

**Climate Migrants, Resource Scarcity and the Sustainability Issue: The Case of Jungle  
Mahals Region**

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**Abstract**

The present paper seeks to chronicle historically the migration process in the Jungle Mahals as a corollary of environmental change. Environmental migration is a “hot topic” now a day. There are hundreds of scholarly articles and at least a few empirical studies. The discourse, however, is dominated by the social sciences; the humanities have so far been rather silent. The relationship between migration and the environment can be explored in several ways. One perspective involves research on the effects of environmental conditions on migration (Douglas and Axinn 2006). Another way of studying the relationship between environment and migration is to analyze the effects of migration on the environment of the recipient region (Barbieri and Carr 2005; Fuentealba Durand and Bravo Avila 2006; Izazola 2006). A third research framework involves examining the environmental consequences of migration for source regions - for instance, those (often rural) areas that are losing population (Patiflo-Pascumal 2003) or receiving remittances from emigrants. Some integrative studies include two or more of these approaches.

## **Introduction:**

The study seeks to chronicle historically the migration process in the Jungle Mahals region as a corollary of environmental and climatic changes. Environmental migration or climate migrants recently became "hot topic". Though there are some empirical studies hundreds of scholarly articles are produced. In social sciences, the discourse is very well known and popular while it has been least discussed by the scholars of humanities. From different approaches, the relationship between migration, environment and climate change can be studied. The first way of enquiry traces out the effects of environmental or climatic conditions on migration. The second approach involves exploring the relationship between migration and climatic and environmental change and the impact of migration on the environment of the region where it receives the people. The third way of analysis focus on the environmental and climatic impact of migration on the areas from where people left. This study will follow an integrative approach involving the first and third ways of enquiry.

The 'maximalist' scholars hold the view that there is a direct link between migration and the environment. These 'maximalist' argue that environmental phenomenon that is linked with climate change, such as droughts, floods, desertification, etc., are responsible for the massive displacement of people or environmental migration. The scholars who are interested to view migration as a complex phenomenon and interpreting it in terms of social, economic, military, and cultural factors, criticized the straightforward view of environmental migration. Recently, the debate revolves around rejecting the discourse on climate and environment-induced migration and neo-deterministic accounts of environmental mobilities. Locating themselves in the middle position, most scholars look at migration not only as environment induced but accepted the other factors also (Lübken, 2019:2).

Environmental migration has been least discussed from a historical context (Piguët, 2013; Armiero and Tucker, 2017; Lübken, 2012a). The discipline of history provides an empirical account of the analysis of what way human societies cope with environmental change. From the historical analysis, we can detect the pattern of vulnerability and resilience of *longue durée* environmental migration and displacement. This approach also contests the notion that

environmental migration and displacement are mainly a problem of the Global South (Uwe Lübken 2019: 4).

Inappropriate agrarian intervention, the introduction of monoculture and commercial forestry caused massive forest degradation which decreased soil moisture as well as rainfall and temperature increase. The region became drought-prone and resource scarcity appeared as a result of the depletion of biological resources. In this condition, people were forced to leave another region in search of work and food. Therefore, this paper will engage in explaining the unsustainable environmental policy which led to environmental degradation and consequently the creation of climate migrants.

### **Agrarian Intervention and Deforestation**

From the late 18th century onwards, colonial intervention engendered a process of transformation in Manbhum, which led to major ecological degradation. In the late eighteenth and the first half of the nineteenth century, the forests were considered an obstacle to agriculture so 'the whole policy was to extend agriculture.' (Stebbing 1922: 62-64) The colonial policy of extending cultivable land at the expense of forest resulted in large-scale deforestation. They also exterminated the dangerous predators (Damodaran 2002: 142-144). H. Coupland mentions the paying of 'rewards ... for the destruction of three tigers and seventy-nine leopards' (Coupland: 21). Due to the growing demand of the railway system, which required immense quantities of logs of *sal* (*Shorea robusta* Gaertn. F.[ *Dipterocar pacea*]) to make sleepers for the railway, the pressure was placed on the forest of Jungle Mahals (Proffenburger 1998:137). By the first decade of the twentieth century, Purulia was connected with Asansol, Sini, Chakradharpur, Kharagpur, Gomo, Jharia and Katras. In 1908 narrow gauge rail line of 2'-6' was constructed linking Purulia with Ranchi. Coupland reported: 'this line affords an outlet for the grain and jungle products of the western portion of the district'(Coupland:185). Timbers were also required for shipbuilding.<sup>1</sup> The opening of the main line of the Bengal Nagpur Railway through Kharagpur and

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<sup>1</sup> West Bengal State Archives, Revenue Dept., File No.- 95/7/19, Govt. of Bengal, Forest Branch, May, 1919, Para-7-9.

Jhargram(1898) had a profound impact on the forests of the region. The introduction of railways made areas in the interior more accessible. As the forest products could be transported to distant places by railway, there was a sudden increase in the supply of these products (RoyChoudhury1966:133). Pallavi Das rightly notes, “As railway construction and operation expanded to facilitate increased trade, the railways’ timber demand on the forests increased causing deforestation. The railways depended directly on the forests for their sleeper and fuel supply” (Das 2005: 56).

Deforestation was carried out by two groups of people. a) Indigenous: the *zamindar* (landowner) recruited indigenous people on different forms of contract, notably *nayabadi* (new tillage) and *junglebary* (land tenures).<sup>2</sup> b) Foreigners: the colonial ruler employed European companies to collect wood, such as the Midnapur Zamindari Company. Deforestation opened up crop fields for cultivation as well as valuable timber. From 1883 onward, the Midnapur Zamindari Company took on the lease of forest land from the *zamindars* and sold the timber for shipbuilding and the production of railway sleepers.<sup>3</sup> In the wake of agrarian intervention and forest destruction, came environmental deterioration. In 1855, Henry Ricketts reported the total absence of trees in Purulia town.<sup>4</sup> In 1863, Major J. Sherwill and Captain Donald McDonald described the landscape as ‘hilly, stony and broken’, and added: ‘The soil is poor.’<sup>5</sup> In 1863, as G. E. Gastrell observes the environmental degradation of Bankura district, ‘What, about a half-century ago, was thick jungle and waving plains of grass, is now almost a sterile and barren waste. Whenever the land was fit for cultivation, it was ploughed up. The successive rains have washed away the soil of

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<sup>2</sup> For *jungleburi*, Hunter, *A Statistical Account of Bengal*, p-332 and for *nayabadi* see Manbhum District Records (hereafter MDR), Circle Note of Attestation Camp No. II, p. 51.

<sup>3</sup> MDR, Circle Note of Attestation Camp No. II Barabhum, Session -1904-1910 by Mr. Radhakanta Ghosh, Assistant Settlement Officer, p. 51.

<sup>4</sup> H Ricketts, ‘Reports on the Agency Administration’, pp. 2-3.

<sup>5</sup> Note of the Map of *pargana* Pandra, Sherghor, Mahesh and Chatna, Main Circuit No. 5& 9, 1862-63. The Survey was conducted by Major J.L. Sherwill and Captain Donald McDonald.

uplands, and had left only a half layer of kunkury earth on which nothing will grow.<sup>6</sup> Vinita Damodaran argues, ‘in the case of Chotanagpur the story of environmental degradation can not be so easily challenged.’ (Damodaran 2002:143).

There was a dramatic change in the land use pattern as a result of the agrarian intervention and forest clearance in the districts of South West Bengal. In Manbhum, agrarian expansion was extended up to the far remote and hilly region of Bagmundi (Mahato 2011). In 1907-08, 58% and 22% of the area of Birbhum district were net crop area and current fallow respectively while 12% area was not available for cultivation (Fig. 1) (O’Malley 1910: 56) . In 1924-32, 65% area was under cultivated area and 17 % area was with fallows. But 14% area was consisted of not available for cultivation (Fig. 2). In 1946-47, 65% of land and 25% of land were under cultivation and with fallow category respectively while 10% area consisted of not cultivated land (Fig. 3). In 1958-59, 74% area and 6% area were cultivated and with fallow category while 4% area and 16% area were belonged to the category of other cultivated land including forest and not cultivated category land respectively (Fig.4). The district Birbhum consisted of only 3% land area under forest cover in 1964 (Sarkar 1966: 155-59).

### **Impact on land relations**

As we have seen above, the British “agrarian conquest” led to large-scale deforestation (Damodaran 2005: 120). According to Vinita Damodaran, it had ‘a greater impact in the context of increasing landlordism in rural Chotanagpur’. Damodaran argues that colonial authority was gradually superimposed on the feudal authority of the Rajas. The British recognized the tribal chiefs as landowners (*zamindars*), imposed a new taxation system (including rent to be paid in cash, excise and other levies), set up markets and developed trade (Damodaran 1998: 864). Thus, the British agrarian invasion led to the spread of different kinds of land tenure which extended

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<sup>6</sup> Lt.- Col. G. E. Gastrell, ‘Report on the District of Bankura’, Quoted in O’Malley, Bengal District Gazetteers: Birbhum, p.5.

horizontal stratification (Mahapatra 1991:22). Chiefs or Rajas of Manbhum were transformed into *zamindars*, and new intermediaries 'emerged from among the holders of jungle clearing tenures in the nineteenth century' (Mahapatra 1991: 22). Sub-infeudation also occurred during this period.

### **Nature of environmental degradation**

In the wake of the agrarian invasion and forest destruction came environmental deterioration. In 1855, Henry Ricketts reported the total absence of trees in Purulia town.<sup>7</sup> In 1863, Major J. Sherwill and Captain Donald McDonald described the landscape as 'hilly, stony and broken', and added: 'The soil is poor.'<sup>8</sup> According to Vinita Damodaran, 'in the case of Chotanagpur the story of environmental degradation cannot be so easily challenged'(Damodaran 2002:143). This process can be viewed from different perspectives. Deforestation caused huge amounts of soil to be eroded by rainwater and deposited onto the bed of the river, reducing its depth (Sarkar 1966: 155-159). The shallowness of the river increased the turbidity of its waters, making them contaminated. This, in turn, affected the health of the forest dweller Adivasis, in particular the Savars and Birhors.

**Erosion of jungle rights:** The Adivasis lost their traditional rights on forestland by the end of the 19th century. The landlords started to extract illegal jungle fees (Damodaran1998:869). Due to increasing debt bondage, the peasants and even the *mukaridar* were obliged to mortgage land and tracts of jungle. In the fiscal district (*pargana*) of Barabhum, the Watson Company started to collect rents from *raiya*s for *mohua* and *lac* trees. As Radhakanta Ghosh, Assistant Settlement Officer of Manbhum informs us: 'Before that these rents were unknown in the *pargana*'. The *laha* (lac) producing trees were in the *baris* (uplands near the house) of the *raiya*s and had been planted or were being grown by the *raiya*s. It was most inequitable to extract these rents. The

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<sup>7</sup> Ricketts, H. 'Reports on the Agency Administration', in *Selection from the Records of Bengal Government*, Vol. 20, Calcutta, 1855, pp. 2-3.

<sup>8</sup> Note of the Map of *pargana* Pandra, Shergarh, Mahesh and Chatna, Main Circuit No. 5& 9, 1862-63. The Survey was conducted by Major J.L. Sherwill and Captain Donald McDonald.

Company also introduced an equally unjustified 'jungle cess'.<sup>9</sup> The traditional jungle rights of the *raiyats* and *ghatwals* (local constables) were thus encroached upon.

**Debt bondage:** Cases of bondage by debt began to spread rapidly in Chotanagpur. Peasants were forced to borrow money from the landlord or money-lender to meet their daily needs (Damodaran 2002:146). The condition of the *ghatwals* of Barabhum was deplorable. In the words of an Attestation Officer: 'If these men are deprived of their *raiyati* rights over their lands and are made liable to ejection by the new coming Ghatwal their case will be very hard, as in these days of hard competition for lands these men will no longer find a place for them in that country and will be forced to migrate to *poorob desh* [the tea plantations in Assam]'.<sup>10</sup>

### Resource Scarcity and Chronic Famine

With the deterioration of forest ecosystem, the indigenous people were deprived of various food supplements. The impact on the primitive hunting and gathering Adivasis was severe as there was a paucity of food. In 1880, Valentine Ball pointed out that 'the reservation of forest tracts, which prohibits the inhabitants from taking a blade of grass from within the boundaries, has resulted in the people being cut off from these food sources throughout wide areas, and many have been forced to migrate in consequence to other regions, not yet included in reserves, where they can continue to supplement their scanty cultivation with the productions afforded to them by nature'(Ball 1880:695). The remarkable pressure eventually drove forest dwellers to involve in crime for collecting their staple food. Having become ecological refugees, they no longer had the potential to survive drought and famine. After the 1860s, famines occurred in the years 1874, 1892, 1897, 1904-05, and 1906-07. Since the beginning of the scarcity became a common phenomenon, as reflected not only in colonial reports of the period but also in indigenous songs( Dey 2005: 35-36):

*Baro mas akal/ tero mas sakal/ O Raja ! Ki khayen kataba jiban? Panchet pahare  
ache ek gachha bel/ sei khayen katale jiban.*

[Scarcity for twelve months / It seems like thirteen. / Oh Raja!

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<sup>9</sup> MDR, Circle Note of Attestation Camp No. II, Barabhum, Session -1904-1910 by Mr. Radhakanta Ghosh, Assistant Settlement Officer, p.121.

<sup>10</sup> MDR, Circle Note of Attestation Camp, Manbazar, Session, 1920-21,p.153.

How are we going to get food for subsistence? / There was a *bel* [wood apple] tree loaded with fruits on Panchet hill. / We once could subsist on its fruit].

Hunter noted: 'General droughts have occurred in Manbhum district within the memory of the present generation in 1851 and 1865. The latter of these was the most severe' (Hunter 1887:339). Chronic occurrences of famines in Manbhum and Bankura had important connections with anthropogenic environmental change in the colonial and post-colonial period.

### **Migration in Colonial period:**

Large-scale deforestation caused massive soil erosion, reducing soil fertility and causing the siltation of ponds. Denudation and cultivation of short-life annual crops in the region increased dryness and decreased moisture in air and soil, causing a drop in rainfall and ultimately inviting aridity and desertification. The Forest Department and landlords usurped the traditional forest rights of the Adivasis. Thus, the sustainable economy of the tribal people was permanently destabilised and the districts such as Manbhum and Bankura became drought-prone. When crops failed, scarcity was the inevitable outcome. Due to the denudation of forests, people were also deprived of forest products for food. When the Adivasis tried to depend wholly on single crops they failed. Their agrarian misery, the result of an inappropriate agrarian intervention, thus deepened with time. In search of food and alternative livelihood, people were forced to migrate. Bradley Birt notes in 1910, 'Manbhum is the land of the cultivators, collie, and the Bhumij Kol – the cultivator pursuing the dull round of daily life and fighting with each recurring season the battle of existence' (Badley Birt 1910: 159). He also writes that many people migrated to the tea gardens of Assam and Bengal in 'hope of better wages, or by difficulties or scarcity at home, or perhaps the victims of the threats, promises, or persuasions of a recruiter who was not to be denied'. If the paddy season was bad, then the fear of scarcity at home was one of the most powerful inducements to seek well-paid labourer elsewhere. Scarcity at home was one of the variable for the fluctuation in migration. In the year 1900, the year of scarcity, the total number of migrants from this district was 65,190 but in the normal year of 1901 total number of migrants was 30,777(Badley Birt 1910: 177). The contemporary periodical, *Mukti*, reports that the condition of the villages kept deteriorating continually with the passing of the days. Poor people,



under starved conditions, migrated elsewhere every year.<sup>11</sup> Chotare Desmaji wrote: ‘*Dekoko then nalhalko calak kana... ona iate Jom bante onte note rengec jalate onte noteko chir chaturak kana*’.<sup>12</sup> (There is no food at home; people have to go in search of a job... due to excessive impoverishment people are compelled to migrate). On the verge of starvation, the construction of railway networks and roads opened a way out of the distressing situation (Sinha 2005: 105). Thus, Purulia became the ‘best known gateway of Chotanagpur for the travellers, the push-push and the coolie’(Badley Birt 1910: 172). Through Ranchi-Purulia road many of the coolies came to the tea gardens of Assam and Bengal. They immigrated here in the hope of more wages, or to escape the difficulties and scarcities at home or being victims of threats (Badley Birt 1910: 175). Adivasi songs reflected the phenomenon of labour migration (Mahato and Mahato 2007: 41). An indigenous song as follows:

দশপুস্ত দশপুস্ত মাল নফলপুস্ত / দশপুস্তকণ্ড ডাহপুস্তপু, চপ্তবাসবাস্তপ্লাহ ডপ্তা ডপ্তা / %পুতপুস্তাচবাস্ত  
 এ ডপ্তা-পুস্তপু

[The money lender cheated us and sent us to the tea gardens in Assam in the name of employment. Certainly, those money lenders benefited by sending poor people to Assam gaining commission]

A steady stream of emigrants flew out from the district mostly to the tea gardens of Sylhet, Cachar and Assam on the one side and Darjeeling and the Duars on the other. Those who went to the former place were bounded for a term of a year. Those who went to the latter place were all free labourers. A large number of Kols and Oraons emigrated to Calcutta and Sundarbans where they settled permanently (Badley Birt 1910: 175-76). The supply of coolies fluctuated under various circumstances. The following table shows the fluctuation in emigration (Table-I). The enormous decrease in labour migration occurred because of the opening of coalfields at hand in Gobindapur and Giridi and railway lines on the other (Coupland 1911). Among the Bengal Districts, except Ranchi, the proportion of emigration was very high in

<sup>11</sup> *Mukti*( a Bengali periodicals of Manbhum District Congress), 1929,Year-4,28:34.

<sup>12</sup> Chotrai Deasmajhi Reak Katha., p.65.

Bankura District and it creased up to 4.37% in 1901. Many ‘aboriginal’ and ‘sem-aboriginal’ people of Bankura temporarily migrated as agricultural laborers to the eastern districts such as Hoogly, Howrah and eastern Burdwan. The migratory labourers called the eastern districts lowland districts *namal* in comparison to Bankura and Manbhum. Many people migrated to Manbhum and Burdwan in search of work in mines(O’Malley 1908: 45). Due to the opening of coal mines in Manbhum labour migration decreased here while labour migration increased in Bankura district.

Table –I: The fluctuation in emigration	
Year	Emigrants
1900	65,190
1901	30,777
1909	15,492
Source: <i>Bengal District Gazetteers: Manbhum, Satatistics</i> , by H. Coupland, 1911,	

**Gender dimension in Migration:** Shashanka Sinha has shown that migration had a significant sexual dimension( Sinha 2005:106). In 1891, from Manbhum 5,500 men and 12,000 women emigrated(Coupland 1911:70). A Large number of females emigrated not only for economic determinism but also for their crumbling position in the patriarchal family (Sinha 2005:110). Women also felt insecure in their land. They had to migrate. This also left another kind of exploitation which was perceived by the victims themselves (women). We can quote a *jhumur* song of a contemporary poet Dina Tanti (Singdeo 2007: 29):

**Jôç×»RôO »JÇô×»RôO ×VãAÕ â]çãl]ý aç]Eõl]ýçã\_î ×QöYÇ Hãl]ý / â\_Fçc÷O\_ %ç]çl]ý  
açTö YÇl]ýÓãb]ý Xç] / c÷çl^ãl]ý \_+»RôOç `îç] ZgõçÅ×Eõ ×Vãl^ [ýgWýÇ »Jôç\_ç×\_  
%çaç]\***

[The *thikadars* (contractors) misguided me by his clever, cunning, and deceptive advice putting me in a dark room. They had noted down seven generations. This debauch had compelled me to go to Assam.]. Another song reflected the disillusionment of the lady:

**]ãX ×»K÷\_ %çaç] ^ç]ý LQÍöç Yç...ç »RôOç†çc÷O]ý / açãc÷[ý ×V\_ %ç]çl^ EõVçã\_×l]ý  
Eõç]\*\***

[I had that desire to go to Assam. / I would be the owner of two decorated fans. / But the Sahib gave me the work of digging.]. Another song runs as follows:

**%ç]l]ýç VÇ×»RôO ]ç ×[ý×»RôO ×VãX Ì]ýçc÷OãTö »Jôç EÇõ×»RôO / EÇõ×»RôOãTö  
EÇõ×»RôOãTö [ýãc÷ Hç]\* / %Wý] VÝXXçU \öãX â^ ^çã]ý \öçc÷O / %çaç] [ýãX / %ç]l]ý  
Xç ×Zõ×l]ýã]ý ×XL Wýçã]\***

[We are mother and daughter two in number. / We work in the tea plantation / While working we are sweating. / The poor Dina Tanti tells / The man who would go to Assam / Would never return to his native land.].

**Abuses in emigration and emigration Act:**

Different types of abuses had shot up in the labor recruiting system. O’Malley reports that fraud recruitment of coolies in Assam by free recruiters was very common. In 1907, large numbers of coolies were recruited in the tea garden under free emigration. Much abused occurred in this system (O’Malley 1908: 142). It has been reflected not only in the official accounts but also in the indigenous songs. The Act of VI of 1901 was passed to check the abuses of recruiting system. To supply coolies many recruiters and their agents used their force and fraud. In this

way, many unfortunate laborer had been taken off to Assam against their will (Badley Birt 1910: 177). As Manbhum was the head –quarters of the district in Chotanagpur easily accessible by rail to Assam and the station through which practically all coolies recruited in the Division and the Native States adjoining, the control of emigration to the Tea Gardens played an important factor in the district administration. According to the Acts, the Deputy Commissioner and Senior Deputy Magistrate became the ex-officio Superintendents of Emigration both for the districts of Manbhum and Singhbhum. Recruitments through licenced contractors and recruiters known as *arkati* system started mainly under Chapter IV of Act VI of 1901. In 1908-1909 five contractors and sixty-four recruiters held licence. In the same year, 1532 coolies with 389 dependants were registered and put under contract (Coupland 1911:70).

### **Migration in Post- colonial Times**

The process of migration continued even in the post-colonial period which was seen through the emigration of people from Purulia pouring into more fertile regions like Barddhaman expecting assured work. From the early 1970s irrigated boro paddy crop was introduced. After acquiring power in 1977, the Left Front government adopted agrarian reforms energetically in its early years, in particular the registration of share-croppers, the continuing redistribution of land held over the ceiling and *panchayati raj*(Rogaly 2001: 4551). During this period, smallholder cultivators were beginning to consolidate. Many of them were actively involved in the political parties within the Left Front coalition. When they gained profits from agriculture, they began to invest in groundwater irrigation. It was more attractive in the less conflictive rural environment. In the early 1980s, the new boro crop was rapidly expanding. After adopting high-yielding varieties and getting associated with new cultivation technologies continuously for a period of the last two decades. In Barddhaman district, as a result of these changes huge manual workers were required for the transplanting and harvesting of rice which continued to be carried out by hand(Rogaly 2001: 4551).

Many (though by no means all) seasonal migrant workers are employed to harvest and transplant rice in West Bengal in eastern India. Ben Rogaly has shown that seasonal migration in

West Bengal is not simply an inevitable part of the cycle of indebtedness. Workers from the border regions of Bihar and West Bengal and from elsewhere in West Bengal have a long history of converging on the south-central part of the state for seasonal agricultural work. With the increase in rice production in West Bengal in the 1980s and early 1990s, employment opportunities are created for potential migrants in transplanting and harvesting for a season which is likely to be continuous (i.e. a month to six weeks for the same employer) rather than sporadic. It is significantly better paid than working for employers in migrants' home areas. At the end of the season, migrants are paid a combination of a daily allowance of rice, accommodation and fuel, plus a lump sum of cash. It has become common for migrants to return home with a lump sum of several hundred rupees (Rogaly 1998: 22). In Purulia district, lacking irrigation relied on a single rice crop and most of the year it required very few paid workers. For the transplanting (the exact timing of which depended on the start of the monsoon rains and was therefore relatively unpredictable) and for harvesting, all the local workers are sufficient. Thus, employment opportunities in Purulia varied from periods when labour was urgently needed to periods when one just sat and watched the mosquitoes fly in front of his face. The two busy periods, transplanting in June-August and harvesting in October-December, coincided with increasing migration possibilities for local workers and there was no seasonal in-migration in the district. During harvest, daily wages were a maximum of 12 rupees per day (Rogaly 1998: 22).

Most of the studies of migration like Rogaly's work dealt with the economic aspect of migration but the environmental aspect has not received adequate attention. After independence, there is continuity rather than a rupture in environmental degradation. The tendency of the soil (laterite and infertile) of the district is towards continuous deterioration. Soil lost its potential to absorb moisture from rainfall. Each year nearly 50% of the different lands have been dangerously eroding.<sup>13</sup> The proportion of wasteland is very high on the one hand, while the current fallow and yield of cultivated land are very low on the other hand. Thus, the cost of operation is very inevitably very high.<sup>14</sup> As the prospect of agriculture is not good so the requirement of an agricultural laborer is meagre. Less agricultural productivity and deforestation resulted in nutritional crisis which started in the colonial period. It affects the migratory trends in Purulia. West Bengal District Gazetteer mentioned that the 'Prospect of agriculture being such, it failed

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<sup>13</sup> *West Bengal District Gazetteers: Purulia*. 1985. Calcutta, p.11.

<sup>14</sup> *Ibid.*, p.116.

largely to attract any sizeable immigration. On the contrary, it caused a more or less equal volume of emigration, thus offsetting the effects of emigration.'<sup>15</sup>

Nitya Rao and Kumar Rana in their study argue that deforestation has exacerbated the migration of both men and women. Due to the modern developmental policies, whether the building of big dams, taking over of forest and agricultural lands for industrial enterprises, or restrictions on the local population regarding the use of forests and common property resources, local women and men lose of control over their basic resources. As a result of deforestation, women have to walk long distances for fuel, non-availability of food items to supplement their diet, such as greens, berries, mushrooms, etc, and lack opportunities to earn a little extra income through the sale of tooth twigs, leaf plates, green mangoes and so on. Cultivation of a single rainfed crop can survive from three to four months. Though rainfall is abundant, sources of irrigation are not well-developed in the area. So it is hard to facilitate double cropping for all. Thus, it made survival difficult and they were forced to enter the labor market, whether locally or as migrants (Rao and Rana 1997: 3187-89). Thus there is a clear similarity between the condition of Dumka region and Jungle Mahals.

In his anthropological study, Dikshit Sinha has shown that the Kherias of Kulabahal village in Purulia district named 139 items of food from which their sustenance came. But later the food items were attenuated and the supply became infrequent(Sinha 1989: 74-75). During my field study at Sidhatairn village of the Kherias, an old Kheria man Kalipada Savar told me that most of the foods are no more available during his father's time.<sup>16</sup> The agony of nutritional crisis has been reflected in a song of the Birhors' (Karmakar 2004: 71):

ଭୂଇଁହୁଣ୍ଡିଟୁଟୁଟୁଟୁ ଦଣ୍ଡାହୁଣ୍ଡିଟୁଟୁ, ଝୁଣ୍ଡିହୁଣ୍ଡିଟୁଟୁଟୁ ଗଞ୍ଜାହୁଣ୍ଡିଟୁଟୁଟୁ, ଚଣ୍ଡି ଚଣ୍ଡିହୁଣ୍ଡିଟୁଟୁଟୁ ଦଣ୍ଡାହୁଣ୍ଡିଟୁଟୁଟୁ /  
ଝୁଣ୍ଡିହୁଣ୍ଡିଟୁଟୁଟୁ ଚଣ୍ଡିଟୁଟୁ ଝୁଣ୍ଡିହୁଣ୍ଡିଟୁଟୁ, ଝୁଣ୍ଡିହୁଣ୍ଡିଟୁଟୁଟୁ ଝୁଣ୍ଡିହୁଣ୍ଡିଟୁଟୁଟୁ, / ଝୁଣ୍ଡିହୁଣ୍ଡିଟୁଟୁଟୁ ଝୁଣ୍ଡିହୁଣ୍ଡିଟୁଟୁଟୁ ?

[Forest had been captured, so there is no root for food and medicine. / It is too tough to get animal species. / I have a body and stomach. / I have a wife, sons and daughters. / How could we live on? ]

<sup>15</sup> Ibid.

<sup>16</sup> Oral history collected from Kalipada Savar, Dakatarn Village, Purulia District.

In his novel *Sindure Kajale*, Saikat Rakshit has described that many girls who belong to Kamar-Kumor-Baouri- Kurmi group left their homes and took up the work of laborers in mines, tea gardens and agricultural lands in the Eastern region ( Rakshit 2002: 60). He also mentioned that attracting to a popular folk love song of a bonded laborer Srikanta a Kurmi lady Bhadari fall in love and they left their village and went to Magra in the Hoogly district to get a job in a brick factory as a *reja khedia*( men laborers who prepare brick is known as *khadia* and woman labourer is known as *reja* ( Rakshit 2002: 79). Here the *reja khedia* sustains his life like a machine. They are involved throughout the day in brick-making. At night they prepare their food and take a drink. One night when Srikanta had taken a huge gulp of drinks with his colleagues the then *Munshi*(supervisor of a brick factory) tried to take advantage by having sex with Bhadari (Rakshit 2002: 80). Thus, here, sexual harassment is common phenomenon. Though Ben Rogaly writes that 'women having to spend one or more nights at labour market-places and travelling without kin, are more likely to be harassed by employers and contractors' (Rogaly 1998: 125) but here Bhadari was harassed despite Srikanta's presence.

According to the census of 1961, 16.4% population migrated to other districts of West Bengal and 33.03% population migrated to other states. Most of the small emigration (47101) from Purulia occurred to the district of Bankura and Burdwan(13,984).<sup>17</sup> Migration from one district to another takes place temporarily or seasonally from time to time. At the time of census operation which falls on the first of March all the harvesting of the monsoon crop is over. The large-scale movement took place from the districts of Purulia, Bankura and Midnapur to Burdwan. It together amounted to 50,345 of the 68,285 immigrants to the district from within the state.<sup>18</sup> The following table shows streams of migration within the state carrying at least 10,000 persons

Streams	No. persons involved
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<sup>17</sup> *Census of India* 1961, Vol.16, W.B. & Sikkim, Part II C-(ii), DI to DIII, J.D. Gupta, p.332.

<sup>18</sup> *Ibid.* pp.328-29.

10,000 persons or above but below 25,000 persons	
From Purulia to Bankura	18,641
From Purulia to Burdwan	13,984

Source: *Census of India* 1961, p.332.

The following table shows migration to contiguous districts, 1961

1	2	3	Percentage of Column 3 to 2
District	Total no of emigrants to other district	Total no of emigrants to contiguous district in the state	
Purulia	47,101	34,257	72.7

Source: *Census of India* 1961, p.334.

### **Inter- District Migration, West Bengal,1961**

<b>Migrants to Districts</b>	<b>Migrants from District: Purulia</b>
Darjeeling	208
Jalpaiguri	123
Coochbihar	53
West Dinajpur	25
Malda	200



Murshidabad	245
Nadia	245
24-Parganas	3883
Calcutta	3848
Howrah	1153
Hooghly	2334
Burdwan	13984
Bankura	18641
Birbhum	527
Midnapur	1632

Source: *Census of India 1961*, p.329.

## Conclusion

Migration in the Jungle Mahals region shows that this is not a pure case of environmental migration but can be treated as climatic migration or environmental migration. People were compelled to leave their village, region and country after drastic environmental changes occurred in the colonial period though there are other factors, such as political, economic, social and cultural involvement. This historical study thus illustrated the migration process where different forces are at work. Draught and famines occurred in the region as a result of anthropogenic climate change and became a part of global environmental change. Therefore, this region-specific empirical study provides an important example in the current discourse of climate change and migration.

In the post-colonial period both anthropogenic environmental change and migration continued. Sometimes government took developmental activities but it did try to recover the lost ecosystem so that people could have to get survive. People were forced to migrate for their survival. The migration had a significant sexual dimension. A large number of females emigrated in the colonial period not only for economic determinism but also for their crumbling position in the

patriarchal family. With the revival of some of the tribal traditional values and customs, livelihood security can be ensured and Adivasi migration can be checked.

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