INTRODUCTION

The emerging significance of environmental history to human affairs cannot be overlooked. In its initial stages the study of environmental history appeared to be a plan to stir public consciousness to environmental crisis identified by the scientists, engaged in diverse branches of environmental science and ecology. However, it is increasingly being acknowledged now that the recent environmental crisis calls for a new and independent role of the historians to develop a new paradigm for the future including studies of the interactions and activities of man and the environment; the significant role of man as both the maker and the unmaker of nature.¹ This study is therefore, a modest attempt to address a relatively new area of research namely the environmental history of Nagaland with reference to water resources.

Environmental history continues to evolve and share an undefined perimeter with other social histories and various other disciplines such as economic histories, history of science and technology, disease history etc. Whatever the approach, the complexity and unpredictability of nature and human societies are inescapable themes in environmental history. Environmental history is thus of growing interest and value to many other disciplines, to policy makers, restoration ecologists, and a variety of cultures and societies around the world.² The formation of the American Society for Environmental History in 1977 marked the birth of environmental history as a formal discipline. Since the 1970’s an explosion of scholarship on United States environmental history has taken place. In Europe the Annals School (a group of French historians who published in the journal Annales) examined environmental changes in Europe, such as forest clearing and wetland drainage in response to population fluctuations.³ It has been noted currently that the academic centre of gravity has shifted firmly away from North America and Europe to South and South East Asia and Africa.⁴ Anil Agarwal and Sunita Narain’s, (1985) The State of India’s Environment and Richard P. Tucker and John F. Richard’s, (1983) Global

³ Ibid.
⁴ R. H. Grove, Ecology, Climate and Empire, the Indian legacy in Global Environmental History, 1400-1940, p.4.
Deforestation and the Nineteenth-Century World Economy are considered as the launching points for an environmental history of South and South East Asia. Despite the interest in the promising growth of environmental history in the region; pioneers of the ecological history of India, such as David Arnold and Ramchandra Guha, have however remarked that South Asia as well as in India, environmental history is by and large under-developed. It has only been in last few past decades that we have seen a proliferation of writings by scholars in almost all aspects of environmental history. Interest in the subject has increased double fold due to scarcity of resources, affecting both social and political syndromes within the nation state and also across national frontiers. Alarming developments all over the world have compelled serious scholars to voice their concerns and examine some critical features of this problem.

In this scenario, as a subject Water History has gained significant attention of environmental historians in recent years although conflicts over the control and use of water have existed historically, and continue to exist across local, institutional and international boundaries. It occupies a vital place in the scientific debate relating to conservation and the management of nature with concern to human societies across the world and the complex patterns of their interaction with the environment. In India the subject itself has had much impetus from the writings of individuals some of them who have had started off their careers as environmental activists. This interest has prompted a large body of research works to be written primarily on the relationship between water and humankind; illuminating the multifarious processes shaping water resource use, and reveal interrelated aspects or historical contingencies and precedents. However, it is true that in actuality due to its nascent nature, literature on environmental history, in general and Naga Hills in particular, is scanty.

This research work is a modest attempt to address the issue in relation to the title, ‘The Environmental History of Nagaland with reference to Water Resources 1881-2005’. The study generally highlights the traditional management of water resources in Nagaland in the pre-Colonial period, and the degree of shift in the Colonial and Post-Colonial Period and the response of the natives towards these developments. The

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5 S. Krech, J.R. McNeill, C. Merchant, op.cit., p. XI.
6 D. Arnold, & R. Guha, (eds.) op.cit., p.3-4.
case studies were restricted to four districts namely Kohima district, Mon district, Mokokchung district and Wokha district.

It is noted that conservation and forest regulations of the Colonial Government started with the establishment of an All India Forest Department in 1865. Furthermore, the earliest British statutory water law in India was introduced roughly around 130 years ago. This initiation led to measures covering all aspects of the environment including forests, land, and water resources. A major objective of this study therefore is to critically examine the degree of transition and complexity of changes involved in the environmental history of the Nagaland, formally known as Naga Hills, a district of Assam from its formation in 1866. However, this research work localized in character; in order to attend to the specificities of the issues involved will engage within a timeframe delineated from the beginning of effective administration, and work from 1881 as regular British administration was introduced in the Naga Hill District from this year only.

In order to further elucidate the topic undertaken, the study is divided into five chapters. The first chapter is ‘Conceptualization’, whereby an attempt has been made to analyze the subject not just from an ecological standpoint but also from popular perceptions and experience based on Naga folk traditions and religious beliefs.

The second chapter ‘Traditional management of water’ defines the traditional method of management of water resources, besides defining water rights and ownership of various Naga tribes; their use by local communities, the continued existence of people dependent on the land and water, the degree of control by the individual community, village, khel, clan and family.

The third chapter ‘Colonial Government and water resources’ highlights the series of measures adopted by the Colonial state and studies the action and motives of the colonists on conservation of forests and particularly water resources. This study would address the issue of how the early development of conservatism and environmentalism was largely dependent on the diffusion of desiccationist and endemist discourse. It will attend to the all important question of the scientific debate

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on whether the series of measures adopted by the Colonial state on conservation of forests and its resources, had a deeper motive more complex than that of conservation and other regulations.

The fourth chapter ‘Commodification of water during Colonial and Post-Colonial period’ deals with the imposition of Colonial legislations which first focused on the regulation of water for economic reasons for instance, through the development of legislation concerning irrigation and navigation. It also addresses the issue of commodification and contestation of water. It will underline the key role played by the Colonial laws in India (including regulation of irrigation, fisheries, electricity, canal and drainage) to dictate regulation of major aspects of water bodies thereby demonstrating that the Crown had extended its control over all aspects of water, types of water and sources of water. An action which led to an un-hindered forcible substitution of old values and principles of community based forest and water laws developed over a long period of time; suggesting that Colonial laws and statutes are invariably superior to tried and time tested indigenous ones. The study will take into account the fact that invariably the people most affected by the sweeping changes made by both Colonial and the post-Colonial Government in India, have usually been the tribals and other forest dwellers who have traditionally kept a balance between human needs and ecological imperatives and preserved forests as a resource of posterity. 8

The fifth chapter ‘Management of water resources’ concerns the central part of the study; it evaluates the post colonial environmental and water policies and laws, and makes an appraisal of the socio-economic impact still felt in the country made by the policies and laws of a foreign British Government. This study will deal with the nature of the integrated environmental and water policies and laws imposed on a colonized India by a foreign British Government which continues to play a dominant role in academic debates; more so because of the lingering socio-economic impact still felt in the country. The study concludes with the final ‘conclusion’, a write up in which the whole study is summarized.

8 Fernandes has dealt extensively on the symbiotic relationship of the tribal’s and forest, and the related cosmology. W. Fernandes, ‘Forests and Tribal’s: Informal Economy, Dependence and Management traditions’, (eds.) Mrinal Miri, Continuity and change in tribal society.
STATEMENT OF THE PROBLEM

A distinguishing feature of the traditional Naga Society is the unique well-developed social structure with mature, resilient, egalitarian and heterogeneous networks that underpin and sustain community activities. The Naga Villages usually claimed unrestricted right over forests and resources. Each tribe had rights over well defined areas of forest, hunting grounds and fishing spots. Networks of social interaction were created and reinforced through the activities of everyday life and cultural rituals, creating interpersonal ties and affirming community boundaries. For instance, perennial natural springs were considered as something more or less magical, with therapeutic value, and therefore associated with exceptional purity. These springs which had religious connotations also, are still an important part of traditional purification rituals during local festivals.

With the coming of the Colonial Government, the Village communities were no longer left to manage their affairs without direct or indirect supervision. The Government meddled in petty issues of all types. For example, the Government forbade the felling of alders in Jhum fields and ordered their preservation in the Pollarded form. In another instance, the administration forbade fishing with cast nets in the Doyang and Bagti rivers. The transplanted regulations created a totally new dimension in forest laws for the Naga Villages, as it carried both the old and new elements.

An endeavor of this study will be to explain the traditional management of water resources. It will define interpretations of water rights and ownership of various Naga tribes, issues leading to water conflicts; the changing economic and social ties and relationships emerging from the water policies and projects of the Government during both the Colonial and Post Colonial period. The later changes brought about by Colonial intervention in the unrestricted right of Nagas over water and other resources have been a continual focus of the study. It will help to understand how the statute laws and state control imposed in the arena of forest and water management reinforced each in their development and growth of an intrusive state; thereby undermining indigenous and community based systems of water rights and management over its resources. In order to determine as to what generated the interest of the Colonial State towards the apparent steps for conservation and forestry
regulations; a variety of questions to be analyzed in the backdrop of social, economic, political and administrative context of the pre colonial and colonial Naga Hills District are: Was their motive simply for ‘Civilizing’ a peoples group hitherto known for their wild, savage ways or was their motive of a more complex nature. Just how far did the Colonial administration and its policies undermine the native social and cultural superstructure all built on the forest base? Did the promises of reformative polity and a cohesive society and resources usually prove to be illusory? Coupled with these is the question of whether, simply, the target levels of benefits had ever been achieved uniformly all over Naga Hills? Most importantly, it will attempt to explain the response of the natives towards these developments and also the degree of shift from the traditional management of water resources in both the Colonial and Post Colonial Period. It would take into consideration how the Naga villages were compelled to make new adjustments to their traditional authority over water resources. It will also address the issue of whether commodification and contestation of water began when traditional rights of the clan, tribe, and village over the water resources were disturbed by the Colonial Government.

REVIEW OF LITERATURE

Although, globally speaking, environmental history may be said to have come to age in recent years, in South Asia it remains by and large in its adolescence. Environmental history in this region has yet to develop a firm intellectual base, a solid scholarly foundation. Since this study attempts to deal with a variety of key issues, such the role of forest and water resources in shaping the history of Nagaland; for the purpose of understanding the exhaustive nature of the subject, a wide variety of published literature has been consulted as a useful source of information on historical, political and administrative matters, and the society and culture of the Nagas. Archival sources have also been consulted, where necessary. In view of the fact that in the context of Nagaland, practically no work devoted to environment history exists; information and statistics required for the study have been acquired as a result of consulting a large number of official reports and documents.
Global literature

For a comprehensive view of environmental history and to taper it down specifically to the India context, a wide range of works by eminent environmental historians have been consulted. Hughes, J. D. (2001). *An Environmental History of the World: Humankind's Changing Role in the Community of Life.* J. Donald Hughes writes extensively on nature's role in the unfolding of human events. This book places humans within the community of life and views the correlation between humans and the environment. He emphasizes the importance of environmental history and argues for its importance in understanding the present state of the world's ecological problems. Since the field's inception in the early 1970s, both in the US and Europe the focal point of most environmental histories has been on regional or national issues. This book exhaustively deals with how natural forces and resources have shaped societies on a global extent and about the reciprocal relationship shared by people and the environment. He specially points out the giving and taking between the two elements, but often in imbalanced amounts. While numerous studies tend to emphasize either human impacts on the environment, or environmental influences on social behavior, Hughes depicts a tidy interrelationship between the two.

Krech, S., Mcneill, J. R., and Merchant, C. (eds.) (2004). *Encyclopedia of World Environmental History, 3 Vols.* The three-volume set is an analytical handbook of natural phenomena and events and their impact on human societies. Many articles in the encyclopedia are written in a spirit of commonality with environmentalism, but without dogmatic commitment to any one specific school of environmentalism, therefore it is useful both for environmentalist and environmental historians since it offers a chronological overview of extensive and authoritative historical coverage on how human beliefs and actions have altered the natural world, but also covers the latest advancement in the field.

Simmons, I.G. (2008). *Global Environmental History.* Simmons follows a multidisciplinary approach and with a humanistic perspective furnishes an enormous amount of details, theoretical concepts, and trends. With a time frame ranging from 10,000 BCE to the modern day to present, he brings under consideration how human technological evolution changes over the years have affected the natural world and goes on to assess the response to conditions such as climate change. By putting
today’s environmental preoccupations into a long-term perspective, Simmons reveals the history of some current anxieties. The book provides an incredibly rich and deep time overview of how we have come to our current state of ecological crises.

Grove, R. (1996). *Green Imperialism: Colonial Expansion, Tropical Island Edens and the Origins of Environmentalism, 1600-1860 (Studies in Environment and History).* This is an extremely important work as it documents the origins and early history of environmentalism with a focus especially on its hitherto unexplained colonial and global aspects. The writer perceives the course of environmentalism as a two-way process, and makes the scrutiny from a colonial perspective but in addition sees it in terms of how that perspective was shaped by the diverse climates along with ecological regimes encountered by the colonizers. This book is an important source as the author diverts environmentalism from its modern North American focus by locating it in the colonial experience and by reminding the readers that environmental and conservation issues are not new but that some modern ideas have historical antecedents far back in the past. It is a book which gives detailed attention to other parts of the globe, in particular to those whose history has been shaped by imperialism.

Radkau, J. (2008). *Nature and Power: A Global History of the Environment.* Radkau, a German historian, writes this book on environmentalism from a predominantly European approach but its reach is truly global as it covers an astonishingly rich outline of many of the central themes of environmental history. His strength is in his approach to the theme of environmental history made somewhat with skepticism and some apprehension about grand generalizations on large scale projects and their exaggerated assertions and sometimes stereotypical conclusions. The key argument that he puts up is that human ecological behavior and thought has been shaped in profound ways by the scale on which human relations with the environment are managed, a subject whose historiographical and political significance is becoming more and more evident. Another one of the author’s fundamental theme is that sometimes the solutions created the greatest dangers. In subtle approach this theme of the perils of sustainability is present all through. He argues that human ecological behaviors are often most destructive when best aligned with the cycles and rhythms of the natural world. He makes a contrast between the North American environmental
historians who have been fascinated by the idea of abundance in the wilderness, unlimited resources and spaces not yet touched by humans and open to exploitation (or protection), and German historians who have focused their scholarship on a more anthropogenic and more limited ‘natural’ world in which the problem of sustainability was always present. Another, distinctively German quality of the book is its sensitivity at every point to the politics of environmental issues. One of the main focal point elucidated by the work is that human relations with the environment are mediated by power relations.

McNeill, J. R. (2001). *Something New Under the Sun: An Environmental History of the Twentieth-Century World (The Global Century Series).* McNeill reconstructs the environmental history of the world over the past hundred years by stressing on the synthesis of humanity's relationship to and modification of the environment during the 20th century. The history he presents is one of causes and consequences; he interprets the human impact on the earth politically, economically, and socially, noting the influence of history and ecology on each other. His claims are substantiated by alarming evidence he presents in this comprehensive and balanced survey. His arguments are important because it reiterates the role and development strategies of humanity as having a massive impact on ecosystems, a key contributor in making the environment ecologically unsustainable thereby perpetuating environmental disturbance. He contends that these strategies may be extremely damaging in the long run to the ecology. The book is also important to have a reference point to comprehend within a capsule history of the environmental movement, gauging its successes and influence.

Beinart, W. & Hughes, L. (2009). *Environment and Empire.* W. Beinart and L. Hughes writes a pioneering work on the environmental history of the British Empire, with ample attention on the former British Empire's interactions with different environments in locations such as Africa and India. A case they underline is that Imperialism was inseparable from the history of global environmental change. The writers illustrate various environmental themes in the history of the British Empire stating that the social and political issues were related to environmental change. But the fundamental theme of the book is the tension between exploitation and conservation; stating that the British colonists sought to regulate natural resources and
at the same time commodify items. This book is significant as it highlights the adaptation of key issues like conservatism, commodification, in the context of the natural resources of British colonies. This study concludes with a focus on political reassertions by colonised peoples over natural resources. The authors in a post-imperial age have found a new voice, reformulating ideas about nature, landscape, and heritage and challenging, at a local and global level, views of who has the right to resources.

Boomgaard, P. (ed.) (2007). *A World of Water: Rain, Rivers and Seas in Southeast Asian Histories*. This book contains essays representing a wide range of approaches to the study of Southeast Asia with water as the central premise. It symbolizes water as a means of change and as an element playing a most significant role shaping the history of Southeast Asia, and its cultures, societies, and economies. The importance of this work is its special focus on water, especially in the context of South East Asia. Although the case of India is not captured specifically in the essays, it gives examples of other Southeast Asian countries having a commonality in multifaceted water issues such as Water rights and conflicts, Privatization of water, environmental and water pollution, Water hazard and society, waterborne diseases etc. This study is a good precursor to understand the historical ecology and culture of Southeast Asia, from 1600 A.D. till modern times.

**Indian Literature**

In the all India context several pioneering publications on environmental history are listed below. Guha, R. (1989). *The Unquiet Woods: ecological change and peasant resistance in the Himalayas*. This is a pioneering work and sets the agenda for literature on the environment as a critique of colonial policies. Guha painstakingly documents the nature of peasant society and aspirations found in the Chipko movement in the Himalayas against commercial forestry which dates from the earliest dates of state intervention, i.e. the closing decades of the nineteenth century. His work although on the conflict between state forestry and the peasantry who lost their traditional rights over the surrounding forests, also casts a reflection on similar issues played out (with variations) in other regions of the subcontinent as well.
Guha, R. (2000). *Environmentalism: A Global History*. Guha mentions the various facets of the environmental movement worldwide and three district schools within the movement. This has been helpful to understand how the environmental historians of India have certain themes in preference to others in writing environmental history.

Gadgil, M. & Guha, R. (1992). *This Fissured Land: An Ecological History of India*, in its third chapter, specifically reflects on the ecological change and social conflict in India brought about by British conquest and control and the evolving environmental debate which begun as a result of the British attempt to assert state monopoly through the imposition of the Indian Forest Act of 1865 and the revised and more comprehensive and stringent legislations that followed over the years. This point is important to note because the protagonists of the earlier debate put forth arguments strikingly similar to those advanced by participants in the contemporary debate about the environment in India.

Gadgil, M. & Guha, R. (2000). *The Use and Abuse of Nature* in its omnibus edition, has *Ecology and Equity*, a book which is important in that it speaks of the resource use and abuse in a post colonial India; it explores the history of Indian economic development in terms of the contest over resources between socio-ecological classes. It addresses the environmental movement in India which begun in the early seventies, having a dominant debate on the forest related conflicts. However, the significant aspect of the book is that it also brings to attention prominent movements in the 1980’s and 1990’s, such as the Narmada Bachao Andolan and the Kerala fisherfolk struggle which brought the question of appropriate uses of water and fish to centre stage. The authors provide a mapping of resource conflicts in contemporary India: conflicts over water, fish, forests, minerals and so on. Moving beyond protest, the book explores the activities of groups and communities that have been engaged in ecological restoration.

Arnold, D. & Guha, R. (eds.) (1995). *Nature, Culture, Imperialism*. David Arnold and Ramachandra Guha, introduces reflective essays by eminent historians on the role of both forests and water which has played an important role in shaping of South Asian history. In their own different ways, virtually all the essays in this book examine and address the significance of the state as a leading, often, the principal, actor in the environmental history of South Asia. The essays also highlights the
powerful influence of colonial and post colonial states in environmental change by formulating legislation pertaining to, and assuming control over resources which were earlier under more informal and decentralized systems of management; by developing and implementing technologies that have dramatically altered the physical environment, as in irrigation works and dam construction; and by creating a transport and communications network that, in aiding the process of commodification, has greatly increased the spatial scale of resource flows.

Grove, R.H., Damodaran, V. and Sangwan, S. (eds.) (1998). Nature and the Orient: The Environmental History of South and South-east Asia. Richard Grove, Vinita Damodaran and Satpal Sangwan launches a series of essays by eminent environmental historians who seriously examines the development of colonial discourses about nature, risk and control of natural resources such as forests, soil, water and animal management. Similarly, it also presents an appraisal of the indigenous response to changing patterns of environmental control, both under colonialism and post-colonial period.

Tucker, R.P. (2012). A Forest History of India. Tucker describes the history of forest use in India in a collection of articles. The author documents Indian forest history from the colonial era to the post-independence legacy. The main highlight of the book is to stress first, the tension between the subsistence needs of the local population and the commercial needs of the local population and the commercial needs of the colonial state, and second, the clash between the forest department, which sought to preserve and manage forests, and the revenue department, which was driven by the need to expand agriculture and industry. It contributes significantly to the understanding of the colonial legacy for post-Independence management of India’s natural resources.

McNeill, J. R., Padua, J.A., Rangarajan, M. (eds.) (2010). Environmental History. This collection presents writings on ecological economics and environmental history. It answers questions of environmental historians as to when and how humans have reshaped the earth and in turn how nature has influenced human choices. It addresses concerns as how economic and ecological processes are inseparable.
Mahesh, R. & Sivaramakrishnan, K. (Eds.) (2011). *India’s Environmental History*, (Vol. 1 & 2). Mahesh Rangarajan, and K. Sivaramakrishnan, is a competently written colossal work covering India’s Environmental history within a two volume set. It is academically sound and being ambitious in its approach, wide in scope covering a chronological time period from India’s ancient past to Colonial times. The first volume From Ancient Times to the Colonial Period, pertaining mostly with India’s ancient ecological history starting from the Harappan civilization closes with the coming of the East India Company. The second volume Colonialism, Modernity and the Nation, holds more recognizable and current issues. The two very distinct features are the relentless documentations of colonial deforestation, and the impact of this deforestation on the people of India. Thus, these two volumes are essential as it provides critical inputs to those concerned about land management, forests, forest rights and climate change.


Joy, K.J., Gujja, B., Paranjape, S., Goud, V. and Vispate, S. (eds.) (2008). *Water Conflicts in India: A Million Revolts in the Making*. The book provides an important contribution to a new discourse on water in general, and water conflicts and water resolution in particular. It gives numerous specific examples of between uses and users at different levels, ranging from individual systems to sharing of waters among riparian in interstate and international river basins. They highlight the varied nature of the conflicts between uses and users and between beneficiaries of projects and those adversely affected. It gives the various reasons for scarcity and numerous conflicts, including growing demand and changing composition, overestimation of water availability, defective project design compounded by poor water management, deterioration in water quality, and mining of sand from river beds. The papers also gives an idea of the ways in which conflicts at different levels are attempted to be resolved, and the fact that these are far from being effective. An important
contribution is found in chapter eight where the focus is on privatization and commodification of water in India.

Cullet P. and Koonan, S. (eds.) (2011). *Water law in India*. Philippe Cullet and Sujit Koonan, brings the various segments of key legislative instruments and policy documents, to provide an overarching picture of the legal regime and regulations related to water in India. Besides discussing the policy framework for the use of water in India, It also brings out the complexity in the structure of laws due to variations at the levels of their implementation. It covers a wide range of issues such as centre-state relations, management appropriation, and control of water; irrigation; sanitation; drinking water; ground water; pollution; and other such issues.

*Water Management across Space and Time in India* by Naz, F., Saravanan V. and Subramanian, attempts to give a spatial and temporal overview of water management in India. It traces how people and the successive regimes made choices across space and time from a wide range of water control and distribution technologies. The water management in India is divided into four periods: (i) the traditional system of water management before colonial times; (ii) response from the colonial rulers to manage the complex socio-ecological system; (iii) large scale surface water development after independence; and (iv) the small-scale community and market-led revolution. Hence it describes the water management over the four periods, which has transformed the irrigation and water management scenario in India. Moreover it shows how development of water management and its practices are linked with the social, religious, economic development with the rise and fall of the ruling regime.

Gaurav, D., Rehmat, Dharmadhikary, S. (2002). *Water: Private, Limited. Issues in privatization, corporatization and commercialism of water sector in India*. This deals with issues in Privatisation, Corporatisation and Commercialisation of Water Sector in India. The work is important as it monitors the key trends and their implications. It also provides a framework and some data about water privatisation and commercialisation in India.

Despite the importance of the need to study the forest and environmental policy of the colonial period, available literature is scare and far in between. Since the colonists placed Naga Hills district under Assam province till 1881, it has been important to
trace the genesis of colonial interest in the region by consulting literature covering British policy in totality in Assam province. In important works such as Barpujari H.K., (eds.) (1993). *The Comprehensive history of Assam, Volume V.* no reference is made to the forest policy and administration of the British Colonial government. Other scholarly efforts include Bezbaruah, R. (1981). *The Pursuit of Colonial Interests in India’s North East,* which endeavors to discover and scrutinize the under-currents that had shaped British Policy towards the peripheral areas of India’s North- in the late nineteenth and early twentieth centuries’. The author makes an observation that colonialism bargained only with those who had the potential either to bestow benefits or inflict injury to its interest. However, no specific mention is made about environmental issues or policies in the region. Goswami, S. (1987). *Aspects of Revenue Administration in Assam,* in his work Shrutidev Goswami has made a noteworthy attempt to study the importance of forest as source of revenue for the British in Assam. Nonetheless this study, on revenue has not gone further than 1874.

It has only been in recent years that in Northeast region where such studies have been of a negligible nature, several historians have made significant contributions to environmental history of the region. Saikia, A. (2011). *Forest and Ecological History of Assam, 1826-2000,* deals exhaustively with the transformation of Assam’s forests and ecology and it locates present day ecological conflicts in the colonial era when contests over forests, land and resource began to take new shape. The important detail about this book is that the author shows how imperial forestry practices led to changes in traditional resource utilization patterns. It also examines the political economy of conservation practices and argues how the making of forest policy in the post colonial period was defined by the complexities of the political matrix. A.C. Sinha in his book (2012). *Colonial Legacy and Environmental Crises in North East India* presents a historical and contemporary analysis of the environmental resources and examines the colonial legacy in forest management and identifies the contours of environmental crises in the Northeast India. In *British Forest Policy in Assam,* (2004). Rajib Handique makes an analysis of the British Forest Policy in Assam from 1864-1947. It traces the genesis and advances of the British Forest Policy and in addition examines the socio-economic and environmental impact of the policy on the people as well as the state as a whole.
B.B. Ghosh, J.B. Bhattacharjee, D.P. Chaudhury, B.B. Mishra have written extensively on the administrative history of the North East and Nagaland.

The existing literature on the Nagas is generally attributed to the colonial administrators, the missionaries and anthropologists of the late nineteenth and early twentieth centuries. Most of the themes have focused on: British Policy and administrative measures, the society and culture of the Nagas, and the introduction of Christianity and its effects in Nagaland. Tour accounts were compiled by Verrier Elwin in (1969) *The Nagas in the Nineteenth Century*. Later J.H. Hutton published his seminal monographs, *The Angami Nagas*, (1921) and *The Sema Nagas*, (1921). J.P. Mills also published *The Lotha Nagas*, (1922) *The Ao Nagas*, (1926); *The Rengma Nagas* (1937). Although over the years more Indian and indigenous writers have added to the scholarship, their works do not exclusively deal with the concerned subject. Piketo Sema’s (1991) *British Policy and Administration in Nagaland, 1881-1947*, gives a general description on British polity. Atola Changkiri’s work on (1999) *The Angami Nagas and the British 1832-1947*, is a work on the relationship of the Angami Nagas with the British. Alemchiba Ao’s work, (1970) *A Brief Historical Account of Nagaland* and Milada Ganguli’s work, (1984) *A pilgrimage to the Nagas*, are of the descriptive type. In the context of Nagaland, books on environmental history are extremely rare to find as interest in the subject is a recent development only.

The only published book on the concerned subject is by Pushpanjali Deori on the (2005) *Environmental History of Naga Hills 1881-1947*. The author highlights the changes brought about by colonization and the evolution of the colonial discourse on deforestation and climatic change and the policies behind Colonial conservatism. Another aspect underlined is the Colonial Ecological hegemony and the popular tribal resistance, in the Indian context. Over all, the work is useful to have an overview of the particular subject but conceptually it is narrow in its scope as it misses out a wider focus on the symbiotic relationship shared by the Naga tribes with nature and the degree to which the local environment has been shaped, both by design and by accident. Since her focus is predominantly on forest history, except for a few fleeting mentions, water as a subject has generally been overlooked in her work.
Water has been commonly mentioned in works by geographers like Soyhunlo S. (2013) in *Geography of Nagaland* and in essays by a few environmental activists with focus on ecological preservation. Nevertheless, it is evident that there is a dearth of written works on the subject of water from Nagaland leaving the field wide open for researchers to fill in the gap by writing about the multiple facets of water, its changing value and the role water has played to influence and shape the history of the Naga tribes.

**CONCEPTUAL FRAMEWORK**

The scope of this study would require a method that can apply to several dimensions of the ownership and uses of forest resources by the Naga society. Desiccation, Deforestation, Conservation, Endemism are useful concepts for the study of the topic under consideration.

**RESEARCH HYPOTHESES**

The study adopted the following hypothesis:

Colonial intervention in the unrestricted right of Nagas over water and other resources had a deeper motive more complex than that of conservation and other regulations.

Contestation of water began when traditional rights of the clan, tribe, and village over the water resources were disturbed by the Colonial Government.

**AREA OF STUDY**

The study “An Environmental History of Nagaland with reference to water resources 1881-2005” is an attempt to cover the degree of transition and complexity of changes involved from the Pre-Colonial, the Colonial to the Post Colonial Period over water resources and management; and for this purpose case studies of Kohima, Wokha, Mokokchung and Mon districts has been carried out. In the four districts mentioned, the district headquarters as well as few important villages have been covered by the researcher in order to have a representative sample.
OBJECTIVES

The aim of the study is to evaluate the Environmental history of Nagaland particularly water resources, both in its material and perceptual sense. A typical village in Nagaland often had exclusive access to a particular species, resources or territory (including water resources), with this individual ‘niches’ usually having a limited overlap. An attempt has been made to analyze the subject not just from an ecological standpoint but also from popular perceptions and experience based on Naga folk traditions and religious beliefs.

1. To study the role of forest and water resources in shaping the history of Nagaland.

2. To study the traditional management of water resources.

3. To study the Colonial state intervention of traditional forest and water management.

4. To study the introduction of new Colonial forest regulations and legislation.

5. To explore the conflict and contestation of water resources after the Colonial intervention.

6. To analyze the water resources in the Colonial and post Colonial period with respect to their availability, accessibility and maintenance.

METHODOLOGY

This study consists of literature review in order to study and identify the importance of forest and water resources at the local, national and international level to acquire a general understanding of the general aspects which necessitated the need for this study. The study involved data collection: both primary and secondary sources besides archival and governmental records keeping in view the Aims and Objectives of the study. Primary sources of data were obtained by using questionnaire technique as the main research tool and other relevant methods according to the field situation. Primary information necessary for this study has been sourced out mainly from data collected and analyzed through various absorbing interviews and questionnaires from four main case studies of Kohima, Wokha, Mokokchung and Mon districts.
The collection of secondary data consists of the reviews of relevant literatures, books, journals and magazines, newspapers, research papers and survey conducted by various organisations, published and unpublished articles, and government records and through internet. It also includes data analysis and identification of planning and research issues. Apart from this, oral histories on water resources are reflected with other sources of information. Since the study was conducted to explore, examine and analyse the management of water resources against the backdrop of the colonial intervention, the approach throughout the study was analytical and evaluative.

**Sampling Frame**

Simple random sampling was used in this study and questionnaire was applied as a technique for collecting data. Here both open and closed ended questionnaires were used. The sample size consisted of 300 hundred respondents both male and female, covering four tribes namely Konyak, Lotha, Angami and Ao tribes. The sample was an adequately representative study of the universe, fair and balanced to be free from bias and prejudice.