled with water from one bank to the other), whereas river islands are vegetated and rise above the surface of the water; but whether or not a bar becomes an island remained unclear for Bridge. Consequently, Bridge comments that, “such a distinction between bars and islands artificially separates depositional forms that may have a common geometry and genesis” (2003: 149). Brice has also attempted to classify midchannel bars as “transient” and “stabilized” on the basis of their permanence, but since such descriptions clash with geomorphological terms, terms such as “unstable” and “stable” were used to imply the degree of erosion and deposition within the channel and, hence, channel migration. Bridge comments that, “terms such as transient, unstable, and stable should be replaced with quantitative measures of the lifespans and rates of creation, migration, and destruction of bars and channels” (2003: 149).

### *Tropical rivers*

River islands have remained outside of the main discussions by fluvial geomorphologists for a very long time. This is because although the fluvial experts are aware of the huge quantities of sediments brought down by the rivers, the Eurocentric nature of the discipline ensured that tropical rivers remained outside of the discussion until recently. Conventional geomorphological wisdom received a challenge when Asian river experts pointed out that tropical rivers and tropical hydro-geomorphological processes are different from temperate rivers and their hydrology. Of these Asian river experts, Avijit Gupta is the most notable. Modestly, Gupta writes: “In tropical geomorphology we are constantly surprised by new discoveries” (2011: 3). And indeed, “we have a limited understanding of the geomorphic processes, landforms and sediments in the tropics” (ibid: 3) because the early geomorphology books were written largely by experts who came from temperate countries and saw in the tropical world what they set out to see in the first place.

Standard textbooks on geomorphology were largely targeted at students in temperate countries of Europe and North America, and pupils studying in tropical countries rarely received the opportunity to explore the examples that were located closer to home. For rivers located in monsoonal tropical areas, the most characteristic feature is the seasonality and ferocity of flow. The large tropical rivers are most significant to the contemporary understanding of human-nature interactions; in the past they supported and destroyed great ancient civilizations, and today they continue to nourish as well as threaten human communities. Those who are not familiar with the rivers in the Indus-Ganga-Brahmaputra plains may have difficulty in even comprehending how different

most tropical rivers are from their temperate counterparts. A river that has been lying nearly dry for a number of months may magically come to life suddenly with the onset of the monsoons and at any time during the wet season may spill over its banks. Toward the end of the rainy season, when the channel is full, it may cause widespread floods in the surrounding plains.

The implications of this seasonality of flow in the tropical rivers of South Asian plains are enormous for chars and their inhabitants. More importantly, the seasonality of flow also means that while sediment accretion gives rise to chars, these chars are also constantly eroded by the rivers that shift their courses frequently and therefore eat up the banks of these chars. Throughout the lower parts of the Ganga-Brahmaputra-Meghna basin, all chars are surrounded by water during the monsoon months. They are exposed to, and repeatedly affected by, not just annual inundations but also the unpredictable shifting of river channels. Near their mouths, many rivers do not follow the same course for more than a couple of decades and areas that are continually subject to waterlogging turn into a maze of moribund channels crisscrossing each other as the delta builds into the sea. During heavy monsoons, continuous rainfall may even completely inundate the low-lying chars. In many seasonal rivers with braided channels, some island chars may comprise land that even in the dry season can only be accessed by crossing a river channel. Some chars can be much more than just a midchannel island that periodically emerges from the riverbed. Some of them turn into permanent or semipermanent islands located well inside the two banks of the river, but they almost always rise above the high water mark.

### Historical origins

Chars are also the products of history, not just the results of natural, physical processes in floodplains. More specifically, the history of land and water management in deltaic Bengal played a crucial role in the formation of chars. The East India Company took the *dewani* of Bengal, Bihar, and Orissa from the Mughal Emperor Shah Alam in 1765, and took over the role of direct management and control in 1772, that is, within this short period of twelve years, the East India Company became “the permanent rulers” of one of the richest tracts in the world (Pal, 1929: 2). The colonial rulers brought with them modernist views of what land and water ideally are and what they should be, and how they need to be controlled, leading to unprecedented changes in the landscapes of South Asia. The capricious tropical rivers of the Indian subcontinent, flowing only seasonally and shifting their courses at their whim, seemed not just utterly strange to them but also as ferocious natural elements that are in need of control. Writing about the major changes brought about by the British Empire, Kumar et al. (2011: 1) consider it as an exceptional global ecological moment for its “relentless transformation of environments and landscapes” in faraway lands.

#### *Colonial alienation of land from rivers*

When the colonial British took over the task of reigning the country, to them the rivers (and the muddy lands) of Bengal appeared strange because of their frequently shifting courses, property ownership complicated, and the ancient Hindu laws quite incomprehensible. Modern European environmental and agrarian imagination carried in their heads required them to split soils and fluids into discrete domains (Cosgrove and Petts 1990). This began an exorcism of water from land, D'Souza (2009: 3) believes,

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primarily meant to turn the lands into useful property that could then become socioeconomic-legal objects owned by individuals. This perception of land was rooted in Adam Smith's view of what an economy should be like, and on conceptions of the environment based upon rural England. Therefore, in riverine Bengal, the colonial British reinvented land and bounded the rivers to separate them from the land. This historical legacy makes the chars unique.

The first priority in establishing an absolute and irrefutable authority on the land was to prove beyond doubt that the state owned all the land according to ancient Indian systems. The Permanent Settlement of 1793 gave land away to zamindars in perpetuity to reduce the complexities of revenue collection and to prevent defaulters in the payments of rent. A series of actions and measures followed the permanent settlement of land, the most significant being the initiation of surveys of rivers and lands. The East India Company assigned its surveyor and engineer, James Rennell, to conduct a survey of the river systems in Bengal and to prepare detailed maps of these rivers. From 1763 to 1773, Rennell compiled a set of maps of Bengal for the British Government, published in 1779 as the *Bengal Atlas*, which became the most authentic and legitimate source of information on the rivers of Bengal and was regarded as vitally important for commercial, military, and administrative purposes.

An ongoing task, accomplished along with fixing the rivers on maps, was that of fixing them on the land by the construction of embankments. The heightened importance of revenue-yielding land was propagated by a perceived need to protect it from the invading rivers. Consequently, more embankments were constructed and the heights of the older *pulbandi bandhs*, that had allowed the annual inundation of rice fields, were raised. The meaning of the embankments also changed; as the river was unable to spill over its banks, the administration began to imagine that the embankments were meant solely for flood protection.

### *Dams, canals and reservoirs*

As described earlier, the basic sediment mechanics is for the coarser sediments to settle first. These sediments are also heavier and tend to be pulled as 'bedloads' rather than in suspension by the rivers. As soon as the river's flow slows down or stops, particularly if an artificial obstruction such as a dam is built, these heavier sediments tend to get settled on the bottom. So, the sandy material tends to accumulate in a reservoir, and when the sluice gates are lifted to release some of the excess waters from the reservoir during the monsoons, it is this sandy material that rushes forth. This point is worth noting because one of the first things following the independence of India that took up Nehru's dream of ushering high modernity was to start building large dams to protect citizens from destructive floods. Amongst the series of large dam projects that were to follow in postcolonial India, were the Damodar Valley Corporation on the Damodar river and Bhakra Nangal project on the Sutlej, both initiated within a couple of years of gaining independence. Needless to mention that these dams and reservoirs, along with their associated raised embankments along the rivers such as the Kosi, completely changed the natural fluvial regimes by significantly reducing natural flows. The effect of such engineering construction on chars was also notable; they became more in number and more permanent in nature as the rivers' flows became scant.

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### *Chars breaking apart*

As we have seen, the fluvial dynamics of erosion is an integral part of chars. Experts (Elahi et al, 1991; Abrar and Azad, 2003) developed a threefold typology of bank erosion - *chapa bhanga*, *bhanga*, and *hanria bhanga*. *Chapa bhanga* literally means ‘the breaking of the bank in *chaps* [chunky portions]’ and occurs during the rainy season when the rivers overflow in swift currents. The size of the chunks breaking away from the bank varies from the size of a golf ball to two meters in width. The common perception is that *chapa bhanga* gives adequate time to the char communities to relocate and save their harvests and other belongings. *Bhanga*, or ‘the breaking of the soil’, can wipe out large pieces of land - from one or two acres - in a matter of minutes. The breakage is often preceded by a sound that can be heard from a distance and the formation of large rings of circular water currents called *ghurnis* that loosen the soil along the bank walls and make them slide immediately. *Hanria bhanga* means ‘the breaking away of the soil as if it is a clean sweep down to the bottom of a *hanri* [a round cooking pot].’ In *hanria bhanga*, the strong, speedy, and sharp undercurrent of the river cuts through the soft, sandy layer and reaches two to three kilometers inland from the bank. At one stage in a riverbank experiencing *hanria bhanga*, a big mass of land can hang above without any support and may suddenly come down without any warning. Local communities have little opportunity to survive or to save their belongings in *hanria bhanga*.

Besides these three main types of bank erosion, local people identify many other types with local names. For example, *chechra bhanga* occurs mainly in newly emerged chars and when the floodwaters recede. In these chars, the soil is usually sandy and the vegetation is sparse, allowing the receding floodwaters to wash away large amounts of loose sand. *Bhurbhuri bhanga* means a string of bubbles rising to the water surface from where the sand has been the washed away; *nishi bhanga* is when the erosion occurs at night; and *probol bhanga* is when the bank erosion has devastating effects (Abrar and Azad, 2003: 17–18). The range of terms manifests the width of close human experiences and understanding of rivers’ behaviours.



Figure 2: Water/land of chars. Source: Kuntala Lahiri-Dutt, 12 October 2011



### Who owns the chars?

One can easily understand that being the results of both ecological and historical processes, chars offer not just real-world examples of a coproduced element in our environment, they also offer other problematic. For example, are they really land? Or are they for all practical purposes parts of the rivers? Besides posing a conceptual difficulty of definition, they also wander around and disappear without notice, and are truly 'no-one's lands' or fictional entities because they cannot be legally recorded in revenue papers. Chars, therefore, make us ask: who owns chars? The short answer is "no one", making char-people as transient as the chars themselves. Let me elaborate this briefly.

Once the Permanent Settlement established the importance of revenue-giving lands in Bengal, the colonial British attempted to resolve the maze of problems of accretional lands and the erosion of existing lands by the rivers. The law that was created for this purpose, the law that still rules the rights of ownership of charlands, is the Bengal Alluvion and Diluvion Regulation Act (BADA) of 1825. Being the first legislation on the chars, this Act probably gave rise to the popular folk term *badajami* for chars. The Regulation was meant to establish a set of rules to guide the courts to determine the claims to land "gained by alluvion," or accretion, and the resurfaced land previously lost by diluvion, or erosion. The full text of this Act, available in Hunter's *Imperial Gazetteer of India*, states that "chars or small islands are often thrown up by alluvion in the midst of the stream or near one of the banks, and large portions of land are carried away by an encroachment of the river on one side, whilst accretions of land are at the same time, or in subsequent years, gained by dereliction of the water on the opposite side" (1887: 137).

Two main categories of char land are considered by the BADA: *in situ* and new accretions. The right to land that once existed but was diluviated, and subsequently resurfaced in the old site, is one thing, and determining claims on it may not be difficult. The BADA considers the rights to such lands to be incidental to one's title to a tangible property, derived from the principle of justice and equity. The right to property is not affected only because it has been submerged under water, and the owner is deemed to be in "constructive possession" of the land during the time of its submergence and can claim it back when it reappears out of water and can be identified as land. For this, the owner must continue to pay rent for the diluviated land. The BADA ensures that when new land rises within a river, it should be considered as "an increment to the tenure of the person" to whose land it is contiguous to, subject to the payments of revenues assessed by the state. Such a rule will not be applicable if a river suddenly changes its course and separates "a considerable piece of land from one estate, and join[s] it to another estate without destroying the identity, and preventing the recognition, of the land so removed" (Hunter 1887: 138). Newly rising chars in large navigable rivers are the property of the state, but if the channel between the island and the shore is fordable at any season of the year, it is considered an accession to the land tenure of the person who is "most contiguous to it." The BADA applied only to the large and navigable rivers. In "small and shallow" rivers, fishing rights were given out as *jalkar*, which gave the rights of the river to individuals. Clearly, such an elaborate schema of ownership was required for revenue collection purposes introduced by the British.

Barkat (2004) thinks that the BADA was designed primarily to protect the interests of the original owners and saw chouras as infiltrators. One aspect of this was the complexities in defining and regulating the relationship between landlords and tenants. The Bengal

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Legislative Council Act III (popularly known as Bengal Tenancy Act, or BTA) of 1885 was enacted by the then Bengal government, which identifies khas (government-owned) water bodies (such as *haors* [low-lying depressions between two or more rivers], *beels* [lake-like depressions], *kha's* [drainage channels], and *baors* [ox-bow lakes of former meandering bends of rivers]) as subsets of *khas* lands. Yet the key to establishing ownership rights in the court of law remained the payment of rent, even on diluviated land. An amendment of the BTA made in 1938 provided for automatic abatement of rent if the land was diluviated, but restitution of this right if it reformed within twenty years of diluvion.

Successive laws attempted to clarify gaps and establish sovereign rights of the state over all lands; for example, the East Bengal State Acquisition and Tenancy Act (EBSATA) of 1950 was enacted after the partition during the Pakistani rule. It further changed the rent provisions to favor either the state or the bigger landlords against the poorer peasants. After the independence of Bangladesh, the Presidential Order No. 135, which aimed to rehabilitate the landless, was promulgated in 1972. This order clearly indicated that all newly emerged lands that were previously lost by erosion should be treated as khas land and restored to the government and not to the original owner. This order might have been meant to recover chars from the more powerful local elites in order to redistribute them among the landless farmers. It did not operate on the ground in that way, however, and failed to fulfil this promise. For this reason, an amending of Act XV was made in 1994 for the abatement of rent of land lost by diluvion, and for the subsistence of the right to land that is reformed *in situ* within thirty years, subject to the ceiling of sixty bighas. For land that rises in a new location, the rights depend upon the ownership of the riverbed. As jalkar rights over smaller rivers have been withdrawn since 1956, the right of ownership of chars rising on them belongs to the state.

The general rule of thumb at present is that chars formed slowly and imperceptibly in continuity of someone's land will be considered as an increment to the land of that person subject to the payment of rent for the increased land. When a char rises in the middle of a river and is separated from the banks by a channel, it becomes the property of the state. If the channel is not deep enough to be navigable and can be crossed on foot, however, the char will be considered as an increment to the land most contiguous to it.

### Human use of chars

As each char differs from another in minute details, the human use of these land also differ from place to place, country to country, from one river system to another, and even within the different reaches of the same river. One might recall here the case of Majuli, the largest char in the world, lying within the course of the great river Brahmaputra in Assam in northeast India. The Majuli island spreads over an area of 875 square kilometers and is about 85 meters above the sea level, and has existed for at least two-and-a-half centuries. It is formed in a stretch of the Brahmaputra where a large number of tributaries form their small, tributary-mouth fans on the north and south banks. Due to its stability, Majuli is a valid administrative unit, a *mohkuma* (subdivision), of the Jorhat district of Assam. Erosion on the southern side of Majuli is due to the erosive actions of the Brahmaputra and on its northern side to the Subansiri River. Kotoky et al. think that the erosion is mainly due to "extreme sediment charge and to the main river traversing through a series of deep and narrow throats, and the formation

of sand bars in the midst of the river” (2003: 929). The heterogeneous nature of the bank material also contributes to the slumping of riverbanks through undercutting and the flow of highly saturated sediments during the dry season.

Unlike Majuli, most newly formed chars are naturally transitory and fragile; their shapes change frequently and their edges may start eroding any time due to the river current; a whole char may even disappear overnight. Bank erosion is as much part of char dynamics as accretion; even Majuli suffers from a high rate of bank erosion. Even old charlands, inhabited for decades by hundreds of men, women, and children with their houses, livestock, and croplands, may be lost in a matter of days due to a sudden whim of the river. Yet some chars may house permanent human settlements, depending upon the silt and soil properties and the strength of river currents.

People’s use of chars in Bangladesh came to light in two important publications by Rafiqul Hasan Mantu and Abdul Baqee, both in 1998. While the former presents the case of human rights of char-dwellers, the latter shows that the fluidity of the existence and ownership of chars lead to bitter disputes over the lands. Indeed, as new charlands emerge out of river beds, complex power plays begin to secure control over these lands. Often, people who live in adjacent areas, or those who are richer or are better connected politically can mobilise hired sentries and eventually gain control that ensure that they get access and user rights, particularly cropping and harvesting rights on these lands. Peasants trying to use the land on chars are often involved in the use of armed fights, trying to force others out of the lands to avoid dispossession. Often, there are murders, rapes, and the robberies of crop as they ripen for harvest (1998: 63). For example, in 1979, in Char Kashim of Chandpur in Bangladesh, about three hundred families who had been leasing the land on an annual basis from the government were attacked by people wearing police uniforms. Those who resisted were rounded up and abducted. Powerful local leaders also hired *lathiyals* (literally, stick-wielders, but the term stands for local army or force).

It would be a mistake to descend into the trap of a Homer-Dixonian thesis (of many people scrambling to access limited resources) to explain these conflicts to gain control of rising chars. One needs to think also of the history of land and water management, and the fact that the laws are made with stable land and fixed river courses in mind. No land survey can be completely at ease with the changing nature of chars give rise to the violent and complicated disputes that often end in bloodshed. Even Baqee comments on the ineptness of charland laws: “the laws are deceptively simple on paper but are very complicated in the implementation” (1998: 65). He identified five factors why the charland laws are unable to ensure security for char dwellers: the opaque legalistic language used by land documents, the large variety of papers required to prove ownership (and the difficulty in obtaining them), the requirement of continued *khajna* (rent) payments for a lost land, access to land document officials, and the difficulties of establishing rights over resurfacing chars. A deadly combination of these factors means that those who lose their lands due to erosion fail to get them back even if it resurfaces or when another char rises nearby.

A char takes three to four years to surface above the high water mark, and political dynamics during that time ensure that such lands are already shown in official documents as sold and allotted. If this leads to bloody feuds during the harvesting seasons when many claimants assemble to resist, some settlement officials might even back one or two claims in an effort to bring peace. Not only in Bangladesh but also throughout the Gangetic plains, physical “possession” of the land is critical for

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establishing ownership or at least user rights; the principle is stated in a popular Bangla proverb, *Dakhal jar, jami tar* (Land belongs to the one who possesses it). One may somehow manage to produce some legal papers, but if the *matbar* (the local leader) has designs on the land, the farmer can do nothing to establish and prove his rights or ownership of it.

During the last decade or so, chars have been drawn into the center of resource management and environmental policy debates and discussions around flood mitigation and human vulnerabilities caused by riverbank erosion. Chowdhury (2001) considered the greater awareness in Bangladesh of chars as populated places understandable because of the importance of the riparian areas to the country's life and economy. The Environmental and Geographical Information Systems (EGIS) Support project study, conducted in 2000, considered chars to be a "by-product" of the fluvial dynamics - in particular, the sediment load, discharge, and morphological behaviour - of the rivers of Bangladesh. Consequently, the project concluded that the erosion-accretion processes are associated with increase/decrease in char areas. The study showed that chars covered over seventeen hundred square kilometers of the country in 1993 (EGIS 2000: 5).



Figure 2: Water-based livelihoods on Chars. Source: Kuntala Lahiri-Dutt, 15 August 2009

This study updated an earlier and more extensive study by the Irrigation Support Project for Asia and the Near East (ISPAN) conducted in 1993. The ISPAN study was primarily concerned with riverine chars and looked into both the island chars and attached chars. It also investigated--besides the physical and demographic features--the social and economic dynamics of life in the chars. It noted that over 90 percent of the chars that are not eroded in the first four years of their emergence are used for either cultivation or settlement by the end of those four years. After about seven or eight years, both settlement and agricultural practices are supported by the chars. Cropping intensity in relatively lower reaches where land is more fertile can be high, although the chars can be less productive than other lands due to the sandy nature of the soils. Besides

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cropping, chars have large areas of grasslands, which support grazing and provide material for thatching. Many chars are mined for sand as building material.

These studies were prepared for the Flood Plan Coordination Organisation, undertaken as part of the Bangladesh Flood Action Plan on riverine lands of major rivers of the country. Apparently, during the 1980s and the early 1990s, char areas increased in all rivers in Bangladesh, except in the upper Meghna region.



Figure 3: The river/land and its people. Source: Ajoy Konar, 28 August 2008

### ‘Developing’ chars

Today, Bangladesh houses the Department For International Development (DFID) funded multibillion pound “chars livelihoods program”, a large-scale, multisector project that supports the “extreme poor households” who live in the remote northwest riverine chars region. The earliest of such developmental intervention in chars can be traced back to the Land Reclamation Project that was initiated in the late 1970s with the assistance of the Netherlands government (Zaman 1989: 197). The Project primarily aimed at the construction of diked or poldered land by encircling the chars with embankments. It also intended to distribute *khas* lands as per the government rules to ensure the ownership of the landless, which was followed by programs for rural development. The DFID started its five-year Char Development and Settlement Project (CDSP) by utilizing some of the experiences and lessons from this earlier project in 1994. It covered three large chars of the district (Char Majid, Char Bhatirtek, and Char Baggardona-2) and continued the work in the second phase from 1999 to 2005. The main difference between phase 1 and phase 2 of CDSP is that in the second phase, some chars were left unpoldered. The third phase of the project is currently underway, and altogether over one hundred thousand hectares of land have been brought under the project in its three phases. The fundamental principle of CDSP is to distribute the *khas* lands among the landless families of the chars, after building engineering works to protect the lands from flooding. The interventions under the CDSP project have been

popular because they have been able to provide a sympathetic form of governance of chars to ensure that the poor receive landownership to assure them the opportunities for livelihoods. It has been claimed that the salinity of the soils has decreased, cropping intensity has increased, and protection from floods has helped the cultivation of minor crops and vegetables around the household lands and increased income opportunities from fishing.

Such rural development and livelihood interventions on chars of Bangladesh have given rise to a “resource versus hazard” debate which might be problematic. While the rural development projects often create new opportunities for the establishment of settlements and the pursuit of livelihood activities, they also create a sense of security that is utterly false and thus further expose char dwellers to the vulnerabilities of bank erosion and flooding. People, who once were mentally prepared to cope with floods, now expect to be protected from floods, an impossible task in a char environment.

## Conclusion

Chars (and people’s lives on them) present insights into what James Scott (2009: 22–32) described as “nonstate spaces,” where resilient and resistant peoples seek refuge and make a living, pointing to the need to rethink boundaries between land and water, and the multiple illegitimacies that are produced by these artificial boundaries. Indeed, any support for char people must also help to push forth improvements in services to enable them to improve on the assets they have created in the absence of basic supports and services: any assistance should be to meet their demands for health and better medical treatment, education for their children, and other support services, rather than just providing secure land rights in an essentially insecure environment.

To live with the river and to make a living on the chars is not an easy task, but the char people seize minimal opportunities to build assets and livelihoods, and understanding this expertise will open up new ways of thinking about the environment and livelihood. Char people live their lives on an everyday basis, and adjust as new vulnerabilities threaten their lives. Water remains the most important source of wealth as well as the biggest threat to human lives on chars. Water determines the production cycle on these lands, and determines the ups and downs in the well-being of families. No conventional interpretations of human security and vulnerability can explain people’s lives that are defined by water. In coping with uncertainties posed by the char environment, every individual do the best they can every day, adopting tentative and micro strategies to adjust to the ever-changing environment and mobilize the intangible skills and assets that they have either brought into or developed through living on the chars.

## End Notes:

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<sup>1</sup> This article draws heavily from Lahiri-Dutt and Samanta (2013).

<sup>2</sup> By Bengal, I am implying the geographical unity that is now divided into two countries: Bangladesh and India (more specifically, the West Bengal state of the country).

<sup>3</sup> See Schumm's (1977: 96) comment that the river channel is primarily "a conduit of the products of denudation".

<sup>4</sup> The local name for low-lying embankments that have traditionally been built in Bengal to allow the overspill of floodwaters into rice lands.

<sup>5</sup> Government-owned lands.

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