

Impact of Traditional Iron Industry in the Khasi-Jaintia Hills

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Abstract: The traditional iron industry in the Khasi-Jaintia hills dates back to a very early period. It remains undisturbed till it was replaced by the factory-made British iron. The traditional iron industry evoked keen interest among scholars since the colonial period. There are a number of interesting accounts by the colonial writers which give us a peek into the status of this important occupation and the impact it had on the economy. The paper is an attempt to explore the impact that this industry had on the forest resources and vegetation of the region resulting in a very incipient form of environmental awareness among the people of the area.

Keywords: Environment, Forest resources, Khasi-Jaintia hills, Pre-Colonial, Sacred grooves, Traditional iron industry.

1. Introduction

The study of Environmental history has emerged as one of the approaches to fill some of the gaps in the broader understanding about the past. The goal of Environmental history is to enhance our understanding of how humans have been affected by the natural environment in the past and also how they have affected the environment and with what result. It is essentially a study of human-nature relationship in the past and the long-term impact they had on one another¹. The interaction between human societies and their bio-physical surroundings emerged as a distinct field of scholarship in the 1970's as part of the new Environmental Movement². The term Environmental history was first coined by Roderick Nash in an article in 1972.³ In fact, from the 19th Century as the west began to industrialize, many people began to express skepticism about the emerging industrial society, about the degradation of the country side and the nostalgic notions of preserving the environment. Henry David Thoreau in the mid 19th Century and George Perkins Marsh wrote not only about the human impact on the environment but also call for altering the destructive and ravenous relation with the natural world.⁴ The publication of Rachael Carson's book "Silent Springs" in 1962 ushered the beginning of the environmental movement in the US and the west in general. By 1979, the American society for Environmental History was established and by 1999 the

European Society for Environmental History was founded.

In India M.K Gandhi may be regarded as one of the earliest environmentalist. At a time when popular opinion was in favour of industrialization, Gandhi rejected industrialization as an option for India. After his death his vision was never pursued as politicians, administrators, legislators and scientist were obsessed with the notion that the country's prosperity depended on rapid industrialization. In 1973 India witnessed a powerful environmental movement, the Chipko Movement. As people became more aware of environmental issues, writers as well as historians of the country began to work in this field.

The people of North East India in particular the inhabitants of the hill areas are closely associated with nature. H.O Mawrie a noted Khasi writer stated that 'A Khasi lives with nature and nature lives within him'⁵. The Khasi honours nature and all its resources. There is a close communion between God, Nature and man. Human does not unnecessarily distance itself from nature as its life is inter-connected with it. But in the quest to better themselves through new subsistence strategies in the process of growth and progress and to cope with the demands and opportunities of life, human began to breach the hallowed relationship with nature and increasingly began to exploit its resources giving nature itself very little chance to regenerate or to recover. And as man pursues and presses on with his mission to improve his lot, nature itself was thoroughly compromised. This led to the destruction of the forest and the environment leading to in many cases, the emergence of a new form of landscape and vegetation, devoid of the shady green that portrays the glory of the past.

This gulf in human-environment relationship became more apparent in the period of the Iron-Age. The knowledge of iron fostered a new stage of advancement in metallurgy and with the aid of metals, human cultures further exercised dominance over the environment. Metal tools being highly effective for clearance of large tracts of forested lands, soon converted forest into agricultural tracts and settlements, a phenomenon antecedent to the growth of civilizations. The Iron Age brought

¹ K. Jan Oosthoek, *What is Environmental History?* <https://www.eh-resources.org>, 2005.

² John T. Cumbler, "Environmental History: A Road Map," *A journal of Environmental and Sustainability*, Issue 19 2009

³ Roderick Nash, "American Environmental History: A New Teaching frontier" *Pacific Historical Review*, Vol.41, No.3, 1972 Published by University of California Press

⁴ John T. Cumbler, *Op.cit*, p-4

⁵ H.O. Mawrie, *The Khasi Milieu*, Concept Publishing Co. New Delhi, 1981, p-97

in stupendous change which witnessed large scale deforestation, destruction of the natural habitat and reshaping of wild landscape. The increased use of metal technology established new economic activities and altogether altered human-culture relations with the environment. This transformation brought about an end to the long discourse of the cordial relationship between human culture and the environment. Human in the name of cultural progress became perpetrators of the natural world and much of the wild in it.

The inhabitants of the Khasi-Jaintia hills could boast for being one of the earliest manufacturers of iron tools. The tradition of iron manufacturing in these hills continued undisturbed throughout the pre-literate period and survived well into the time of British annexation of these hills in the later part of the 19th Century. There are scholars who held the opinion that the Khasis (collectively including the Jaintias) are the authors of the industry in the hills and they could also be probably the first iron using culture among the innumerable tribes inhabiting the North Eastern region. In this context linguistic evidence suggested that the Khasis had an indigenous name of Iron (*Nar*), a word not being used by any other tribal community.⁶

2. Role of Iron in the Economy

From the Ethnographic and Anthropological records of European workers and administrators published in the form of monographs and articles circulated over the different journals of humanity and science there are numerous references about the conspicuous role of iron in the Khasi and Jaintia hills Sir W.W Hunter in his official report⁷ (1879) has noted on the role of the Iron Industry in the Khasi hills. The traditional industry plays an important part in fostering the economy of the people of these hills. The traditional Industry had tune itself more to the demands of external consumption and only a small portion was actually meant for home production. The major part constitutes an important item of export of these hills. But the influx of the cheap iron finished products from England provided stiff competition to the local product which contributed to a steep decline of the industry by the last quarter of the 19th Century.

Lt. Yule in his account of the traditional Industry observed that there are separate centres which specialize in the smelting and manufacturing of iron products. The place from where the ore was mine or extracted need not necessarily be the core area for smelting and manufacturing of iron products. He was in awe at the marked effect that the once prosperous industry had on these hills leaving behind trails of big and naked boulders offering a striking reminder on the extent of excavation when the Industry was at its peak. He went on to add that “so

numerous and extensive are the traces of former excavations that . . . one may guess them to have occupied the population for twenty centuries”⁸ Some of the existing ethnographic records⁹ bear enough evidence revealing the role of Iron as the most decisive trade item contributing to the bulk of the national income of the Khasi State. Colonel Lister had in 1853 mentioned that the amount of Iron in the form of hoes and in lumps of pig iron exported from these hills to the plains of Assam and the Surma valley was around 20,000 *maunds*¹⁰. Another report by Pemberton substantiated this observation made by Colonel Lister in which he stated that Iron ore constitute as one of the main items of export from the hills¹¹. D.R syiemlieh while elaborating on the role of Iron on the economy of the people opines that the Khasi might have migrated from their earlier settlement in Jaintia hills in search of new iron ore deposits in the Khasi hills¹².

Besides these reports and information that are available based on colonial records, the myths and folklores existing in the culture of the Khasi-Jaintia people points to the conspicuous role that Iron had in the socio-economic and cultural of the people. The story of *U Thlen* or the serpent for example, stated that the monster creature had created great havoc and fear among the people. The serpent was finally killed after he had swallowed lumps of red-hot iron which he mistakenly took it for food offered to him daily with herd of goats¹³. The other legend was that of *U Lum Diengiei* in which once upon a time a giant tree by the name of Diengiei blocked the sun, as a consequent of which the earth was covered with darkness. The ever-growing branches of the *diengiei* tree were chopped off with iron axes thus restoring peace to these hills. Yet another legend of a waterfall called *Nohkalikai* narrates the story of a woman who committed suicide after being deceived by her second husband to consume the flesh of her own child. The legend, tells of her occupation as an iron ore washer. These stories points to the association of the Khasis with the Iron Industry from a very remote period of time¹⁴.

3. Impact of Iron Mining and Smelting

Thus, the traditional Iron Industry occupies an important position in the economy of the Khasi-Jaintia hills in the pre-colonial and early colonial period. But pivotal as it was to the economic prosperity of the hill areas, the industry was bound to have a telling impact on the environment and forest resources of the Khasi-Jaintia hills. The success of the industry depends on the easy supply of raw materials and other resources needed for its production. Lt. Yule has given a clear description of the method of extraction of the ore. The popular method employed in the extraction of iron ore was the open mould method in which streams are channelized to the granite material where

⁶ Namita Shadap Sen, *Origin and Early History of the Khasi-Synteng People*, Firma KLM privateLtd, Calcutta, 1981

⁷ W.W. Hunter, 1879, *Statistical Account of Assam*, Tubener, London

⁸ Lt.Yule, *Notes on the Iron of the Kasia hills for the Museum of Economic Geology*, JASB, Vol.XI, Part II, 1842, pp 853-857

⁹ Thomas Oldham, *Geology,Meteorology, and Ethnology of Meghalaya*, Mittal Publications Delhi (1984)

¹⁰ P.R.T. Gurdon, *The Khasis*, Low Price Publications, New Delhi, 2002, p.57

¹¹ R.B. Pemberton, *The Eastern Frontier of India*, Mittal Publications, New Delhi (2008) p. 255

¹² D.R Syiemlieh, “Khasi Iron Culture and Iron Trade with Sylhet in the late Eighteen and early Nineteen centuries”, *Proceeding of NEIHA*, Eight Session, Kohima,1987

¹³ P.R.T. Gurdon. Opcit, pp. 98-99

¹⁴ Ibid, pp 163

manual poking on the boulder was done by the workers. This was mostly done in the rainy season as it ensured a continuous supply of water.¹⁵

The industry as already mentioned was a pre-colonial development and colonial documentation came at a stage when the industry was declining. Recently it was brought to light that the Iron-Industry in the hill areas was more started than 2000 years ago Radiocarbon or C- 14 date from a charcoal that was extracted from one iron slag collected from the site of Nongkrem in Khasi Hills, produce a date of 2040 ± 80 years BP¹⁶. Such a time span and duration on the existence of this Industry in these hills, gave us enough basis to presume that this economic activity was bound to have a drastic impact on the surrounding on which mining activities was conducted and the neighbourhood where the smelting process was actually carried out. In the Khasi hills charcoal was the only fuel used for the entire process of smelting and manufacturing. Colonel Yule and even J.D Hooker mentions that the best charcoal was produced from the local khasi oak but whenever this preferred material was not available other species of trees was used for carbonization¹⁷. Though some has ascribed competition from cheap English iron for the decline of this industry, it was however, quite evident that non availability and shortage of charcoal contributed to this decay. This was corroborated by P.R.T. Gurdon¹⁸ who noted that the areas where the metal was available have been completely denuded of timber. The landscape was thus laid barren of trees as the wood was being used for fuel for iron smelting in the days gone by. The denudation of the forest was also caused by the method of extraction of metals from rock boulders which led to large scale erosion of the soil.

The Iron Industry in the Khasi-Jaintia hills therefore had a lasting impact not only on the forest resources but also on the topography and landscape of the region. It was perhaps the result of heavy deforestation that the industry began to collapse and the smelting sites abandoned.¹⁹. In fact, colonial writer wrote in amazement that the whole of Khasi hills was remarkable for the absence of forest²⁰. A contrasting development, probably an offshoot of this impact was the growth of incipient environmental consciousness that ultimately resulted in an earliest form of conservation movement represented by the Sacred Grooves in many parts of the Khasi hills. The impact of the traditional Iron Industry on the forest and environment of the Khasi-jaintia hills was perhaps so profound that it may have created an awakening in the minds of these hill men to revise their attitude towards nature and environment and to relook into the traditional aspect of his former noble relationship with nature. The concept of Sacred Grooves is therefore something which has to be re-look

and examine from this perspective. These forests that are scattered in different parts of the Khasi-Jaintia hills stands out as a remarkable contrast to the surrounding grasslands and raises some very interesting question as to the idea that was preconceived before community participation to protect them takes effect. The religious affiliation given to them attached with sanctity and taboo and their identification as abode of the gods once again help to re-invoke the former noble human-nature relationship. Most importantly, however this measure ensures the survival of the primary vegetation within the enclosure of the Sacred Grooves which could have otherwise been swept away by the tide and demands of the traditional Iron Industry. That a new type of vegetation altogether began to swarm the country side and the other parts of the hill areas, will become another interest of research from the botanical and environmental perspective. Environmental issues and the consequent ecological awareness from this perspective must have therefore been experienced by the Khasi people way back in the past when iron started to become an item and a commodity of trade.

4. Conclusion

This paper presented an overview on impact of traditional iron industry in the Khasi-Jaintia Hills.

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¹⁶ Pawel Prakop and Ireneusz Suliga, 2013, " Two thousand years of iron smelting in the Khasi hills, Meghalaya, North East India" *Current Science* Vol. 104, No 6, pp 761-768

¹⁷ J.D. Hooker, *The Himalayan Journals*, Vol-II, 1864, p-267

¹⁸ P.R.T. Gurdon. *Opcit*, pp. 58-59

¹⁹ Hamlet Bareh, *The Art History of Meghalaya*, Agam Kala Prakashan, Delhi (1991), P. 97

²⁰ W.W. Hunter, *Op.cit*, p212