

# Public Arguments – 5



Tata Institute of Social Sciences  
Patna Centre

## Ecological Changes and Underdevelopment of North-Eastern Bihar in Historical Perspective

Hetukar Jha

August 2017





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## A Note of Tribute to Hetukar Jha

Hetukar Jha (1944-2017) was an indefatigable academic and educationist. His achievements as a sociologist and his efforts of developing the field of historical sociology is well known in academia and much appreciated. Jha who retired as Professor from Patna University was a prolific writer. Some of his notable works are *Social Structures and Alignments: A Study of Rural Bihar* (1985), *Social Structures of Indian villages: A Study of Rural Bihar* (1991), *Historical Sociology in India* (2015), etc. along with several journal articles. It is as a passionate and rigorous collector of historical documents and a builder of archives that Jha acquires even more significance and his contributions invaluable and unparalleled. His knowledge of documents on Bihar and its villages was surpassed by none. At the time of his demise, he had collected documents, which included village notes relating to 6000 villages in Bihar. He was in the process of writing a social history of villages in colonial Bihar and had collected documents that covered the entire period from 1894-1916. It is a task that needs to be taken up from where he left.

Hetukar Jha's association with Centre for Development Practice and Research, Patna began since its inception in 2016. He was part of the senior group of academics who provided valuable inputs to research scholars at the Centre on their respective research projects. Despite his failing health, Jha agreed to deliver the inaugural lecture at the orientation course on migration organized by the Centre. He was working on that lecture making it into an article as a contribution to Public Argument— Series of occasional papers published by the Centre. Sadly, his demise meant that this task remained unfinished.

This paper “Ecological Changes and Underdevelopment of North-Eastern Bihar in Historical Perspective” was delivered as a lecture by Jha at the Indian Statistical Institute, Kolkata on 28 March 2016. Jha was trying to develop this into an article. As our tribute to this uncompromising scholar who was always generous with his time and scholarship for the Centre, we are publishing this lecture in our Public Argument series.

Public Arguments



# Ecological Changes and Underdevelopment of North-Eastern Bihar in Historical Perspective

HETUKAR JHA<sup>1</sup>

Developmental models of modernisation, industrialisation, etc., are said to have been pursued for engineering socio-economic changes for a long time. However, in the 1970s, disillusionment with the much acclaimed capability of these models for effecting universal development or progress appeared to be quite glaring as the masses of people of different parts of the globe were observed to have been falling in the trap of underdevelopment (Tilly, 1980:56). And, thus, 'underdevelopment' came to be recognised as a very prominently visible social fact, a serious and urgent issue of historico-sociological investigation. (Ibid). Ramachandra Guha contends in this context that a social fact 'to a considerable extent can be ...explained with reference to other social facts ... However, ... (it) can only be properly understood with reference to the natural environment within which humans, like any other species, live, survive and reproduce. The ecological infrastructure powerfully conditions the evolution and direction of human economic life, political relations, social structure...' (emphasis added: 2001:5). Radhakamal Mukerjee, one of the 'pioneers' of Indian Sociology, had taken note of the significance of ecological approach long time back, in the 1930s (Ibid 19). So, for understanding and explaining development or underdevelopment of any particular society, rather profoundly, it seems appropriate and desirable that the relation between the dynamics of its (society's) ecological infrastructure and that of its socio-economic and cultural conditions should be taken into account. Considering this approach to be quite appropriate and efficacious, an attempt is made here for understanding the underdevelopment of north-eastern Bihar by probing into the association of the change in its ecological infrastructure with that of the conditions of socio-economic existence of the people of this region since the beginning of colonial rule.

Bihar is one of the five states of the country occupying the bottom layer of development (Human Development Report, India, 2011:3). There are 38 districts in this state, of which 21 are declared officially as very backward. However, a large number of 'most backward' districts identified by the Government of India are situated in the north-eastern region of this state (Rorabachar, 2016:39). So, it may be assumed that this region is most underdeveloped even in this state and, therefore, it (north-eastern Bihar) has been considered as an appropriate site for purposes of present study.

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<sup>1</sup> Formerly professor of Sociology, Patna University. This is a revised version of the paper presented for commemorating Prof. Ramakrishna Mukherjee, Indian Statistical Institute, Kolkata, 28 March 2016.

The river Ganga flowing from west to east divides the state of Bihar into two parts, northern and southern Bihar. The northern part is constituted by three cultural zones viz. north-eastern zone known as Mithila (Maithili speaking area), north-western Bhojpuri speaking belt and between the two lies the region of Vajjika speaking people. The following districts are generally supposed to constitute the region of Mithila today: Sitamarhi, Sheohar, Darbhanga, Madhubani, Samastipur, Begusarai, Saharsa, Supaul, Madhepura, Purnia, Katihar, Araria and Khagaria (Mishra, S.K. and Das, B.L. – personal communication). The area covered by these districts taken together is about 30% of the total area of the state (Bihar Through Figures, 2007: 1-4). The south-eastern terai of Nepal is also recognised as part of the cultural zone of Mithila. Maithili, according to an estimate by Alice I. Davis, is spoken by approximately twenty one million people in the plains of north-eastern Bihar and south-eastern terai of Nepal (1973:3016). So far as the number of Maithili speakers of north-eastern Bihar is concerned, the figure was more than nine million in 1891 according to G.A. Grierson (Brass, 1974:64). Later estimates are considered grossly inaccurate (Yadav, 2000:71). However, it may be supposed, rather undoubtedly, that the size of the Maithili speech community is quite massive. The region has remained well-known in Indian history for its long literary tradition and contribution to such knowledge systems as Nyaya, Vyakaran, Dharmashastra, Mimansa, etc. However, here, it is not intended to discuss the political and cultural history of Mithila. The present endeavour is chiefly concerned with exploring and discussing the changes in ecological conditions and that of the conditions of villagers and villages of the area. It may be pointed out here that there were very few towns in the area, for example, the old district of Darbhanga (comprising the present districts of Darbhanga, Madhubani, and Samastipur) had only 3.7 percent and 4.2 percent of population in urban areas in 1901 and 1951 respectively (Roy Chaudhury, 1964 : 59). It was observed that ‘the district lives in the villages’ (Ibid). More or less similar situation prevailed in other districts as well<sup>1</sup>. Therefore, the scope of the present inquiry is limited to only rural space of the region having such constituents of ecological infrastructure as forests, rivers, tanks and ponds, etc. Of all these, however, it is the shrinking existence of forest which has been chiefly dealt with in this paper.

The area of land (large or small) covered with trees and undergrowth (excluding the land under agricultural production network) is generally identified as forest. Forests are of much value for the physical existence of man as ‘the influence ...they exercise upon climate, the regulation of moisture, the stability of soil ...’ (Schlich, 1989:13). Michael Mann writes in this context that ‘... In every region of the planet forests regulate the climate ...keep the ground soft ...have a decisive influence upon the level of precipitation ... regulate the temperature ...help prevent erosion ...’ (2000:396-401). Mann

in his study of deforestation and agrarian distress in the Ganga-Yamuna doab (in Uttar Pradesh) found that 'The first signs of climatic change were palpable after thirty years of British rule... Here (doab) and in neighbouring Awadh temperatures rose and precipitation became irregular ...these climatic changes could be traced back to deforestation in the Doab, Awadh and Bundelkhand' (emphasis added, Ibid). He further observed that lu began to blow that was 'caused by the soil's surface being heated (due to) the lack of forest to act as a natural barrier... The general rise in temperature and the increased strength of lu corresponded with the absence of rain fall' (Ibid). Mann's observation indicates it clearly that deforestation is an important factor behind the rise in temperature and increase in the strength of lu, which correspond to the irregularity or absence of rainfall. Drought was (and is) frequently caused by the absence of rainfall. Deforestation, thus, seems to have far reaching consequences. So, it is proposed to describe here first the state of forests in north-eastern Bihar before colonial rule. Then, an attempt is made to examine the trend and extent of deforestation and the corresponding increase in distress of the people of Mithila.

The earliest account of forests (known as aranya, vana and jungle) in Mithila is available in the Mithilakhanda of Brihad-Vishnupurana that is supposed to be a work of post-fifth century A.D. (Singh, 2012 : 2). According to Mithila Darpan (1915) of Ras Bihari Lal Das, this purana contains the description of seventeen forests, (each known by a name) such as Kanchanaranya, Saroja Vana, Mandar Vana, etc., which existed in different parts of the territory of Mithila (Jha, Hetukar, 2005 : 15). In the first quarter of the fourteenth century, Jyotirishvara Thakur wrote Varna-Ratnakara, a sort of social survey of a city/ town (of Mithila) and its surrounding areas in Maithili prose. According to Suniti Kumar Chatterji, one of its editors, Varna – Ratnakara is to a considerable extent based upon the author's observation and experience, and it includes a description of forests which were '...inhabited by ... the Kochas, Kiratas, Kols, Bhils, Khasas, Pulindas, etc, and were the abode of horror and also of beauty' (1940 : XX111, XX1X). This account of early fourteenth century indicates it clearly that there were large areas of forest in Mithila at that time. In the reign of Akbar, even a very brief description of Sarkar Tirhut mentioned in The Ain-i-Akbari (vol.-III) leaves one in no doubt that the region had vast areas of jungle full of savage buffaloes, deers, tigers, etc. (1989:165).

Until about the end of the eighteenth century, jungle existed in large areas. But, soon the situation began to change. C.J. Stevenson-Moore mentioned in The Final Report on the Survey and Settlement Operations in the district of Muzaffarpur (1892-99) that 'In 1783 the Collector of Tirhut propounded a project for attracting cultivators from the dominions of the Vizir of Oudh to reclaim the unpeopled wastes of the district ...less than 60 years after, Mr.

Wyatt found three-fourths to four-fifths of the whole district in a high state of cultivation` (1922:15). So, it seems that deforestation began for the expansion of agriculture. However, several parganas (fiscal districts) retained quite large areas of jungle until about the 1840s (Ibid:11). According to J.H.Kerr, who prepared The Final Report On The Survey and Settlement Operations in The Darbhanga District ( 1896 – 1903 ), large areas of forest existed in different parganas of the then district of Darbhanga in the 1790s (1926 : 84). Even in 1812, 891 villages of Bharwara pargana of the district were in 'jungly state' (Ibid:85). Buchanan in his report of the survey of the district of Purnea in 1809-10 wrote that large tracts of jungle existed in the north-eastern part though cutting of woods for the export of timber had started rather vigorously from Araria (now a district) (1928:304, 568). L.S.S.O'Malley in Purnea gazetteer of 1911 observed that 'Even as late as 25 or 30 years ago, Purnea had the reputation of being ...one of the best shooting districts in Bengal ... Owing to ...the bringing of jungle lands under cultivation, wild animals are getting scarcer... ' (1911:13). Since 1793, J. Byrne wrote in Bhagalpur Gazetteer of 1911 that 'It is amply established that there has been an enormous increase in the cultivated area of this district (Bhagalpur).. ' (1911:76). More or less similar situation existed in other districts as well. For example, according to O'Malley, in Darbhanga 'in the early part of the 19th century... a large proportion of the district, amounting probably to half the total area and in the north certainly to more than half was uncultivated. By 1840 the cultivated area had increased to three fifths of the total – in 1850 it amounted to nearly three fourths of the total. In 1875, it was estimated to be 79 per cent of the total and the recent survey and settlement operations have shown that it is now just under 80 per cent of the total area of the district' (1907:60-61). Thus, deforestation was vigorously carried on since early nineteenth century.

As a result, by the beginning of the twentieth century, except few small patches of jungle, the dense and large forest tracts had virtually disappeared. L.S.S.O'Malley in his Muzaffarpur gazetteer of 1907 wrote '... Even towards the close of the 18th century, wild animals were still plentiful..there is no jungle left in the district...(there are) patches of jungle towards the north of Sitamarhi sub-division (now district)' (1907:9). Ras Bihari Lal Das in his Mithila Darpan (in Hindi) reported that very small patches of jungle could be seen in only two villages of Madhubani sub-division (now district) in 1915 (Jha, Hetukar 2005:129-30). Besides, the 'village notes' prepared in the beginning of the last century by the then Survey and Settlement authorities in the course of conducting the first cadastral survey of Bihar, also throw much light in this context. For example, in village Kishanpur, thana no. 83, sub-division Supaul (now district), district – Bhagalpur, villagers reported on 25.7.1905 that in the beginning of the East India Company rule their village and all the surrounding villages were full of jungle. The people of village Sookhasan, no. 63, of Supaul

informed that deforestation had begun much before 1880. The overwhelming number of 'village notes' of Darbhanga and north Bhagalpur areas do not record the existence of any forest except a few small isolated patches at some places in the beginning decade of the twentieth century<sup>2</sup>.

As a result of jungle-clearing since the beginning of the nineteenth century, such animals as elephants, tigers, leopards, etc. were rather forced to leave the territory and take shelter in Nepal. Here, it will not be out of place to describe how, as a result of increasing deforestation in the nineteenth century, production of ivory artefacts and a sort of common practice of domesticating elephants for purposes of transport ceased to survive in Mithila. Since there were many jungles and jheels (lakes), it was possible for a large number of elephants to be domesticated and used in villages as easily affordable means of transport. In 1867, a book *Riaz-i-Tirhut* (based mostly on field experience) was written in Urdu (published in 1868) by Ayodhya Prasad 'Bahar' (Jha, Hetukar 1997). Regarding elephants, he observed that most of the persons in the villages used to have one or two elephants at their doors since they had not to incur any considerable expenditure due to the abundance of forest and jheel (Ibid: 48). Elephants served them as easily affordable means of transport through dense jungles at that time when there was virtually no organised road network in the rural areas. Besides, the tusks of elephants were available in plenty and the craft of making art objects of ivory was quite developed. The craftsmen used to prepare several items such as mat, boxes, palanquin, etc. (Ibid: 52). Ayodhya Prasad described an agricultural exhibition organized by the then government authorities in 1865 at Muzaffarpur. In this exhibition, a mat made of ivory threads and a model of ship made of ivory were presented which were appreciated so much that the authorities decided to send them to England (Ibid: 62-63). However, by the end of the nineteenth century, in absence of jungles, perhaps, it became impossible for villagers to keep elephants in large numbers. So, ivory became very scarce and the craft of making artistic objects of ivory virtually disappeared. Now, the knowledge of the existence of this craft in the nineteenth century also seems to be lost. Thus, loss of jungle may be supposed to have caused not only the loss of a significant art, but also that of easily affordable transport in the rural areas.

In the twentieth century, deforestation continued unabated. According to a government report of 1938-39, 'There is ample evidence to prove that denudation of forests is still proceeding in Chota Nagpur where most of the surviving forests in the province are centred, at a pace that threatens the extinction of the forest area within a limited time...' (Wasi 1942: 88). This report makes it clear that by the third decade of the last century only Chota Nagpur belt had forests whose existence was also threatened. In 1959, it was observed that '...only about 20 per cent of the total area of the state is under

forest. Most of it lies in the Chota Nagpur plateau...' (Diwakar 1959: 37) In 1963, P.C. Roy Chaudhury wrote in his Purnea gazetteer that 'The forests... have almost completely disappeared by now. The last patch to fall to the axe was the Bhauah jungle....about two decades back' (1963 : 46). In Darbhanga, by 1949-50 only 19000 acres had jungle of simply kush-pater (grass) (Roy Chaudhury 1964:128). By 1974, the (old) districts of Muzaffarpur, Darbhanga and Saharsa covering almost the entire territory of north-eastern Bihar were found to be 'totally devoid of forests' (Pathak 1974:60).

Here, it will not be out of place to discuss, at least briefly, the changes in the socio-economic conditions since deforestation began. J.N. Sarkar in his study of the economic life in Bihar since Mughal period observed that 'while there has been almost 300 per cent increase in cultivation in Bihar since the Mughal period on account of jungle-clearing ...there has been a decline in the average fertility of the land actually cultivated... In other words, soil was more fertile...under the Mughals than now...' (1986:410). A. Wyatt, a Revenue Surveyor in his *The Geographical and Statistical Report of the District of Tirhut* (published in 1854) mentioned that in 1847 the average yield of rice was about 40 to 50 maunds per bigha (Stevenson-Moore 1922 : 10-11). According to J.H. Kerr, this rate of production was drastically reduced to only about 14 maunds per bigha by the end of the nineteenth century (1926 : 127). Villagers' version reported in the 'village notes' of 1903-1905 also corroborate to a large extent J.H. Kerr's finding in this context<sup>3</sup>. O'Malley bemoaned this decline and wrote in his Darbhanga district Gazetteer that '...There is ...but little room for further extension of cultivation ...it will at no distant date reach a point when it will no longer be able to support an increase in its population...without an increase in productive capacity' (1907:62). It was, perhaps, quite late for British authorities to realise the consequence of deforestation. In 1911, it was observed that 'Within recent times the denudation of the forest area ...is said to have increased the intensity of the floods...large cultivated plain...offers no resistance to the passage of floods' (O'Malley 1911:104).

In his report of 1854, A. Wyatt (mentioned) that even before the middle of the 19th century the area used to be visited by floods which were temporary, not devastating and '...the spill-water would spread out quickly without making the damage'<sup>4</sup>. O'Malley mentioned in this context in his Darbhanga district Gazetteer (1907) that '...widespread inundations ...cause...temporary suffering...the distress they cause soon passes away...Cultivators are compensated in large measure for the losses they sustain by the fertilizing silt left by the receding waters, which increases the productiveness of the soil and ensures rich crops (1907:65). He further observed that since the last quarter of the 19th century frequency of flood increased; (three floods in 1893, one in 1898, one in 1902, one in 1905-06), which proved to be quite disastrous

(Ibid:65-69; 1911:104). Railway bridges being short in length had (and have) narrow space for the drainage of flood water which remain(ed) stagnated for a long time damaging the crops, trees and causing health problems of people in general.

In 1937, a conference on flood was held at Patna that was attended by experts (engineers) and also political leaders. In this conference, the meteorological and geological condition of north Bihar was described and it was asserted that deforestation had accentuated flood conditions of north Bihar (1938:14). Besides, rainfall became irregular, and variation in temperature was observed to be significant. In the eighteenth century, a great famine had occurred in 1770. Between 1770 and 1867 (about a century) there was no great famine. Then its frequency increased. There were famines in 1865, 1874, 1892, 1897, 1903, 1906, etc. (Byrne 1911:24; O' Malley 1911:18, 97-103). In 1896, collector of Darbhanga reported that famines were occurring due to irregular rainfall, very low water level, hot days, dry and parched up soil (Kerr 1926:7-8). Mann's observation regarding deforestation and its effects in the Ganga-Yamuna doab (mentioned before) seems to be true for north-eastern Bihar as well.

Flood and drought following deforestation have been increasingly aggravating the miseries of villagers of north-eastern Bihar after Independence. The woes and distress of the flood affected villages and people have been narrated by Vibhuti Bhushan Mukhopadhyaya, a well-known name in Bengali literature, in his book (in Bengali), *Kushi Pranganer Chitthi*<sup>5</sup>. Devastating floods, however, still continue to remain uncontrolled. Dinesh Kumar Mishra, a civil engineer and Fellow of People's Science Foundation (Dehradun), has been intensively analysing the official policies and measures taken so far for flood control. He contends in this context that the nexus between political elites and engineers / contractors is virtually responsible for the recurrence of the menace of devastating floods (Mishra 2000:90-91). John A. Rorabacher has also comprehensively studied the problem and endorses the contention of Mishra in the following words: 'The flood business, funded by government relief, is worth thousands of crores of rupees; and as long as there is money to be made, legitimately or not, ...embankments will continue to stand, be rebuilt, built up, improved, and perfunctorily repaired' (2016: 167). Thus, subsequent to increasing deforestation since the beginning of the nineteenth century irregular rainfall, frequency of drought, hot days, declining agricultural production and productivity, devastating floods, all have become virtually perpetual phenomena contributing seemingly to the crisis of existence of the people of north-eastern Bihar.

## NOTES

1. For example, see Roy Chaudhary 1963 : 127; the rate of urbanisation in Bihar as a whole can be gauged by the fact that urban population of the state increased from 3.8 percent in 1901 to only 10.48 percent in 2001 (Bihar Through Figures 2007 : 18-19).
2. This observation is based on the contents of about 1500 'Village notes' of north Bhagalpur and Darbhanga. For details regarding the kinds of socio-economic data of each village recorded in its 'village note' see Jha, Hetukar 1991 : 35.
3. For example, see the 'village notes' of Kishanpur, no. 83; Sanpatona, no. 41; Kataiya no. 102, etc., belonging to Supaul subdivision of the district of Bhagalpur in the first decade of the last century.
4. Parts of A. Wyatt's report have been included in Roy Chaudhury 1964: 199.
5. This book was originally written in Bengali by Vibhuti Bhushan Mukhopadhyaya probably in the 1950s. Its Maithili translation, Kosi Pranganak Chitthi, by Manipadma was published in 1979 by Maithili Academy, Patna. It includes vivid description of the area devastated by Kosi flood; see particularly p10, p73, p85, p100, p134 and p147.

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