Draft Version

Development, "Waste" And the People Of Sundarbans

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Abstract:

This paper traces the history of land reclamation of the Sundarbans throughout the colonial era and explains it in the context of two differing development paradigms of the colonial rulers. Further this paper shows how the already marginalized people of Sundarbans were further marginalized by the coming of forest conservation in the 1870s and how this marginalization in turn affected negatively the conservation efforts in the Sundarbans in both pre and post independent India.

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1.0 Introduction

The Sundarbans in West Bengal is one of the most backward regions in India. Inadequate infrastructure, poor communication facilities, lack of access to clean drinking water, health, education services and a fragile and limited natural resource base have contributed to a low level of development and high poverty incidence in the region. The traditional livelihoods are limited by the fragile ecology of the regions and they include forest-work, agricultural work and other community services. Majority of these service holders are also the landowners and also the most 'well off' of the region. On the other hand modern services such as 'tourism' and 'brackish water shrimp farming' have been gaining popularity since the late eighties. The livelihood choices are largely influenced by the ownership of land in the region. Land, being not only an economic asset but also a social asset takes a centre stage in livelihood decision making. Here the quantity or the quality of land is hardly the issue. What is of foremost concern is the geographical location of land as land which is "up" or in other words in the mainland areas away from the forest and the rivers is seen to be a mark of social status and upward mobility as compared to "down" land which is deemed to be socially inferior. Hence people from the "down" lands buy "up" land and shift if they are able to save money. Moreover it is land which is the backbone of nearly all social and economic hierarchies in the Sundarbans. It is also one of the major issues in regional politics over there.

However, with the coming of ecological, environmental and wildlife conservation perspective some of the traditional as well as modern livelihood opportunities are shrinking. This has affected adversely, the livelihood options of a population which was already constrained by the fragile ecology of the region. In this perspective it would be important to understand the role of land as a social 'marker' in ecologically fragile zones, which in turn will help us to formulate policies for the betterment of their livelihoods. The human settlements in the Sundarbans go back to the ancient times. Archeological evidence of what was once flourishing civilizations (according to nationalist Bengali historians) are still to be seen. But this contentious claim has been thoroughly contested by other Historians especially the

colonial ones who thought that these settlements were merely trade outposts which were sparsely populated. Eaton (1990) points out that the Sundarbans was a sort of political and cultural frontier[2] for both the Delhi Sultanate (1204-1575) and the Bengal Sultanate (1575-1765). During these two periods efforts were put in for land reclamation in the Sundarbans which ultimately failed to yield any substantial results. Reclamation of land was properly initiated by the British after they secured the Diwani rights of 24 Parganas in Bengal in 1757 which basically meant they the right to collect revenue from the region. With the different land reclamation policies adopted by various collector generals there was a gradual transformation of the jungles of Sundarbans into rice and paddy growing fields which brought revenue into the colonial coffers. This land reclamation project also resulted in the creation a labor force which comprised of various tribes, scheduled castes: some indigenous and some immigrants. These tribes and scheduled castes were lured here with incentive of being able to own and till the land after clearing it.

The colonial land reclamation process in undivided Sundarbans can be divided into three distinct periods: 1770 to 1828, 1828 to 1878 and 1878 to 1915. This has been done on the basis of revenue maximization simply because it was the sole reason as to why the colonial rulers decided to embark upon the risky project of clearing the Sundarbans.

1.1 The Period of Constrained Revenue Maximization (1770-1828):

Collector General Claude Russell was the first person to consider the issue of reclamation of the Sundarbans in 1770. It must be mentioned that during that period that the Sundarbans was not a separate district and the three districts of 24 Parganas, Jessore and Backarganj exercised concurrent revenue, magisterial and civil jurisdiction in the area. Russell started the process of granting leases to individuals during 1770-1773 and made them rent free for a period of seven years after which the rent would increase progressively depending upon the quality of the land reclaimed (Sarkar, 2010). This was done with the obvious intention of incentivizing

[2] "Frontier" is described as the border between the settled and unsettled, the "civilized" (Turner, 1962/1996; p. 205) and the "wilderness" (Turner, 1962/1996; p. 4).

the process of reclamation of forest land in an area which was actually dangerous due to the presence of various wild animals and natural calamities like frequent cyclonic storms. This initiation of what would turn out to be a century old process was carried forward with great intent and determination by the Judge and Magistrate of Murli, Tilman Henckell (Chattopadhyaya,1999) who has been portrayed as a sort of "Colonial Paternalist" (Sarkar, 2010).

Henckell, like all early colonial administrators, was of the view that the forests belonged to the state and was outside the ambit of the local landlords settled beside them (Hunter, 1875). His plan was to lease out plots of forest land to individual cultivators who would clear the dense forests and start tilling the land and in this way a multitude of own-land cultivators would be created and they would be directly under the jurisdiction of the Colonial state (Pargiter, 1934). This plan was approved the then Governor General Warren Hastings in 1784, nearly a year after they were submitted (Pargiter, 1934) and Henckell started awarding land grants from 1785 (Sarkar, 2010). A total of 600,000 bighas was reclaimed in just seven years and the corresponding colonial revenue collection was pegged at 7.5 lakhs INR (Sarkar, 2010). But the going was not smooth at all. This can be very well understood from the fact that the amount of forest land being leased out fell progressively from 21,000 bighas in 1785 to just 1603 bighas in 1789 (Chattopadhyaya,1999). The main reason was the constant boundary disputes with the local zamindars who would more often than not trespass and try to forcibly take over plots of land granted to individual ryots. They were helped by the fact that there was no proper demarcation of Sundarbans in the official records and hence they could stake claim to those plots by fudging their own boundaries (O' Malley, 1914). It resulted in a situation where a large number of applications for land grants could not be acted upon (Sarkar, 2010) which in turn diminished the revenue collections of the state. During this period an interesting socioeconomic development took place as well with the birth of the "Talukdar" in the Sundarbans (Sarkar, 2010). This social group was the byproduct of the constant disputes between the colonial state and the local landlords. They were those individual cultivators who had both the guts and more importantly the resources to stand upto the trespassing and land grabbing zamindars. Those ryots

who couldn't left because it was untenable on their part to pay revenues for plots which they couldn't till due to the continuing legal disputes. In 1790 this land reclamation scheme was officially abandoned.

It must be mentioned that ever since the British got the Diwani rights in 24 Parganas, they had been trying very hard to come out with a systematic and effective way of revenue collection (Guha, 1982). After a period of nearly 40 years of administrative experimentation and public debate the Permanent Settlement Act (PSA) of Bengal was legislated in 1893 which stipulated that the zamindars would have to pay taxes in perpetuity on any landed property they possess and as long as they did so they held complete rights of alienation, mortgage, lease and inheritance over their estates; otherwise these estates would be confiscated by the colonial government and sold to interested candidates (Richards and Flint, 1990). This Act which the created a conservative (and exploitative) class of landlords or zamindars was not enacted in the Sundarbans as it fell under the category of wasteland (Chattopadhyay, 1998). As there were no clear boundaries between the landed estates and the Sundarbans, the zamindars of those estates started encroaching, clearing and claiming forest land which ultimately resulted in loss of revenue to the colonial rulers. This got them started with the project of clearly defining the boundary of Sundarbans, legislating rules and regulations to create the post of the Sundarbans Commissioner and also the right of the state on the Sundarbans. This process started in 1811 and finally ended in 1828 with the establishment of the Dampier-Hodges line[3] as the boundary between the Sundarbans and the mainland (under the PSA) and also the enactment of Regulation III of 1828 which firmly asserted that the Sundarbans was the property of the state.

During this period of 50 years, in a nutshell, the colonial imperative of revenue maximization was severely constrained by local level socioeconomic dynamics which manifested itself in two ways: first through the problems relating to boundary issues and secondly through the creation of the "Talukdar": an adding

[3] This boundary line was established after the entire forest area was divided into 236 blocks whose combined area was calculated to be around 1,70,24,20 acres (Pargiter, 1889).

of stratification to an already stratified frontier society[4]. Another aspect worth mentioning was the non-implementation of the PSA in the Sundarbans as it was "waste" land.

1.2 The Period of (relatively) Unconstrained Revenue Maximization I (1828-1878):

As mentioned before the PSA was not implemented in the Sundarbans. Instead the system of "Sundarbans Lots" was introduced. This was indeed a logical step after the segregation of the entire forest into blocks. Each block comprised of lots which were to be sold/auctioned off. This period of reclamation was much more dynamic in nature and yielded better results in terms of both the total amount of land reclaimed and the total amount of colonial revenue collected.[5] This dynamism is best portrayed by the fact the rules for land reclamation got changed three times in this period of 50 years. The main features of these rules are given in the table 3.1 in the next page.

It can be seen that initial lease period changed from perpetuity in 1829 to 99 years in 1853 and were ultimately abolished as the colonial authorities resorted to outright selling of lots to the highest bidder or in the case of existing grant holders an once and for all payment of revenue. Also the rate of revenue was also slashed considerably. The main reason for these shifts can be attributed to the fact that both the rate of land reclamation and the collection of revenue were below expected levels which can also be seen from the table. These changes resulted in dramatic improvement as far lots allotted and total land reclaimed were concerned. The number of grants allotted increased by nearly 168 % in a span of ten years from 1853 to 1863. One must however bear in mind that the number of lapses in grants due to inability to meet the minimum reclamation stipulations was around 19.4 % only which again was considerably lesser than in the previous period of 1829 rules. Although there is no data available for the above assertion it can be logically deduced by just looking at the other figures in the table.

[4] See Sarkar, 2010.

[5] Revenue collection increased because the sources of revenue were double now: forests and cultivable (reclaimed) land.

Table 1.1

Grant Rules / Categories	1829 Land Grant Rules	1853 Land Grant Rules	1863 Wasteland Rules
Period of Grants	perpetual	99 years	No Grants; outright selling of Lots
Maximum Revenue Rate	Rs. 1-8/ acre	6 annas/acre	No revenue in case of outright selling; once and for all payment of revenue by existing grant holders.
Rent Free Period	20 years	21-51 years[6]	0 years
Reclamation Stipulations	25% of land in 5 years.	25% of land in 10 years.	NA
No. of Grants Allotted	138	360	33
Total Area Reclaimed	490 sq km	1510 sq km	
Major type of Grant Holder	Europeans, Indian Landlords	Europeans and very rich Indian Landlords	Europeans and very rich Indian Landlords

Source: Hunter, 1875; Richards & Flint, 1990; Chattopadhyay, 1998; Sarkar, 2010

The average area reclaimed per year from 1829 to 1853 is 35 sq kilometers whereas the same for the period from 1853 to 1873 was 75.5 sq. kilometers i.e. an increase of 115 percent. This obviously means two things: one the number of grants given must have increased a lot which can be seen from the above table but it also came down drastically to just 33 after the 1863 rules were implemented. So in order for the average land reclaimed to have increased it is imperative that the proportion of lapses must have been lower from 1853 to 1873. This reduction in lapses can be directly attributed to the fact that the minimum stipulations for reclamation were relaxed to a large extent. Further since 1853 the rules were framed in such a way so as to favor European settlers and very rich Indian (from Undivided Bengal)

[6] Full payment of revenue was to be made only in the 51st year starting with a slow but progressive revenue collection from the 21st year (Chattopadhyay, 1998).

landlords.[7] One way in which it was done is that the area of estates being sold was increased so as to make it nearly out of bounds for smaller landlords. This is precisely why the number of lots allotted after 1863 fell so drastically. At this point the procedure of leasing out land was done away with; instead the 1863 Wasteland Rules promulgated that the lots be sold outright or an once and for all payment of revenue by existing grant holders. Thus the onerous job of collection of revenue was done away with. Further it was no longer the state's headache if the incumbent was unable to reclaim the land successfully.

Thus it can be seen that during this period the revenue flow to the government was streamlined by implementing the PSA in the reclaimed lands and applying the "Lots system" in the Sundarban jungles and all these was done by an extremely active colonial government which kept on changing the rules and regulations pertaining to reclamation of forest land in the Sundarbans. As a result of steady revenue flow from both the cultivated land and the jungles it can be argued that this period of 50 years was marked by more or less relatively unconstrained revenue maximization.

1.3 The Period of (relatively) Unconstrained Revenue Maximization II (1878-1915):

The third period of land reclamation turns out to be the most interesting and much more importantly most significant from the point of view of the inhabitants of Sundarbans. Following the failure of the ambitious scheme of F. Schiller and others to float a company for the specific purpose of land reclamation in the Sundarbans[8], the colonial authorities approached the problem of land reclamation with a two pronged strategy. The Rules of 1879 came out with two sets of land grants: one for the smaller landlords and the other for the rich landlords (Sarkar, 2010). There were quite naturally two different sets of regulations for both classes which are shown in table 3.2 below.

[7] Both Chattopadhyay (1998) and Sarkar (2010) use the term "capitalist" but the word " very rich landlord" seems to be more apt.

[8] See Chattopadhyay, 1998.

Table 1.2

Categories	Set of Rules: Rich Landlord	Set of Rules: Small Landlord
Grant Size	Upto 200 acres.	200 to 1650 acres
Lease period	30 years	40 years
Renewed Lease Period	30 years	30 years
Rent Free Period	2 years	10 years[9]
Maximum Revenue Rate	Rs. 12 to Rs. 24/ acre	Rs. 12 to Rs. 24/ acre
Reclamation Stipulations	Entire land must be brought under cultivation in 2 years.	1/8th of entire area must be brought under cultivation in 5 years.
Rent on Wood and Timber	None	None
Duty on Exported Products	Yes	Yes

Source: Hunter, 1875; Richards & Flint, 1990; Chattopadhyay, 1998; Sarkar, 2010

From the above table it can be seen quite clearly that the colonial authorities tried to bring about a synthesis of sorts as far as land reclamation was concerned by trying to incentivize it to both categories of landlords. This did bring some positive results as the amount of land grants made in this period of 25 years was around 3168 sq kilometers[10] out of which 2008 sq kilometers was reclaimed for cultivation which means that the average rate of reclamation per year was around 80 sq kilometers which was the highest rate in the entire reclamation history of Sundarbans. The chief reason for this high rate can be attributed to the fact that both small and big landlords were in action during this period. However there were some serious problems as well with two pronged reclamation strategy especially so in the case of the big landlords. This scheme provided enough leeway for land jobbers and speculators to exploit the arbitrage in the land market so created[11]. Moreover the issue of rackrenting also emerged wherein the original grant holder would sublet his land to smaller lessees (in order to recover their investment expenditure rather quickly) and these lessees would in turn again sublet them and this process would go on till the land was actually cultivated by small peasants paying rack rents

[9] 1/8th of the entire grant was rent free in perpetuity (Chattopadhyay, 1998)
[10] See Richard and Flint, 1990.
[11] See Chattopadhyay (1998).

(Chattopadhyay 1998). As a result in 1904 the colonial authorities decided to pursue further reclamation of land only via the Ryotwari Settlement Act. But the initiation of Ryotwari Settlements was an astounding success in Backarganj and an abject failure in 24 Parganas (Richards and Flint, 1990). The failure of Ryotwari settlement in 24 Parganas lead to the resumption of 1879 reclamation rules (albeit with slight modifications) in 24 Parganas in 1909 (Sarkar, 2010). This move was criticized by people within the colonial administration and in 1915, after much deliberation, the colonial government decided to proceed with further settlement in the Sundarbans only via the Ryotwari system.

This third phase which saw a minimum of 2300 sq km being reclaimed and cultivated in the Sundarbans was easily the best phase for the colonial rulers in terms of revenue generation. Now they had three sources of revenue namely reclaimed cultivable lands, forest lots and tariff on exports of forest produce. This phase also witnessed a flurry of regulationary and law making activities on the part of the colonial authorities as they first introduced both a two tiered Lots system, then introduced the Ryotwari system in its favour and then had different settlement systems in different districts and finally culminated with the Ryotwari system in the whole of Sundarbans. This had a dynamic impact on both the ecology and the socio-economy of Sundarbans.

1.4 The Socioeconomic Force of Forest Conservation:

So far the focus regarding land reclamation has been on facts and figures at the aggregate level i.e. about undivided Sundarbans on the whole. However looking at aggregate figures of reclamation does not give us the entire picture. At the disaggregate level in terms of district interesting patterns emerge. The three districts of Sundarbans namely Khulna, Backarganj and 24 Parganas show varying levels of reclamation and cultivation. Of these three districts land reclamation was most successful in Backarganj in Bangladesh and was the worst in Khulna while 24 Parganas fared moderately (Richard and Flint, 1990). By 1915 jungles in Backarganj had been cleared nearly completely while in Khulna there was hardly any clearance. As far as 24 Parganas was concerned, only 40% of it had been reclaimed (Sarkar,

2010). One main reason as to why Backarganj performed so well was purely geographical in the sense that the positioning of the tectonic plates were such that there was a tilt towards the eastern part of Sundarbans from the western part. As a result most of the freshwater flowed from the western part where 24 Parganas is located to the eastern part where Backarganj and Khulna are located which made the water less saline and agriculture more tenable in these parts (Chattopadhyay, 1998). Moreover as land in Backarganj was higher and better drained it meant that embankments of moderate size were only required as compared to 24 Parganas where steep embankments were the order of the day due to lower land levels and damaging tidal action (Richards and Flint, 1998). But this doesn't give any explanation as to why there was hardly any reclamation in Khulna and can at best be one major factor in case of 24 Parganas. There was indeed another major force at work: the socioeconomic force of forest conservation.

The process had actually started back in 1869 when the Forest Department lobbied for a tax on timber and other NTFPs (Non Timber Forest Produce) which were being exported out of Sundarbans but to no avail(Ascoli, 1921). However in 1874 the scenario changed drastically as the duo of Richard Temple, the Lieutenant Governor of Bengal and William Schlich, the Conservator of Forests were of the view that conservation of the forest was as important as reclaiming them for cultivation because the entire of Southern Bengal was dependent on the Sundarbans for fuel and timber (Richards and Flint, 1990). Between 1875 and 1876 a total area of 4094 sq km of Khulna was converted into the Sundarbans Forest Division. Then came the Forest Act of 1878 and with it the concepts of "reserved" and "protected" forests which were applied in the Sundarbans too. In Khulna the entire area under the forest Department was converted into reserved forests. Table 3.3 gives us a better picture:

Table 1.3

District	**Class of Forest**	**Area in Square Kilometers**		
		1890	**1904**	**1938**
Backarganj	Protected	0	0	50

Khulna	Reserved	4095	5390	6000
24 Parganas	Protected	4480	4500	4500

Source: Richard and Flint, 1990

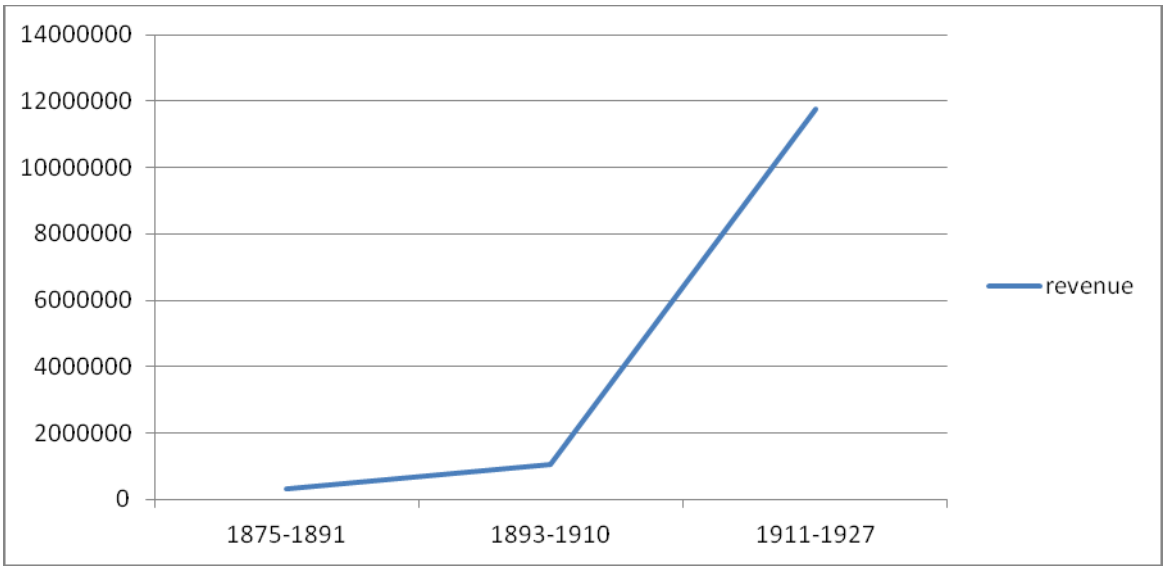
From the above table it can be seen that that in Khulna the area of reserved forests increased over time at a rate of 46.52 percent between 1890 and 1938. In 1938 nearly 86 percent of the total area of Khulna was under the Reserved Forests which explains quite easily as to why there was hardly any land reclamation here for cultivation since 1870s. As far as 24 Parganas the area of protected forests remained more or less the same throughout the entire period. Backarganj which had almost been completely reclaimed for cultivation naturally had a very low protected forest area and no reserved forests.

It is important to understand that this creation of reserved and protected forests in Sundarbans brought about a huge amount of revenue for the colonial authorities as they managed a steady profit by selling of forest produce. The products had a huge market in Bengal most notably in Kolkata (Chattopadhyay, 1998). This can easily be understood from Graph 3.1 in the next page which shows the gross revenues of the Forest Department[12] in three time periods: 1875-1891, 1893-1910[13] and 1911-1927. It can be seen that the increase in gross revenues was phenomenal in the last period. The gross revenue earned in the last period was a staggering Rs 1, 17, 69, 007 while it was an impressive Rs. 10, 59, 754 in the preceding period. The first 17 years of forest conservation in the Sundarbans brought gross revenues of Rs. 3, 03, 498. The growth rate of forest revenue was an impressive 249 percent in the second period and an astounding 1010 percent in the third period.

Graph 1.1

[12] Here it implies revenue realized by selling different types of forest produce.

[13] The year 1892 has been intentionally left out as the author is not sure about the authenticity of the data.

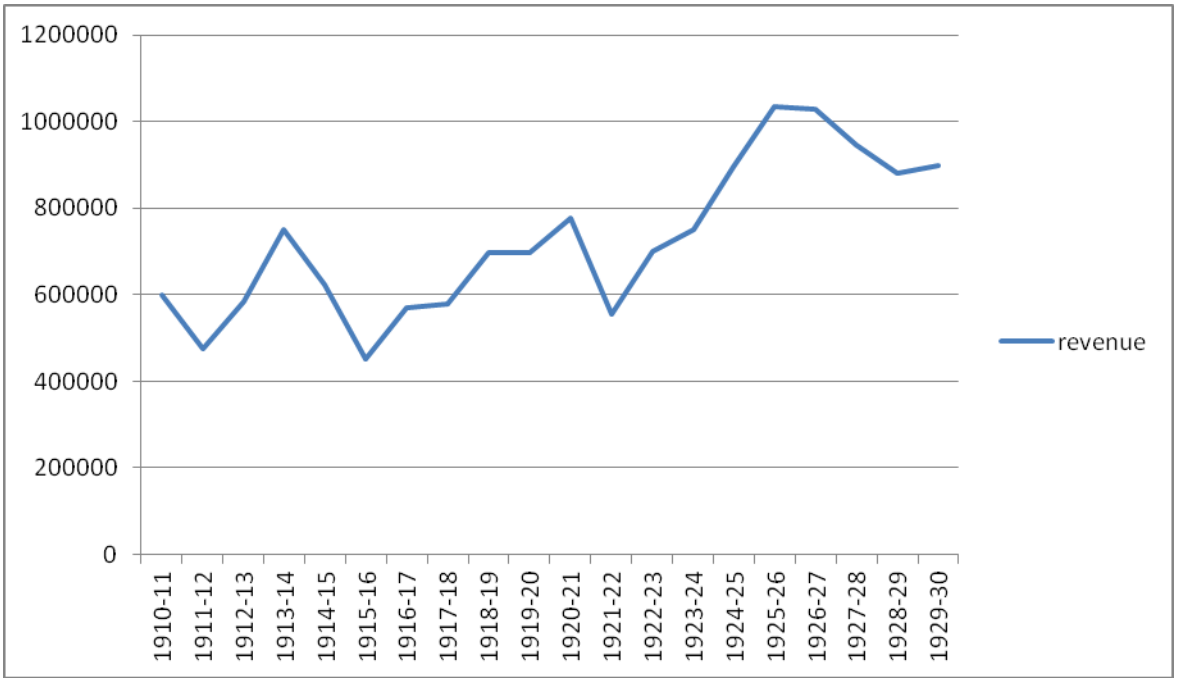


Source: Richards and Flint, 1990; Chattopadhyay, 1998

This gives a clear impression of not only the correctness of the revenue logic behind the movement of forest conservation and quite clearly this must have been the greater source of revenue from Sundarbans when compared with that of land revenue at least in the third period.

Looking at Gross Revenues from the forest Department at a more disaggregated level shows some fluctuations but the overall picture is one of tremendously accelerating revenue earnings as can be seen from Graph 3.2. This graph shows the yearly gross revenues for the period 1910-1911 to 1929-1930. The average yearly gross revenue during this period was Rs. 724577.60. The highest gross revenue was collected in the year 1925-26 at Rs. 10, 33, 737 and the lowest was collected in 1915-16 at Rs. 4, 50, 763. The growth rate of gross revenues from the forest department in this period was nearly 50 percent.

Graph 1.2



Source: Chattopadhyay, 1998.

So overall this decision to conserve certain part of Sundarbans paid rich dividends for the colonial authorities in terms of revenue generation for the state. As a result after 1915 not much land reclamation took place in the Sundarbans in Bangladesh. The case however was different in the 24 Parganas which is in India where extensive reclamation took place till 1939 as it was a protected forest and not reserved and hence the colonial authorities could clear it after obtaining necessary clearances from the Forest Department. After Indian independence a few pockets were also reclaimed in this area primarily for refugee rehabilitation in the period 1951-71 (Mukherjee, 1983). Post 1971 there has been no reclamation whatsoever in the Indian Sundarbans.

The Forest Act of 1927 which established monopoly control of the Forest Department over most of the forest lands save the forests owned by the zamindars remained the same till early 1970s in post independent India after which a series of acts were passed for wildlife protection and management of forest (Bhattacharya, 2005). Before 1980 management in Protected Areas basically consisted of measures related to security and tourism and the issue of forest people's welfare was driven into the background. Innovative measures like 'social forestry' that was taken up in

the 1980s all over India met its doomed fate rather quickly in the Sundarbans as once again there was not much participation from the local communities of Sundarbans (Bhattacharya, 2005). The National Forest Policy, 1988 finally stressed the need for reorientation of forest use policy to convert the people within and around the forest into the main stakeholders. Finally, in 1990 following a Government of India order, provision was created for Joint Forest Management (JFM) through the creation of Forest Protection Committees (FPCs). Further a Government order in June 1996, resolutions for formation of Eco-Development Committees (EDCs) in and around national park and wildlife sanctuaries was undertaken. FPCs are for the people living in the fringe areas of the forest and EDCs are for the people living within the wildlife areas. This has turned out to be a considerable success in West Bengal in general and the Sundarbans in particular.[14]

3.5 Development Paradigms and "Waste":

Coming to the question of development paradigms operating in the Sundarbans during the colonial era one can see that there were two distinct paradigms which had differing effects on both the ecosystem and the socioeconomy of Sundarbans. These two paradigms brought out two different interpretations of "waste" which in turn was used to justify the application of the development process in the two periods (Whitehead, 2010).

For nearly a century till 1870s the dominant development paradigm was to clear the forests, establish secure tenures and replace them with paddy fields which would bring in a steady supply of revenue to the colonial coffers. This meant the same fate awaited the dense forest of Sundarbans for that period. However being dense mangrove forests they were uninhabited and hence to clear these forests the colonial rulers had to first create a labor force. Bulk of the small farmers, share croppers and landless laborers migrated from the drought and famine prone areas of the eastern plateau region. They came from Jhargram area, western Medinipur,

[14] See the Sundarban Biosphere website.

Bankura, Singhbhum and Santal Parganas. Most of the immigrants were tribal people, such as, the Santals, Mundas, Oraons, Kurmis and Koras.[15] There were also some depressed Hindu caste groups comprising mainly of Paundra Kshatriyas and Namasudras who are believed to be the original settlers on the fringes of Sundarbans (Sarkar, 2010). During this century of reclamation the colonial idea was to convert the "waste" lands of Sundarbans into paddy fields and then bring these paddy fields under a structured revenue regime which would ensure a continuous flow of colonial revenue. However socioeconomic milieu changed after the early 1870s as the development paradigm of forest conservation gained traction gradually from the mid 1860s and by the late 1870s had replaced the previous development paradigm as the dominant one. Now the development focus shifted to conserving the forests so that it could provide a sustainable supply of timber and NTFPs which would in turn be commercially exploited for generation of revenue. It is interesting to note that what was considered as "waste" land for over a century got radically transformed into its binary opposite "value" as the "waste" jungles which were to be cleared at any cost suddenly became "valuable" jungles which were to be conserved and commercially exploited. It can be argued that this "syngamy" of "waste" and "value'" originates from the discourse of modernism in 17th century Europe which conceptualized land as the ultimate source of wealth, private property as the instrument which would "unlock" the "value" of both land and labor and finally the "capitalist" as the agent of socioeconomic emancipation.[16] This was a not so obvious but classic example of "utopia and wasteland turn out to be the same place"[17].

It must be said that the concept of 'waste' originated in England the late 13th century and its specific purpose was to curb the rights to use (of land) enjoyed by tenants (Gidwani, 1992). This concept that underwent subtle but important changes in meaning over time: pre-Enlightenment "waste" referred to ecological spaces which were subject to lower or no feudal dues whereas post-Enlightenment notion of "waste" was a mix of Lockean, Physiocratic and Benthamian doctrines and was

[15] See Chattopadhyay, 1987
[16] See Gidwani, 1992
[17] See Brantlinger and Higgins, 2005

ultimately referred to as "neglected utility" i.e. something which can be improved upon using the discourse of modernism.[18] It can be argued that the interpretation of "waste" had such innate fluidity that it not only represented different notions in different development paradigms, rather it had different layers of meaning operating at different levels of the world economy vis-à-vis the Sundarbans.

At the global level "waste" represented the "uncolonized" lands whose native inhabitants didn't possess the requisite skill and knowledge alongwith the industriousness to "exploit" the land (and other natural resources) to further their own economic development.[19] In otherwise words, the interpretation of "waste" at the global level provided the rationale, ideology and impetus for colonial conquest as the colonists had what it takes to realize the locked in "value" of lands. At the national/state level, in India's case, the interpretation of "waste" when it arrived with the British in 1757 (in Bengal) was in the context of "waste lands" which primarily meant a category in the land revenue records not contributing to government revenue through crop cultivation (Shiva, 1986). This provided the logical basis for clearing of forests for nearly a century in the Bengal initially and then the whole of India. The value loaded term seamlessly transcended from 'waste' as simply a category of land- use to 'waste' as a representation of the cultural inferiority and physical infirmity of Indians (Gidwani, 1992). However at this period of time not all Indians were "waste": the colonist hoped to create a new breed of "efficient landlords" via the PSA who would extract maximum "value" from the land. When this utopia didn't work out, the zamindars became "idle" and possessor of "indolent" habits which created the fetters in the path of maximum revenue generation.[20] Thus the focus of colonial improvement shifted to the "ryot" who was now portrayed as "the individual cultivator oppressed [sic] for centuries (not by the colonists of course but by the "idle" and indolent" Indian landlords) "fervently awaiting socioeconomic emancipation at the hands of the value extracting (and realizing) benevolent colonial rulers and thereafter would unleash his innate

[18] See Cooper, 2011.
[19] Adas, 1989
[20] See Gidwani, 1992 and Whitehead, 2010

innovative capacities with the help of private property rights and commercialization gifted to him by the colonial authorities.[21] However with the advent of the second development paradigm the forces of forest conservation gained much more prominence throughout India and a new "interpretation" of waste was born to justify/rationalize this particular development project. This interpretation as Whitehead (2010) points out categorized the scheduled castes as the ones inhabiting a "structured semi-civilized agrarian society" whereas the tribes were "savages". This was nothing but a political project to strip the ancient rights of the tribes to the forests which suddenly had become a source of unimaginable value to the colonial rulers and not "waste" lands.[22] Thus in a nutshell the expansion of the railways in India alongwith the demand for high quality teak from the Imperial Navy resulted in the ushering of a different development paradigm which accorded greater importance to conservation of forests rather than reclaiming them for cultivation. Corresponding to this the interpretation "waste" transcended from the forest itself to the forest dwellers who were the new "waste" from whom value (forest) had to be reclaimed. If one takes into consideration the local level as well we have what can be termed as what Gidwani (1992) calls "a catalogue of negatives". In more precise terms, "waste" has both ecological as well as socioeconomic interpretations at three levels namely global, national/state and local.

The local level (in this case Sundarbans) interpretation of waste is even more complex. Here after 1870s both the development paradigms were in application albeit at varying degrees of effectiveness. However since there were no indigenous people of the forest the application of socioeconomic interpretation of "waste" was in a way much more legitimized than in other parts of the country. But the similar story of gradual stripping of rights to access to the forest and forest products was carried out in the Sundarbans as well.[23] Thus in a nutshell after a century of portraying the Sundarbans as "waste" it turned valuable and conservation kicked in with great force especially in Backarganj. Thus unlike the forests inhabited by tribes

[21] See Chaturvedi, 2007.
[22] See Guha 2001.
[23] See Santhakumar et al, 2005.

in other regions, where the conflict was between utilization of an existing habitat-cum-common- property resource and historically novel statist claims to conservation and management, the remaining (and shrinking) mangrove forests became an object of conflict between social forces seeking an extension of livelihoods on the one hand and a state that sought to limit that process on the other (Richards and Flint, 1990). Thus ironically the very group of people who were assembled in the Sundarbans to convert the "waste" jungles into "value" producing paddy fields became "waste themselves as the development paradigm changed.

But there is indeed a final twist in the narrative. If one were to closely analyse the labor force of Sundarbans during the first two phases of land reclamation it can be clearly seen that the labor force comprised of a majority of scheduled castes and a few groups of immigrant scheduled tribes. Among the scheduled castes the majority were Paundra Kshatriyas and Namasudras both of whom are the lowest of the low in the Hindu caste hierarchy.[24] In other word these were the people located at the margin of their respective societies. In other words they were "waste" as well in the socioeconomic context of their regional Indian society. Thus in a way the story of land reclamation in Sundarbans is the story of a labor force of "waste (in Indian context)" people who cleared "waste" lands of Sundarbans so that the colonial rulers could unlock, extract and realize the value of land via the instrument of private property. However this labor force of "Indian waste" got converted into "waste" in the socioeconomic context of the dominant imperial paradigm and was further reduced to the margin. This exploitation in terms of stripping of rights of forest access affected their livelihood opportunities quite drastically.

Ironically the laws which allowed for the marginalization of the "already marginalized" were in vogue even after independence and it was only after the initiation of the Joint Forest Management paradigm in the Sundarbans that theirvoices were heard to a certain extent. But still a lot needs to be done especially

[24] See Risley (1891)

with respect to caste and gender exploitation in the Joint Forest Management paradigm.[25]

1.6 Conclusion:

An ecological system creates both actual and perceived barriers via social, political, and economic dynamics to sustainable development to which human societies adapt in either planned or unplanned ways, or struggle with. In all cases, the capacities of small communities to conserve their local ecosystems for sustainable development become a bounded function of changes in population level. Unless the ecology can accommodate such population level changes, pressure on local norms of conservation increase gradually. As we move from conservation of usable resources to preservation of an ecosystem, the boundary conditions become even more stringent and if the ecosystem under consideration is fragile then the stringent boundary conditions can almost choke off any livelihood options deemed sustainable by both local and global authorities. This can lead to adverse socioeconomic and political results if the boundary conditions are not violated but if they are violated, which is indeed the case in most times, then there are adverse effects on the ecosystem itself. However the story doesn't end here. If the boundary conditions are respected by both the local and the global community then positive feedback loops are created but whether these positive feedbacks are appropriated by the local or the global community remains eminently debatable. Logically though these positive feedbacks are more beneficial to the global community simply because they don't have to make socioeconomic and sometimes political sacrifices of the same magnitude as that of the local community. On the other hand if the boundary conditions are violated (which used to be the case more often than not until the last two decades or so) adverse ecological effects are generated which in turn create a negative feedback loop which now hits back at the economy itself and ironically affects the socio-politico-economy of the local community at a much greater force. One must add that repercussions are also felt at the global level as well but not of the same magnitude when looked at isolation. Rather in case of the global community,

[25] See Santhakumar et al, 2005.

the combined effects of all such "boundary violations" results in a negative feedback loop which in turn affects the global economy and the global ecosystem.

This problem rears its ugly head all the more if the ecosystem in consideration is a fragile one. The fragility of the ecology of a region has a direct impact on its economy and vice versa. The reason as to why the economies of ecologically fragile regions are important is the fact that these regions which have a unique history, nature and landscape are more often than not home to a significant population of humans who in turn have deep social, cultural and economic ties with the complex and fragile ecosystems. It must be added that these significant population of humans are generally worse off socioeconomically when compared to their counterparts residing in relatively lesser fragile ecosystems.[26] Though the poor are often seen as the greatest threat to fragile ecosystems, they are more importantly the first victims of ecosystem degradation. The contradiction between livelihoods and preservation remains as a function of market dynamics in the existing context of skewed distribution of assets and extreme pauperization[27]. Though some environmentally progressive change is possible within that configuration, assuming significant alteration of political dynamics, substantial progress would require quite fundamental rethinking of the relative values of growth per se, social justice, and political democracy in the context of environmental crisis (Herring, 1991).

[26] Constanza (1989) posits that all ecosystems are complex and fragile in nature.
[27] See Herring, 1991.