CHAPTER ONE

INTRODUCTION

1. The Problem

The critical relationship between man and forest has for long been the theme of intense debates among various conservation theorists and activists. The objective of the present work is to study this relationship between wildlife and the human beings in the context of the conflict between the conservation initiatives of the state and the livelihood necessities of the community in the specific context of a forest area in Assam.

2. The Theoretical Framework

Notwithstanding the progress it has achieved, mankind today is faced with massive existential challenges arising out of its skewed interaction with the environment that has resulted in large scale devastation of natural resources. In response to this crisis situation, the recent years have witnessed an unprecedented environmental consciousness all over the world. This consciousness has resulted in the establishment of an increasing number of protected areas (PAs) with a strong ‘preservationist orientation’ adopting the ‘people out approach’ (Ghimire and Pimbert 2006). This approach has understandably faced severe criticism from many others as being anti-people and unsustainable (Saberwal et al. 2001; Saberwal and Rangarajan 2003; Shahabuddin and Rangarajan 2007; Kothari 2003). They also point out that many of the traditional forest dwellers have been having a symbiotic relationship with forests and in the process also contributed toward its preservation. In view of such opposite stands, it becomes imperative to examine the man-forest interactions particularly among those who are living in and around the PAs. This study will make an attempt in that direction. It aims to throw light on an appropriate and viable model of forest conservation.

What really ails the PAs in the recent context? The dangers pertaining to poaching, illegal trade in animals and animal parts, surreptitious removal of timber, development projects, etc are all posing serious threats to the natural ecosystem and it is against these that the areas need to be protected. But more pervading and conspicuous threat is the presence of
human settlements and their activities in almost every PA in the country (Gole 2001, 150). In this context, the moot question that arises is related to the issue of human settlements in the forest areas which have been inhabited in India by the forest dwellers. In the post-independence period, NPs and other PAs are seen as important instruments for the conservation of biological diversity. This conservation in its true sense of the term considers human settlements in and around the parks and reserves as nuisance to wildlife and the general notion is that these communities should be removed from there (Ghimire and Pimbert 2006, 11-15).

Significantly, most of the forest Acts and policies are designed in such a way that they do not include the perspective of the forest dwelling communities into its fold. The forest Acts both during the colonial and post-colonial periods failed to consider the age-old rights of these communities over forests. In the process, rigorous attempts have always been made to keep forests as an ‘isolated entity’. Pravin Sheth points out that the forest laws and administration, during both the pre and post-1947 regimes were characterised by the rulers’ perceptions that the local communities lack knowledge of and capacity to manage the land on which they live for centuries. Such a pattern of forest management has alienated the local forest dwelling communities from forests. Deprived of their sense of belonging to the forest, they lost their stake in conservation. On the other hand, the urban consumer and the industrial interests like pulp and paper mills and forest contractors who exploit the forests of their wood, deep and green, only for commercial interests, have no stake in forest conservation (1997, 105-106).

The PAs have now become a major source of tension between the local people and the state which has brought about considerable changes in the pattern of man-forest interactions. Archana Prasad in Environmentalism and the Left: Contemporary Debates and Future Agendas in Tribal Areas contends that forests are a site of conflict between the indigenous forest dwellers and the state. The major aspect of this conflict is witnessed in the problems arising out of the government’s forest conservation programmes emanating from the state’s monopoly control of forest since the nineteenth century (2004, 58). By bringing the forest land under government control – a process which continued even after independence – the state conservation programmes intend to move the local
communities out of the forest areas for conservation. But the major concern that arises is -- where will these people go if they are displaced from their traditional habitats?

Ghimire and Pimbert observe that a study of 171 NPs and sanctuaries conducted in India in the mid 1980’s found that there were 1.6 million people living in 118 parks that were inhabited. By 1993, some 600,000 tribal people were already displaced (2006, 7). This number has increased manifold by now. India’s conservation experiences show that the alienation of the communities living in the forest areas has resulted in serious conflict with the conservation strategies of the state in the post-independence period. This has given rise to many debates among the Indian conservationists on the question of devising right strategies for long-term conservation goals and the place of the local communities in conservation (Ghimire and Pimbert 2006; Sachchidananda 2004; Guha 2006; Gadgil 2001; Shahabuddin and Rangarajan 2007; Kothari et al. 1998; Saberwal and Rangarajan 2003; Saberwal et al. 2001).

The People-wildlife debate has long dominated the conservation discourse in India. The traditional wildlife conservationists contend that forests should be protected as an ‘isolated entity’ without the people. The other group of conservationists argues that people must be considered integral to the conservation process. The former view, defined as the ‘wilderness view’ (Kothari 2003, 1) believes in the preservation of natural habitats within the PAs by purging of any form of human interventions. It aims to create ‘people-free zones’ in and around the parks, considering humans as outsiders to the natural ecosystem. This is perceived to be the best way to ensure protection to forests and wildlife. The wildlife enthusiasts support this strand. Thapar and Manfredi, for example, contend,

One of the primary reasons for establishing non-use forest areas, or National Parks, is because virtually any form of sustained human activity results in serious modifications of the natural environment whether in watershed regulation, soil erosion, agriculture productivity or climatic change. Such modification can seriously upset a balance and cause severe stress for man. (1995: 28)

Tiger Conservationist K Ullhas Karanth, another advocate of the ‘people-free’ approach to conservation contends,
Environmentalism is primarily concerned with the goal of making the world a better place for us human beings. Consequently, for environmentalists, wildlife conservation occupies only a narrow band within a wider spectrum of people-centric issues. Social activism is even further removed from wildlife conservation concerns, because the ‘rights’ of a single species, *Homo sapiens*, are central to its agenda. (2008: 273)

He further asserts,

The cumulative effect on wildlife of the ‘sustainable use’ paradigm shift has been disastrous in India. Even as demographic and social pressures on the nature reserves have mounted, and international trade and commerce in endangered species boomed, official wildlife protection mechanisms have gone into serious neglect and decline. By the late 1990s, India’s wildlife reserves had perhaps lost about 60 per cent of the protective capabilities that existed a decade earlier. Although numerous social factors have contributed to this decline, the seductive siren song of ‘eco-development’ was the most crucial element...The threat of habitat degradation arises when contiguous habitats are fragmented by intrusion of human settlements, roads, railways, or pipelines...human impacts on habitat quality are obvious: an area overgrazed by livestock may support lower densities of wild ungulates than an area without cattle; a forest that is heavily logged for timber may be an inferior habitat for rainforest primates. In other cases, such effects are less obvious. The long-term consequences of the exploitation of non-timber forest products like fruits, leaves, bark, root, gum, resin, rattan, and bamboo can be particularly insidious...The impact of human disturbances on wildlife habitats is often cumulative...Yet such non-timber forest product collection is often blindly touted as a ‘conservation solution’ by many conservationists. (2008: 276-279)

This approach informs conventional environmentalism and the formation of NPs and sanctuaries with the aim of preserving wildlife and biodiversity by the post-colonial Indian state reflects this view (Prasad 2004, 12). It upholds a conservation regime which believes in protecting forests and wildlife by excluding the local forest dwellers through fences and fines or ‘guns-and-guards’ approach (Kothari 2003, 2).

Contrarily, the other group of conservationists argues that communities must be considered integral to the conservation process. They plea for a more democratic system of park management in which the voices of local communities can be heard loud and clear (Guha 2006, 140). Saberwal et al. (2001) suggest that the crisis with the Indian conservation scene today is located within the exclusionary policy. The forests across India have remained the habitats for a large number of indigenous communities for ages. The settlements were formed not only in the fringes of the forests but also deep inside
them. These communities have also evolved certain practices with regard to the use of land and other resources within forests for their survival. Their alienation from forests by the state conservation policies has only undermined the latter. Smuggling and poaching in the PAs have increased. Alienation and lack of access to forest resources for livelihood has resulted in local hostilities to conservation strategies and regular clash with the forest officials. Prasad also explains how forests have become a site of conflict between the forest dwellers and the existing conservation regime premised on its monopoly control of the forests since the nineteenth century (2004, 58).

A large body of contemporary literature on conservation has developed as a critique of the exclusionary state conservation policies and the majority of the critics are concerned essentially with the livelihood question of the locals and the necessity of making them partners in conservation. There are very few works either by academics or activists that seem to support the ‘wilderness’ or the ‘park-centric view’. This, however, has still somewhat remained a dominant approach of the post-independence Indian state which has been always exclusive of local communities’ specific livelihood patterns and their traditional institutions, beliefs and practices. Various conservation policies and Acts in the post-independence period amply reflect this view (as discussed in the subsequent Chapters). Although the Forest Policy of 1988 set the stage for participatory forest management in the country through the introduction of the JFM, there is little to be seen in terms of its success.

The newly enacted FRA 2006 has brought about a significant shift in the erstwhile exclusionary conservation approach of the state toward a people-oriented participatory conservation. This Act is considered a new beginning in the way forests are to be managed. For the first time in the history of forest conservation, vital changes are made in the policy structure for recognising the long denied rights of the forest dwelling communities. The implications of the Act are discussed in detail in Chapter Five.

At this juncture, question arises as to – the forests are for what and for whom? Whether the issue of conservation since independence has really been addressed in the right perspective? Or what would be a viable (and sustainable) model of conservation that
would benefit society, wildlife and the forests? In this context, it is important to examine the very basis of the approach to conservation in the present times.

In the light of these theoretical positions, this study examines the issues of conservation and livelihood vis-à-vis the changing human-wildlife interface in two forest villages (FVs) located in the buffer area of the Nameri Tiger Reserve (NTR). It historicises the formation of the forest settlements in the area and then throws light into the local forest dwellers’ sources of livelihood, dependence on forest and responses to various conservation initiatives to explicate the specific nature of human-wildlife relationship in Nameri in particular and Assam in general.

3. Environmental Sociology
3.1 Its Emergence as a Discipline
In the recent years, discourses on environmental issues and concerns have gained in immense importance. The studies on environment have come to dominate significant place in the arena of social thought. Various disciplines are incorporating environmental issues into their core paradigm as a response to the challenges raised by global environmental crisis. The contemporary environmental problems reveal how the subject matter of various disciplines (for example, history, sociology, anthropology, ecology, geography, economics, biology, etc.) has changed over time. They share close disciplinary boundaries in the study of global dimensions of resource use as well as environmental problems and policies. In this context, sociology too, has made a dramatic progress with the growth of its sub-field of environmental sociology in the 1970s and again after a period of quiescence in the late 1980s and 1990s (Foster 1999, 367). However, the study of the environmental problems gained momentum only after late 1980s and 1990s (Ibid). Environmental sociology has seen many phases of development as a full-fledged academic discipline.

Environmental problems like global warming, desertification, large-scale deforestation, etc not only pertain to scientific causes and consequences but also concern a wide range of sociological underpinnings too. In other words, these problems are not only problems of technology and industry, of ecology and biology, of pollution control and pollution
prevention, they are also social problems. Since it is seen that the utilisation of natural resources is totally dictated and appropriated by human beings, issues and problems concerning the environment are mainly determined by social factors. Therefore, environmental sociology is defined as the study of societal-environmental interactions. The discipline focuses not only in the relationship between society and environment, but also place special emphasis on studying the social factors that cause environmental problems, the societal impacts of those problems, and the efforts to solve the problems (See Munshi 2000; Hannigan 1995; Sundar and Muthukumar 2006, Bell 1957). The focus of environmental sociology is on the study of both built as well as natural environment.

The built environment that we see around us refers to all those man-made and tangible settings which people create for their comfort and which can be repeatedly used. The Earth is not only marked by its natural features (mountains, deserts, forests, rivers, oceans, etc.) but also by large numbers of built environments constructed by human being to suffice their needs. The environmental sociologists are showing increasing interests to the study of urban-industrial settings and the patterns of change in the interactions between man and their physical environment. The natural environment represents the realm which is outside human control. For example, forests and other natural settings constitute the natural environment (Dunlap et al. 2002, 2-6).

The environmental sociologists are more concerned with assessing human interventions into the natural environment as well as the dynamics of human-environment interactions. They also study a multiplicity of ways in which these relations are often influenced by various socio-cultural as well as socio-economic processes. This implies two very significant points of human existence: human beings as part of the larger ecosystem on one hand, and humans as creators of unique and distinctly social environment on the other. Frederick H. Buttel termed this as the ‘inherent duality in human existence’. Further, Buttel and Humphrey observe that this double determination and especially the social significance of dependence on and interaction with the natural as well as built environment, represents the uniqueness of the field (Dunlap et al. 2002, 15).
Environmental concerns grew among the people along with the Protest Movement during the 1960s. The New Social Movement in the 1960s marked a radical criticism of industrialism and the capitalist expansion in various parts of the planet, including the United States, accentuating the need to investigate the environmental problems (Sundar and Muthukumar 2006, 5). The emergence of environmental sociology as an academic discipline has its roots in the field of human ecology. According to Buttel and Humphrey, "(H)uman ecology as a field can be defined as the study of structure and change in sustenance organisations or resource groups which support human populations within dynamic and constraining environments. It focuses on patterns of activities for sustaining human populations, their functional relationships, and temporal change in their level of complexity...The nature of organised sustenance activities, of course, involves more than productive organisations, supplies of natural resources, and other limits encountered by growing human populations" (2002, 37). It has played an important role in the development of environmental sociology.

Human ecology had remained dominant within urban sociology from 1920s to the 1960s. The urban ecology model was introduced during the 1920s and 1930s by sociologists Robert Park and his colleagues at the University of Chicago (Hannigan 1995, 16). The American sociologists Park and Burgess were heavily influenced by the works of Charles Darwin. In their study of urban ecology, they used Darwin’s work-'Web of Life', whereby the active principle is the 'struggle for existence'. According to this principle, the human interventions in the form of urban development and industrial pollution have disturbed the natural ecological balance, thus intensifying the 'struggle for existence' (Hannigan 1995, 17; Buttel and Humphrey 2002, 39).

Although, human ecology as a field of study has its own limitations of focusing only on competitive cooperation in the spatial organisation of urban populations, a number of sociologists re-worked the conceptual basis of the field during the 1950s and 1960s. Consequently, it came to be known as the study of interrelations among four major properties of human ecosystem: population, organisation, environment and technology, which are often designated as components of a 'POET' model by O. D. Duncan. This model was depicted as an ecological complex in which each element is interrelated to the
other three and a change in one can therefore affect each others. For example, an increase in population (P) can create a pressure for technological change (T) as well as increased urbanisation (O), leading to the creation of more pollution (E) (Buttel and Humphrey 2002, 38-43; Hannigan 1995, 18). Environmental sociology, therefore, did not emerged in vacuum, and human ecology served as one entry point for sociologists with a growing interest in what would become a new field. Also, several research were conducted within the rural sociology on a variety of areas like, agriculture, forestry, recreation, mining and other primary industries (Buttel and Humphrey 2002, 44).

3.2 Environment in Classical Sociological Theory

Although works pertaining to natural resources and environmental sociology had appeared mostly within the areas of urban and rural sociology (broadly speaking, the area of human ecology) these had never coalesced into a cumulative body of work. The rise of environmental sociology during the 1970s had surprised the contemporary environmental sociologists on the ground that they found themselves without any prior body of theory or research to guide them towards more comprehensive understanding of society-environment interactions. Each of the three major classical sociological pioneers -- Karl Marx, Emile Durkheim and Max Weber -- arguably had an implicit environmental dimension to their work (Hannigan 1995, 5).

Nevertheless, to a certain extent each of the three sociological pioneers had something significant to say about the complex interactions between society and environment (Hannigan 1995, 5). Some of the contemporary environmental sociologists like William Catton, Riley Dunlap, Allan Schnaiberg, Frederick H. Buttel, Michael Redclift and others have made deliberate attempt to adopt the strategy of extracting ‘ecological’ insights from the works of the classical thinkers. They were inclined to extract the concepts and ideas from the collected works of the sociological pioneers, even if these were not originally used in the arena of environment and apply to the understanding of current environmental crisis. The following section explores the ‘ecological concerns’ in the writings of Marx, Durkheim and Weber -- the three founding fathers of modern sociological thought.
(a) Karl Marx

Karl Marx's analysis of social structure and social change has become a starting point for the contemporary theories of the environment. This is evident in the writings of Marx on capitalism during the Industrial Revolution (eighteenth and nineteenth century). The penetration of capitalism into the society was held responsible for a wide range of social problems from over-population and resource depletion to the estrangement of people from the natural worlds which were once together. In a capitalist system, the social conflict for huge profits between the proletariats and the capitalists leads to their alienation from the nature. In some of the later works, Marx seems to follow a distinctively anthropocentric\(^1\) direction depicting man gaining mastery over nature. In contrast, his earlier works provides a powerful analysis of ecological crisis of his time, like growth of cities, pollution, over-population and spread of capitalist agriculture (Hannigan 1995, 8; Buttel 2005).

Central to his argument was the notion that the capitalist large-scale agriculture prevented any truly rational application of the new science of soil management. Despite scientific and technological development in the area of agriculture, capitalism was unable to maintain the necessary conditions for the recycling of the constituent elements of the soil (Foster 1999, 380). Both Marx and Engels did not restrict their concerns of environmental degradation to the robbing of the soil but also focused on other aspects of this problem, including the depletion of coal reserves, the destruction of forests and so on. According to Marx, the development of civilisation and industry in general had always been active in the destruction of forests that everything that has been done for their conservation and production is completely insignificant in comparison (Ibid, 385).

Marx used the concept of metabolism to describe the complex relationship and interaction between society and nature. According to him, metabolism 'constitutes the fundamental basis on which life is sustained and growth and reproduction become possible'. During the mid-nineteenth century, even the agricultural practice that was prevalent led to the estrangement of human beings from the natural world of soil. This Marx referred to as 'metabolic rift' (See Hannigan 1995, 9; Foster 1999, 378). He had

\(^1\) Man as the centre of everything.
employed the concept to capture the material estrangement of human beings in capitalist society from the natural conditions of their existence (Foster 1999, 383). The capitalist mode of agricultural practiced especially for huge commercial profit was accused of polluting the environment with the use of large-scale chemical fertilizers

Marx raised fundamental issues about the necessity of ecological sustainability. In emphasising the need to maintain the earth for successive generations, he captured the contemporary notion of sustainable development, defined as -- development which meets the needs of the present which compromising the ability of the future generations to meet their needs. In this regard, Marx proposed the concept of ‘humanisation of nature’ suggesting that human will develop a new understanding with nature for its sustainable use (Hannigan 1995, 8).

Hence, Marx and Engels’ schema of positioning the contradictory development of class societies and the revolutionary transformation from one mode of production to the other depicts an evolutionary model based on Darwin’s work. It will be wrong to say that Marx has provided little insights into nature and the natural world. In fact, Marx’s analysis of modes of production includes not only class relations (or people-people relations) but also the relations of material appropriation (people-nature relationship). In his theory of ‘metabolic rift’, he has very skilfully applied the sociological thinking to the ecological realm (Hannigan 1995, 8-10).

(b) Emile Durkheim

Like Marx, Emile Durkheim also set forth a modified evolutionary schema drawing heavily from Darwinian evolution and organismic biology (Hannigan 1995, 6; Buttel 2005, 18). His first major work, The Division of Labour in Society (1893) is indeed a classic study of social solidarity. Wherein he described the evolution of modern society from a state of mechanical solidarity (social solidarity is a product of shared cultural values) to organic solidarity (the social bond is a function of interdependence, notably that arising out of an increasingly complex division of labour). Durkheim, in this work set forth the major element of a theoretical perspective that has come to be known as ‘human ecology’. Durkheim while examining the master direction of societal transformation from
primitive to modern societies with a complex division of labour has also taken into consideration the related consequences of this shift. As societies evolve from simple to complex, physical densities as well as competitive struggle for available resources also increase. This essentially led to an ecological crisis of rising population paired with scarce resources. Durkheim recognised that increasing occupational specialisations (functional interdependencies) within the human population in a modern society is a way to solve competition and struggle over resources (Hannigan 1995, 6-8; Buttel 2005, 18).

As already discussed, human ecology has traditionally stressed the role of population growth in changing the organisation of communities and societies. The same emphasis on population process seems to be strong in Durkheim’s analysis of the Division of Labour in Society. His ideas have played a formative role in human ecological theory, particularly in its emphasis on the ability of human population to transcend. Durkheim identified the role of technological and scientific innovations (that is, increasing specialisation) in an advanced industrial society to tackle the problem of population growth as well as scarce resources. In short, the spurt of technological advancement will increase the productive capabilities of human population. In this regard, William Catton contends that Durkheim’s theory was very much an attempt to devise a solution to what is essentially an ecological crisis of rising population paired with scarce resources (Buttel and Humphrey 2002, 40-41).

Furthermore his study on ‘totemism’, especially among the tribes in primitive societies also very clearly reflects the relationship between society and nature. A ‘totem’ can be anything selected from the natural world. It may be a wolf, bear, turtle, fox, a bird, a tree, etc. The relationship between a totem and the people exhibits a harmonious nature-culture relationship, wherein the nature is nurtured and worshipped. Though Durkheim is least recognised as an environmental commentator, nonetheless some of his major works contained implicit ecological insights.

(c) Max Weber
A final classical sociologist whose work is said to possess an ecologically relevant component is Max Weber. He was an opponent of social Darwinism and had arguably
stressed how social sciences differed from biological sciences (Buttel 2005, 18). The methods, techniques and concepts employed by social sciences in the study of societies are also different. Weber's work has been taken to be the first decisive break from nineteenth century evolutionism anchored in biological analogies (Ibid). His works on comparative-historical, empirical studies were clearest in explaining his break with evolutionism and biological analogies. Weber in his book -- Economy and Society (1922/1978), he had discussed at length about the capitalist economy and its related ill-consequences on the society. He had observed that the capitalism or the industrial work which was growing very fast in the west had destructive consequences upon human societies.

As we have seen that each of the three widely acknowledged founding fathers of the discipline of sociology -- Marx, Durkheim and Weber -- addressed some aspects of nature and society, but this was not really definitive to their work. Ecological or environmental issues got implicitly raised in their works while discussing various socio-political and economic conditions prevailing in their society during that time.

3.3 Contemporary Environmental Sociologists and their contributions

3.3.1 Growing Environmental concern

The eighteenth and nineteenth centuries the landscapes of England began to show changes with the advent of the Industrial Revolution. Coal mines, textile mills, railroads, and shipyards were visible signs of an enormous expansion of industry and trade. The industrialisation was accompanied by rapid urbanisation. The population in the cities began to grow at a faster rate, while the countryside had also undergone considerable changes. The peasants, shepherds and artisans, who had formed the backbone of the rural economy started to flock in the cities in search of employment. England was the home of industrialisation (Guha 2005, 10-11). Large tracts of forests were converted into timber plantations and beautiful meadows were destroyed. Guha further contends,

It is only in the sixties that environmentalism emerges as a popular movement, successfully influencing public policy through a mixture of protest in the streets and lobbying of legislators in the corridors of power. However, an intellectual concern for the protection or conservation of nature goes back to at least to the last decades of the eighteenth century. This precarious interest rapidly grew in
the nineteenth century, its votaries seeking to influence the modernising government of North America and Europe. The history of environmentalism in most countries has followed a broadly similar pattern; an early period of pioneering and prophecy, culminating in recent decades in a widespread social movement. We might thus speak of a first wave of environmentalism, the initial response to the onset of industrialisation, and a second wave, when a largely intellectual response was given shape and force by a grounds-well of public support. (2005: 3-4)

The period spanning from the 1960s to the mid 1980s, the New Social Movement and a radical criticism of industrialisation, marked a drastic change in the society in various parts of the planet. The United States was a pioneer in institutionalising environmental sociology. In 1960s and 1970s, the US and Europe showed concern about environmental degradation due to increasing industrialisation, capitalist agriculture, technological innovations, depletion of natural resources, etc (Sundar and Muthukumar 2006; Hannigan 1995; Buttel 2005). They tried to approach these issues from a more radical perspective with a view to find out ways to solve growing environmental crisis. In this regard, John Hannigan noted,

As Europe and America became increasingly urbanised at the close of the nineteenth century…views towards nature began to undergo a major transformation. In particular, the concept of ‘wild nature’ as a threat to human settlement which had long predominant gave way to a new romantic depiction of nature…Rather than a threat, wilderness was now seen as a precious resource. This view was strong, especially, in the US, where…natural landscapes were rapidly disappearing as urban growth proceeded. Urban expansion…seemed to produce a surfeit of noise, pollution, overcrowding, and other social problems. In this context, unspoiled natural settings took on a special meaning…‘Back to Nature’ movement that flourished in the United States from the turn of the century to shortly after the First World War…encompassed a wide range of activities including, summer camps, wilderness novels, country clubs, wildlife photography, dude ranches, landscaped public parks, and the Boy Scouts. While it was not the only factor, this nature-loving sentiment played a significant role in the creation of the natural parks systems. (Hannigan 1995: 40-41)

A large number of environmental writings were frequently featured in popular periodicals. By this time, sociological interests in environmental matters had been re-ignited primarily by the rising popularity of environmentalism and environmental movement.
3.3.2 The Contemporary Theorists

Two pioneers in environmental social theory -- William Catton and Riley Dunlap have argued that anthropocentrism is the key legacy of the classical theory. Though scholars have pointed to the limitations of the theoretical legacy of classical sociologists, their works were taken as the theoretical base. The contemporary scholars, like, Raymond Murphy, David Pepper, Anthony Giddens, Ulrich Beck and others have tried to interpret these intellectual precedents. The constitution of a theoretical core in the emergence of environmental sociology was unified around the works of environmental sociologists such as Catton, Dunlap, Schnaiberg, Buttel, Hannigan, Michael Redclift, and others, who stood out in theoretical work after 1970s (Hannigan 1995; Buttel 2005; Buttel and Humphrey 2002; Dunlap et al. 2002). These scholars, despite the differences in their analytical perspectives, emphasised on the study of relationships between man and the environment. They have strongly criticised the unsustainability of modern societies, whereby the patterns of interactions with the natural environment are mainly responsible for large-scale environmental crisis.

The most influential components of the environmental sociology literature remain those originally contributed by Catton, Dunlap and Schnaiberg during the mid to late 1970s. They are regarded as the most influential contributors at the theoretical core of environmental sociology. Catton and Dunlap’s environmental sociology is built around several interrelated notions. In terms of attempts to conceptualise societal-environmental relations, there involves two poles dichotomies with regard to the biological duality of human species. One pole dichotomy involves the assumption that humans have unique culture; and the societies are accordingly seen as being shaped by socio-cultural forces. That is, the human beings are different from rest of the natural world in term of its capacities to remake their habitats and their world through technological innovations. Human society then, in contrast to the rest of nature, is organised on two levels: the biotic and the cultural. The second pole of dichotomy reflects an assumption that humans are only one species among many in the ecosystem, like all other species, humans are also part of the ecosystem. These poles of continuum are referred to as the Human
Exemptionalism Paradigm (HEP) and the New Ecological Paradigm (NEP) respectively (Hannigan 1995, 13-17; Buttel and Humphrey 2002, 47-48).

For Catton and Dunlap, the NEP which emerges from environmental sociology is based on the following assumptions: (a) human beings are now one of many species that are interdependently connected within the biotic community, (b) the biotic community consists of an intricate web of nature, with complex linkages of cause and effect, and (c) the world itself is finite, there are natural limit to social and economic progress. In contrast to the anthropocentrism that characterised the HEP, the NEP represented a shift toward what is now called an ecocentric point of view in which human beings are seen as part of the nature, interconnected with other species and subject to the natural limits of the biosphere (Foster 1999, 397).

Further, Catton and Dunlap argued that the environment can be seen as serving three distinct functions for human societies. The ecological basis of environmental destruction is probably best described in their own model – ‘three competing functions of the environment’. Their model discusses three general functions that the environment serves for human beings: Supply depot, Living space and Waste repository (Hannigan 1995, 18-19; Dunlap and Catton 2005, 6-9).

Used as a Supply depot, the environment is a source of renewable and non-renewable natural resources such as air, water, forests, fossil fuels, etc, which are necessary to sustain human societies. Overuse of these resources results in shortage or scarcities. The Living space or habitat provides home for humans and other beings, including not only our housing, but also the space where we engage in other activities (for example, our transportation systems). Overuse of this function results in crowding, congestions and destruction of habitat for other species. With the Waste repository function, the environment serves as a ‘sink’ that absorbs the waste products of human life, including industrial production. Exceeding the ability of ecosystems to absorb wastes creates ‘pollution’, which may harm humans and other living beings and eventually lead to the destruction of the entire ecosystem (Hannigan 1995, 18-19; Dunlap and Catton 2005, 6-9).
The Living space, Supply depot and Waste repository functions of any given area may compete with one another. Using a given geographical area as a Waste repository, for example, tend to make it unsuitable as a Living space or Supply depot. Similarly, building a housing tract on former farmland obviously reduces the area’s potential for production of natural resources. All the three functions have bearing upon one another; disturbance in any one will affect the other two.

**FIGURE: COMPETING FUNCTIONS OF THE ENVIRONMENT (A) SITUATION CIRCA AND (B) CURRENT SITUATION** [Source: Dunlap and Catton 2002, 245]

Recent evidence of human-induced global environmental crisis (depletion of the ozone layer, loss of forests and biodiversity, air pollution, extinction of plant and animal species, soil and water pollution) suggest that human beings are overusing the global ecosystems at an alarming rate. In the present times, moving towards a more sustainable society means using natural resources efficiently in order to minimise resource ‘withdrawals’ and ‘pollution’, thus checking inexorable deterioration of the environment (Schnaiberg et al. 2005). Understanding the ‘functions’ performed by the ecosystem gives us an insight into the evolution of environmental problems and issues of interests to environmental sociologists.

In the late 1960s and early 1970s, when sociological interests in environmental matters were just beginning to emerge, primary attention was given to air and water pollution
(problems stemming from the environment’s inability to absorb human waste products, and increasing human population), as well as on the decay of urban environment due to growth of capitalists’ activities and the importance of protecting areas of natural beauty such as the large tracts of natural forest cover. Throughout the 1980s, new and often more complex environmental problems emerged which posed serious threats to the very existence of life itself (for instance, rainforest destruction, ozone depletion, loss of biodiversity, escalating industrial growth, capitalist agricultural practices and so on). This has grabbed the attention and concerns of the environmentalists towards complexities mounting in the interrelatedness of man and nature.

Allan Schnaiberg’s ideas on environmental sociology are second only to Catton and Dunlap in its influence throughout North America. Within environmental sociology, the most influential explanation of the relationship between capitalism, the state and the environment can be found in Schnaiberg’s works. Schnaiberg outlines the nature and genesis of the contradictory relations between economic expansion and environmental disruption. Two concepts are particularly important in his work: (1) the societal-environmental dialectic and, (2) the treadmill of production. The concept of Treadmill of Production was first introduced in 1980 by Schnaiberg. The concept was introduced taking into account two major observations of the present day societies. First, the significant changes appeared in the impact of production processes upon ecosystems in the last half of the twentieth century. Second, social and economic responses to these impacts were quite variable in a sense that some people rebelled against this modern production system while others embraced new technologies as their best hope for solving environmental problems (Schnaiberg et al. 2005, 37).

Treadmill of Production underlies the political economy of environmental problems and policies as being organised within the structure of modern industrial society. This refers to the inherent need of an economic system to continually expand its profit even at the cost of environment. In a modern production system which is capital intensive requires large-scale extraction of natural resources for production of finished goods. This results in depletion of natural resources (ecological withdrawals) on one hand; and environmental pollution (addition to the ecosystem) on the other. With regard to this,
Schnaiberg detects a dialectical tension that arises in advanced industrial societies as a consequence of the conflict between the Treadmill of Production and demand for environmental protection. The state is the only social institution which could redirect the course of economic growth in any societies. As environmental protection is a significant point on the policy agenda of governments, the state must increasingly balance its dual role as a facilitator of capital accumulation and economic growth and its role as an environmental regulator. Unfortunately, economic criteria have remained at the foundation of decision-making about the design, performance and evaluation of production and consumption. As mentioned, this primacy of economic criteria still tends to overshadow most, if not all, ecological concerns. The state also shares this orientation, and often cedes a great deal of power to private sectors. This is, in fact highly problematic in creating conditions for sustainability and ecological responsibility (Schnaiberg et al. 2005, 38; Buttel and Humphrey 2002, 52-54).

Schnaiberg’s writings on the ‘Political-Economy Explanation’ well articulated the nature of capitalist’s development. His analysis provides a clear understanding of the present times. The processes of economic liberalisation and globalisation have added to this crisis. Ramachandra Guha contends that economic liberalisation will mean more rapid exhaustion of non-renewable resources, greater pollution of environment and serious impoverishment of communities depended upon nature for subsistence (Poddar 2009, 35).

In Indian context, sociologist Indra Munshi contends, “(T)here has been a spurt in social science research in the last two decades. A number of scholars turned to the colonial period to understand the ecological changes over time. There is a general agreement among the scholars that the colonial period was an important watershed in the ecological history of India” (2000, 260). Most of the studies on environment have concentrated on the social and environmental consequences of colonial state intervention, its effect on the indigenous, social, cultural institutes and practices of resource management. Scholars

The current development model that seeks continuous economic growth and the maximisation of profits in the shortest term possible. The very essence of this doctrine is questioned as it generates destruction and degradation of the natural environment.
such as Mahesh Rangarajan, Madhav Gadgil, Ashish Kothari, Vasant Saberwal, Ramachandra Guha, Richard Grove, David Arnold, Richard Tucker and others have been working extensively on the issues of conservation, livelihood and changing man-forest relationships both in historical and contemporary perspectives. The environmental historians and ecologists have made a vital contribution to the understanding of the continuities and changes in the man-forest interactions from the pre-colonial to the contemporary times. The work of these scholars provide valuable information and insights into the causes of depletion of natural resources, management of these resources and their effects on the local communities. They also underscore the urgent need for a new conservation paradigm in India that is more ‘people oriented’. These works largely inform the approach of the contemporary scholars, conservationists and activists toward conservation.

Although, sociology is concerned with a broader area of study of human society, a sociological/social science perspective in the analysis of environmental issues is still emerging (Munshi 2000, 261). A broad area of environmental sociology has only recently gained ground among the sociologists engaged in the study of diverse societal issues. They are also influenced by contemporary ecological movements, like Chipko Movement in the Garhwal Himalaya, Narmada Bachao Andolan in Gujarat, Maharashtra and Madhya Pradesh and various other conflicts over exploitation of natural resources, like forest, land, water, etc. Recent sociological studies on environment also include studies on marginalisation and displacement of the poor, women and environment, indigenous forest dependent communities, ecological and social costs of development planning in India, etc. Sociologists such as Nandini Sundar, Amita Baviskar, Ramachandra Guha, Shiv Visvanathan and others have focused their studies on the understanding of the changing dynamics of human-nature relationships. These studies draw significantly from the works of environmental historians in tracing the changes and continuities in the interactions between man and nature. Similarly, the contemporary environmental historians have also adopted a sociological approach to their studies which extensively use sociological categories such as caste, class, tribes, gender, communities, etc. to understand the complexities and nuances of human-wildlife interactions. Thus,
sociological, social anthropological and historical insights cross-fertilise each other and play significant roles in the study of recent environmental issues and problems in India. The empirical contributions of the scholars mentioned above have proved critical in the development of environmental sociology in India.

In this part of the Chapter, an attempt has been made to delineate the history of emergence of environmental sociology, the theoretical development of the discipline and its major areas of concern. As discussed above, the limited legacy of the classical sociological theories provides an inadequate conceptual framework to understand the complex interactions between societies and environment. In the light of these intellectual precedents, the contemporary environmental scholars argue that environmental concerns do not largely brook in the traditions of thought incorporated into mainstream sociology. The sociologists today find it rather difficult to develop a systematic appraisal for the classical theorists. It is observed that though all the three authors, Marx, Durkheim and Weber saw the degrading consequences of industrial work upon human beings, none foresaw that the furthering of the forces of production would have large-scale destructive potential.

4. The Indian Context

4.1 Pre-Colonial Period
There are sufficient reasons to assert that the dynamics of people-nature relationship in the pre-colonial period were very different from what was to follow with the coming of the British. Forest dwelling communities have been dependent on forests for ages either for livelihood or survival. The system of Common Property Resources (CPRs) was their prudent system of resource use, what they held in common. CPRs were accesible to the whole community of a village and to which no individual had exclusive property rights. For these communities, forests acted as CPRs over which they had customary rights. These resources included, village pastures, rivulets or rivers, village ponds, waste lands, community forests, etc. The customary rights over the forest resources allowed to collect minor forest products, such as, honey, resins, firewood, thatch, medicinal herbs, etc for their livelihood. To quote Madhav Gadgil, "(A) perusal of the travelogues and gazetteers
of the early nineteenth century gives us a clear picture of a wooded country whose pastures and forest resources were controlled and well managed by the local communities" (2001, 190). The satisfaction of survival needs was an integral part of the functioning of the forest ecosystem. There were traditional beliefs pertaining to the worshipping of the sacred groves. The presence of sacred groves extended protection to more forms of living creatures. One is forbidden to cause any harm to these groves. Such strict taboos have led to the preservation of these sacred groves of forests in its virgin conditions. There is now left little of these great forests, but the sacred, often stand here and there, covering as much less areas (Gadgil 2001, 160-161).

4.2 The Colonial Period

Environmentalist Vandana Shiva et al. contend, “Indian civilisation is distinctive in the sense that it evolved in the forests, not in the city...The civilisational principle became the foundation of forest conservation as a social ethic through millennia” (1991, 74-75). Gadgil and Guha also observe,

Until the early decades of this century, almost a dozen of communities in the Indian subcontinent depended on the original mode of sustenance of human populations, namely hunting and gathering. Their distribution encompasses nearly the entire length of India, with the Rajis of Kumaon in the north to the Kadars of Cochin in the south. The abundant rainfall and rich vegetation of their tropical habitats facilitated the reproduction of subsistence almost exclusively through the collection of roots, fruit, and the hunting of small game. While cultivation was largely foreign to these communities, they did engage in some trade with the surrounding agricultural population, exchanging forest produce such as herbs and honey for metals, salt, clothes, and very occasionally grain. (2000/2010: 148)

The reservation of forests by the British had disjunctive affects on the subsistence activities of these communities (Gadgil and Guha 2000/2010, 148). The coming of the British therefore, marked an ecological watershed (Prasad 2004, 16) in the history of forest management. The man-forest interactions as in the pre-colonial period underwent drastic change during the colonial period. Colonial rule introduced dramatic breaks in the way forests in India were perceived and used. The perception of forests as a sacred abode of deities and as fulfilling diverse needs for food and shelter was superseded by the commercial exploitation of forests during the colonial period. The emergence of timber
as an important commodity of commercial value led to a qualitative change in the patterns of harvesting and utilisation of forests (Gadgil and Guha 2000/2010, 147).

The British had radically redefined forest and land-use patterns. Large tracts of forest land were brought under its ambit. Through the Indian Forest Act of 1878\(^3\), the British acquired rights over all valuable tracts of forests by converting them into Reserved Forests (RFs). These forests were exclusively under the control of the imperial Forest Department (FD). The legislations of the imperial administration had transformed CPRs of the poor into resources for revenue and profit generation through the establishment of monopoly rights and control. In this process of revenue maximisation, the rights of the local communities were severely curtailed, thus threatening their livelihood and survival needs.

A whole gamut of forest Acts and policies were introduced by the colonial power to provide guidelines restricting the customary rights of the local communities who have been the part India’s ‘jungles’ for centuries. This way the ‘jungles’ were transformed into forests. The former denotes wilderness and untamed nature whereas the latter means nature tamed with rules and restrictions imposed on its use (Saikia 2011, 2). Though the British claimed that their legislation was aimed at forest conservation, but in reality revenue maximisation was their main interest. The Acts empowered the government to declare any land with, trees, brushwood or ‘jungle’ as government forests and was also empowered to make rules relating to the preservation of trees.

It is said that the British had already destroyed their own forests before they had established their Empire in India. They were hard-pressed for wood since their own oak forests were destroyed and rendered unproductive in the second half of the eighteenth century through unscientific management. Mudappa and Raman discussed about the degrading conditions of the Valparai Plateau in the Annamalai hills (Tamil Nadu) in the Western Ghats. These evergreen tropical rainforests with a profusion of plants and animal life and a few scattered settlements of tribal people -- the Valparai Plateau came under severe attack ever since the British had invaded the region. In 1858, the British explorers

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\(^3\) The Indian Forest Act of 1878 later came to be modified as the Indian Forest Act 1927.
found the areas covered with 'miles and miles of evergreen forests with a few main paths running through it made by the huge herds of elephants which roamed there'. They assessed these regions in terms of their economic value, as a source of forest products, including timbers. As the rainforests, particularly in the higher reaches, were not, particularly attractive for their timber, they were considered wastelands that had to be earmarked for developmental activities. The British found that the forests could be leased out for conversion to various kinds of plantations that would generate revenue for them. The leasing of the land led to the establishment of various commercial plantations that included cardamom, coffee, tea, cinchona, rubber and vanilla (2007, 213-215).

The forest policy evolved by the British in different parts of the country was the same, though it had some of regional variations. Innumerable instances of reckless exploitation of virgin forests during the colonial rule can be cited. In Assam too, the imperial rule had brought about tremendous disjunctive affects on its land. This point will be discussed later. The autocratic control over forests and forest enterprises resulted in maximising the production of commercially and industrially valuable hardwood trees like teak, sal, and eucalyptus, deodar, through the destruction of natural indigenous mixed forests which have a high use value for basic needs and for ecological sustainability. The practice of silviculture⁴ and monoculture⁵ in the ecologically sensitive zones had threatened the survival economy of the forest dwelling communities. The forests were also cleared to make way for agricultural development. The British had to reclaim agricultural land by clear felling of trees over large tracts of forest areas. There was also a widespread belief that forests were an obstacle to agriculture. Conversion of forest land into agricultural zones was thus seen ideal.

In many parts of the subcontinent, efforts were consequently made for cash crop plantations which the colonial rulers believed would double their revenue extraction. When the British had established their rule in India, it was estimated that around one-

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⁴ Silviculture refers to the method of regeneration that combines both the harvest of the timber and re-establishment of the forest. It is the practice of growth, composition and quality of forests to meet diverse needs.

⁵ Monoculture refers to the practice of planting single variety of any plant species over a large area mainly for commercial purposes. It results in serious loss of biodiversity.
third to one-half of the total area of Bengal Province alone was 'wastelands'. Such lands also included the forest districts of Chittagong, Darjeeling, Jalpaiguri, Chotta Nagpur and Assam, the vast trail of forest lands near the mouth and delta of the Hoogly and other rivers, known as Sunderban. These lands were taken over by the British government and leased to cultivators to turn them into revenue generating lands. The colonial category of 'wastelands' was thus a revenue category, not an ecological category (Shiva et al. 1991, 168-169). Historical descriptions tell us that the period spanning from 1867 to 1927 marks a major phase in the colonial struggle for legal control over resources. The abolition of the traditional rights and customary rules governing forests began with the very first draft of the Forest Act of 1865 and culminated with the total control of the state over the forest resources.

4.3 The Great Hunting Grounds

Forests were used as hunting grounds for sport hunting by the Indian emperors and even by the British officials during their regime. Hunting was not only considered an integral sport for the emperors or the officials, but it had also signified their superiority and strength to conquer wild beasts. In the early times, the emperors used to maintain accounts of the game they had shot. The Indian legacies in the pre-colonial era talk about the dynamics of people-nature relations from altogether a different perspective. The wild animals and the people lived in close proximity since there were no sharp dividing lines between the villages and the vast stretches of dense forest lands. During those days, the war against wild predators was so intense that their extermination became significant. The wild predators (large carnivores) were considered potentially dangerous as they were threats to people and their livestock.

The schemes for extermination continued without any modification in most parts of British India. The extension of agricultural frontiers was later seen as a way of reducing the living space for these wild beasts. The dominant thinking was that the clearing of dense forests would destroy their habitats and the conflict between the wild beasts and human settlement would automatically be resolved. The second Chapter provides a number of examples showing the war against dangerous beast in different Indian
Provinces. The strategy to wipe out dangerous animals by the people or by way of sport hunting gave birth to a reverse phenomenon. By 1920s, number of man-eaters had declined very rapidly. This had put the survival of the ‘wild’ in great danger. Gradually, forest lands, wild animals and their habitats were diminished considerably. Moreover, the existence of RFs provided no guarantee for the survival of these rare species. The main purpose of reserving large tracts of healthy forest areas was only to procure good timber. Therefore, it can be argued that the nature-culture dichotomy is interestingly reflected in these activities of hunting. According to the colonial understanding, nature is something to be mastered over, even if it meant destruction of forests.

4.4 The Post-Colonial Period

It is evident from the above discussion that conflict over forest resources has its roots in the colonial period. Forest struggles have been a sustained response to commercial forestry introduced by the British. The imperative for revenue and profit maximisation, had led to large-scale exploitation of commercially valuable resources at the cost of destruction of the ecosystem. The 1952 Forest Policy is a turning point in the evolution of forest management in India after independence. It clearly points out that local interests and priorities should be subservient to the broader national interests (Fernandes and Kulkarni 1987, 76). This policy gave a new thrust to the commercialisation of forestry and the growth of forest based industry. The wood based industries such as, pulp, paper, plywood were established, and their demand for raw materials became an important consideration in the management of forests. Large-scale commercialisation has resulted in monoculture which in turn led to the destruction of virgin mixed forests having a high use value for basic needs as well as for ecological stability. Increase in mining of ecological resources has disrupted the forest ecosystems and threatened the survival of the forest dwelling communities.

The new Indian Constitution and the changes in the political governance in the early decades of India’s independence did not bring about radical shifts in the structures of these forest laws. The laws that served the purpose of the colonial government continued to serve the similar purpose for the independent government. The main features of these laws are the proclamation of the state’s monopoly control over the forests and evaluation
or implementation in terms of revenue generation. The application of these principles through laws is uniform for the plains as well as for the mountains, especially where various central acts which apply to the whole of India are concerned (Singh 2007, 4-5).

The conservation of forests and environmental protection emerged as a national priority in India after the Prime Minister Indira Gandhi participated in the Stockholm Conference on Human Environment in 1972. And the following decade, particularly since 1980s saw the evolution of a number of environmental laws, policies and programmes to gear up the state to the task of environmental protection. This concern has also been reflected in the Indian Constitution. In it the Directive Principles of the State Policy, a significant set of organising norms of the desired order, contain provisions which commit the state to protect the environment with regard to forest and wildlife. Through an amendment to the Constitution of India, some fundamental duties are added which ask the people to preserve natural resources and protect the environment (Sheth 1997, 92).

The 1970s saw radical change with the foundation of organisational framework for environment programmes in the country. The period witnessed growing awareness about environmental degradation and a series of legislations were executed. The National Wildlife Policy for India was first formulated in 1970 with the aim of reserving at least 4 per cent of the total land area for wildlife, both plants and animals. Much of the policy was subsequently included in the Wildlife Protection Act 1972. It is considered to be a significance piece of legislation. The Act provides for the constitution of a Wildlife Advisory Board to regulate hunting of wild animals and birds. It lays down procedures for declaring areas as sanctuaries and NPs, as well as regulation of trade in wild animals, prevention of poaching, etc (Sheth 1997, 93-103).

In 1973, the government of India launched the Project Tiger. The National Committee of Environmental Planning and Coordination was set up by Prime Minister Indira Gandhi. Eventually, it evolved into a Department of Environment in 1980 with Digvijay Singh

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The Project Tiger was launched in India in 1973, with the goal of saving the tiger and its habitat. It envisaged that forestry operations and other activities would be reoriented to suit wildlife conservation. From 9 tiger reserves in 1973, the number of such reserves rose to 39 in 2010. Later in 2006, it was replaced by the National Tiger Conservation Authority.
Jhala as the first Deputy Minister in charge of it. Five years later, Prime Minister Rajiv Gandhi upgraded it as a full-fledged Ministry of Environment and Forests (MoEF) of the government of India. This move had encouraged the state governments to establish their own department of environment and forests so as to attend to the fast increasing policy initiatives, measures and programmes in the environment and forest sectors as a response to environmental problems becoming more visible since 1980 (Sheth 1997, 93-103).

The contemporary conservation model depends on the establishment of an increasing number of PAs with a strong preservationist orientation, adopting the people-out approach (Ghimire and Pimbert 2006, 7-11). The local communities, who reside in and around the PAs suffer the most hardships through lost access to resources, break-down of traditional customary rights over forest and changed livelihood patterns. Parks and sanctuaries have become the major source of tension in most developing countries. The local dwellers are treated as enemies of the forests. In contrast to this notion, the pro-people view holds that communities’ participation is indispensable for any conservation strategy. This view contends that the local communities are the real protectors of forests without whose support conservation of forests and wildlife is not viable.

The conservation practices of the state considers the interests of the local communities as irreconcilably opposed to the logic of conservation and thus it seeks to exclude them from within the PAs, restrict local human access to them, and prohibit customary use rights (Saberwal et al. 2001, vii). The state’s exclusionary model has also failed to protect forests and wildlife from destruction rather these policies have led to outright local hostilities. Evidently, the period since 1980s has experienced the complexities in managing the PAs. In large part, this complexity revolves around the discontent of the people living in or around the PAs and around the disjunction between conservation and development objectives of the state. Local dissatisfaction with the exclusionary model of wildlife conservation has manifested itself in ways that have been detrimental to the forest resources.

In the light of this, the period 1988 saw a new turn towards enhancing the involvement of resident peoples in the management of local resources. In this context, Indian experience
with JFM has certainly seen a significant break with the past (Saberwal et al. 2001, 3-7). It introduced a new regime of participatory approach to forest management. Nevertheless, the JFM has failed to provide people, a greater stake at conservation. It has been criticised by conservation scholars and activists to be ‘joint’ only in name since most of the powers are seen to be concentrated in the hands of the foresters. The state is now seen to be subverting the provisions of the newly implemented The Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act 2006, briefly known as the FRA 2006 in the country. It seems to continue to believe that giving the communities control over the forests would render FD irrelevant, losing all conservation benefits from forests (Lele 2011, 101).

The recent scenario reveals that the bureaucracy that came up created a structure that was (is) ostensibly meant to carry out the scientific conservation of forests but, in effect both colonial and post colonial periods have seen massive degradation and destruction of forests in India (Prasad 2004, 58). In the post colonial, conservation has certainly gained precedence over livelihood needs of local communities, which significantly has become a more contested and debatable issue.

The issue of ‘conservation’ centres around a variety of strands and ideologies. The noted environmentalists and activists, Madhav Gadgil, Ramachandra Guha, Ashish Kothari, Mahesh Rangarajan, Ghazala Shahabuddin, Vasant Saberwal, Archana Prasad, Vandana Shiva and others argue that the conservation policy to be realistic, one needs to go beyond the colonial model and involve the local forest dwellers who alone can have a permanent vested interests in forest conservation. The forest dwellers’ rights over resources and conservation are inter-connected. Forests cannot be protected in isolation from the people who are indeed the important part of the conservation regime. This calls for close negotiations with the people to make them genuine stakeholders in forest conservation. The state must move from its bureaucratic control over forests towards more sustainable model inclusive of human needs (Saberwal et al 2001; Sachchidananda 2004; Saberwal and Rangarajan 2003; Shahabuddin and Rangarajan 2007; Guha 2006; Kothari et al. 1998). This would ensure protection of India’s dwindling forest covers as well as sustainable man-forest relationship over a long term.
Twenty-three per cent of the country’s land area is recorded as ‘forest’, mostly under government control. This huge area includes much of the country’s resources, water bodies, biodiversity, wildlife – and the marginalised communities, the Adivasis. The government’s forests and PAs, which cover approximately 22 per cent of the landmass, have their genesis in the Indian Forest Acts (the last of which was passed in 1927) (Golpalkrishnan 2011, 62). The total forest cover of the country as per the 2007 assessment of State of Forest Report is 78.37 million hectares which constitutes 23.84 per cent of the geographical area of India (Geography and You 2009, 50).

The succeeding Chapters argue for the adoption of a middle ground out of the two extremes of India’s conservation regime. The argument here is based on creating a new regime of conservation that seeks to provide the forest dwelling communities’ rights and access to forests for survival in a sustainable manner and make them real stakeholders in the entire endeavour of management and protection of forests. To integrate the local communities into the system of conservation, the state will have to halt all kinds of illegal activities (timber felling, poaching, etc.), debarred denotification, and leasing of forest areas for commercial purposes. Elimination of such practices and providing due rights to these communities would assure greater level of local participation in conservation. Saberwal et al. rightly contend that the exclusionary policy of forest conservation over a long time is unsustainable both ecologically and socially. Hence, it is utmost important to move towards an inclusive conservation policy (2001, 8).

5. The Context of Assam

5.1 The Geographical Location

Assam is situated on the north-eastern frontier of the Indian state, bounded between 24°N and 28°N latitudes and 89°E and 97°E longitudes, and borders on all hill States of Bhutan, Arunachal Pradesh, Nagaland, Manipur, Mizoram, Tripura and Meghalaya in the vicinity of China and Tibet on the north, of Burma on the east and the south and of Bangladesh on the west (Baruah 1985, 3-4). It comprises of the valleys of Brahmaputra and the Barak (Surma), together with the range of hills called Assam Range, the eastern end of which inclines slightly north-ward where it is joined by the Patkai Hills. The most striking
feature of the region is its meandering rivers, that criss cross the entire region. The Rivers: Subansiri, Jia Bhoroli, Barnadi, Pagladia, Manas or Manah from the northern hills and Burhi Dihing, Disang, Dikhow, Jhanji, Dhansiri from the south predominantly merge into the River Brahmaputra.

The river Brahmaputra flows through its entire length from east to west, dividing the state into two zones: the north bank and the south bank. It has a number of tributaries, most of which are snow-fed and depend on monsoon for their water volume. They are dried up during the winter, but when the rain sets the water level rises up. The Brahmaputra basin in its north bank has a narrow basin because of which the water overflows the banks during rainy season, causing unprecedented devastations to the people and their livelihoods. Floods and inundations are a regular occurrence in Assam (Goswami 1987). Heavy rains, topography and earthquakes have made the rivers unpredictable and destructive during high floods, which at the same time leave behind rich and fertile valleys when the floods recede. Some tremors of the most violent nature are being recorded in recent history of the region. An earthquake in 1869 with its epicenter in the Shillong plateau had ravaged the area between North Cachar and Assam Valley and had made the bank of the Barak Valley sink about 15 feet. Another that followed in 1897 was one of the greatest ever experienced, hitting about 1.75 million square miles. Still another tremor of 1930 had shaken over 3.22 lakh square miles. And the most recent one of 1950, which had mutilated the whole area of Arunachal Pradesh and Upper Assam (Saikia 1976). These earthquakes had pernicious affects on the topography of the region.

Assam’s landscape known for its rich evergreen forest covers evergreen hills and plains as well as numerous rivers. The entire region abounds in dense forests, meadows, marshes and swamps. The vegetation is broadly classified into tropical with evergreen, semi-evergreen, deciduous (both dry and moist) grasslands and stretches of riparian forests along the river banks and sub-tropical. Located in the monsoon belt, extreme humidity and excessive rainfall are peculiar to the climate of Assam. It is predominantly an agricultural economy, where most of its people live on agriculture. People are intrinsically dependent on land for their survival. With the elapse of time, the indigenous
peasants have seen various phases of hardships due to scarcity of available cultivable land in the Brahmaputra Valley. The plight of these peasants can be attributed to a number of factors such as, natural calamities (floods, erosions, etc.), tea plantations, migration of foreign communities into the land, development activities, military establishments, etc. These factors, both natural as well as man-made, have resulted in fast shrinking of agricultural land, thus restricting local peasants' access to land resources. Thus, Assam represents a different ecological history in terms of peasants, land and forest relationships which will be discussed in detail in Chapter Two.

5.2 The Triangle of Land, Peasant and Forest

Though in the medieval times land was abundant in the Assam valley, it was rather limited for the surplus-yielding wet rice cultivation. It necessitated a major drive by the semi-feudal Ahom state to reclaim agricultural land from the existing wastelands and forests. Under the corvee labour (called paiks) system of the Ahom state, each able-bodied peasant-subject was given some agricultural land for his service toward the state (Guha 1991). Further, the peasants could supplement their subsistence with various products from forests and wastelands which served as village commons.

As a historian observes,

It would be unwise to suggest that forests remained a pristine and untouched zone in the pre-imperial period or that there was no trade in forested resources. That Assam and its neighbourhood had a rich complex trade system dependent on forest resources is well documented. An instance of this is the political economy of the Ahom-Mughal wars, which was crucially connected with the Mughal rulers' insistence of securing access to the forest resources of the region, including the prized elephants. Contest over natural resources resulted in wars and frequent clashes between the Ahom kings and Mughal rulers. In the pre-colonial time, beyond the Ahom frontier, taxes on a variety of forest produce, which included cotton and birds, contributed to the revenue. The State exchequer also relied heavily on the exploitation of the forest resources, including the elephant. The most commonly used item was timber for constructing boats. The Ahom military system was crucially interested in securing its waterways and hence required sustained investments for naval warfare. Similarly, elephants were usually procured in large numbers not only to strengthen the military system but also for everyday uses of the royal palaces... (Saikia 2011: 12)

Even during the pre-colonial period, the Ahom rulers encouraged the peasants to clear forests areas for agrarian expansion. They encouraged wet-rice cultivation (sali kheti) for
greater productivity. In the process, they also settled populous villages in various forested areas of Assam. Although the Ahom State had its authority over the forests, it allowed the population to enjoy their rights over the forest produces for their living (Saikia 2008, 79-80). He further mentions, “...away from the direct control of the Ahom kingdom, the relatively independent feudal chiefs and the tribal monarchies retained their hold over large forested areas. Clearly, the idea of forest a reserved territory, except some areas that were specially demarcated for hunting by the royal hunting, did not exist. The forest management during the pre-colonial times had little to do with a market economy” (Saikia 2011, 13).

The advent of the British brought tremendous changes in the landscape of Assam in the early part of the nineteenth century. The colonial administrators started to understand the vast tracts of ‘jungles’ in terms of their future commercial prospects and revenue potentials. The ‘jungles’ were converted into ‘forests’ and these entailed total state control with intricate sets of rules and restrictions. This was in the line of experience with other Indian imperial provinces. Saikia points out that the colonial rulers began to tame wilderness of the ‘jungle’ into a more ordered space in the form of forests (2011, 2). Soon, the forests were reserved to gain maximum control over them. The Bengal Forest Act of 1865 provided the basic framework for the reservation of forests in the province. Under the same, large parts of the province were declared as RFs in order to bring much of the areas under their strict control. Revenue expropriation was the main motive behind the reservation of forests. Huge patches of forests were clear-felled to make way for agrarian expansion and tea gardens. Moreover, the surge of tea plantations came as another threat to the forested landscapes of Assam. The process of reservation of forests severely curtailed the customary rights of the local people. The village ‘commons’ (such as grazing fields, beels, forests, etc) freely accessible to the communities were thus brought under heavy taxation (Sharma 2001).

Furthermore, the colonial regime had adopted the policy of opening up vast stretches of wastelands for agricultural production with a view to generating more revenue. These lands were also opened up for the poor, landless peasantry from the erstwhile East Bengal. The colonial rulers had imported labourers from outside the province to work in
the plantation industry as well as for jute cultivation. They viewed that without the aid of the vast pool of immigrant labour pool, it would not be feasible to develop the province’s enormous wasteland resources (Tucker 2012, 175). All these seriously restricted the access of the local peasantry, tribal and non-tribal, to the land resources. Over and above, the two great earthquakes of 1897 and 1950 also had a cataclysmic effect on the topography of Assam exacerbating the incidences of flood and erosion and thus loss of land among the indigenous peasantry (Sharma 2010).

Post-1950 years witnessed large-scale migration of Assamese peasantry in search of agricultural land to different parts of Assam. The available wastelands including forest reserves, grazing land, etc became their main target. This flow of peasants continued as the problem of landlessness only accentuated over time with the advent of other private commercial interests which were looking for vast land resources for different enterprises not to talk of the various developmental (e.g., oil fields) as well as the military projects of the government. On the other hand, in the lower and central Assam, immigrant peasants especially from East Pakistan/ Bangladesh have grown exponentially creating a serious crisis of land among the local peasantry. In response to such a situation, the Assamese peasantry has revolted a number of times since 1947-1948 demanding land for survival. A number of these revolts have been witnessed among the forest villagers and new settlers in the forest lands. The mainstay of their mobilisation has been reclamation of forest land and tenurial rights on the land so reclaimed (Sharma 2010). The penetration of huge immigrants into the land both during colonial and post- colonial periods had added greater vulnerability to the indigenous peasantry.

The acute land alienation due to natural as well as man-made factors forced the land-starved Assamese peasantry to penetrate into these RF areas in search of land and livelihood in increasing numbers leading to their conflicts with the FD. This conflict has assumed a much more complex character in the recent times giving rise to serious contestations and challenges with regard to the people’s rights and conservation approach of the state. The agrarian practices of the forest dwellers have emerged as a threat to the very existence of forests in the recent times.
6. Review of Literature

Environmental Sociology is concerned with the study of societal – environmental interactions. It places special emphasis on studying the social factors that cause environmental problems. Environmental sociology emerged as a coherent sub-field of inquiry in 1960’s and early 1970’s. The works of William Catton, Riley Dunlap, Allan Schnaiberg, Ulrich Beck, Frederick H. Buttel, Anthony Giddens and others have enriched the discipline with their valuable contributions. In India, the pioneers who have extensively worked towards the understanding of man-nature relationship are Mahesh Rangarajan, Ramachandra Guha, Madhav Gadgil and David Arnold. During the last two decades, the discourses on man and forests have dominated the field.

In the recent decades several eminent environmentalists in India like Ramachandra Guha, Madhav Gadgil, Vasant Saberwal, Mahesh Rangarajan, Ashish Kothari, Sharachchandra Lele, Archana Prasad, Vandana Shiva and others have contributed numbers of writings representing the dynamics of man-forest interactions in historical and contemporary perspectives.

Mahesh Rangarajan’s articles, “Polity, Ecology and Landscape: New writings on South Asian Past” (2002), “The Raj and the Natural World: The War against ‘Dangerous Beasts’ in Colonial India” (1998) and his book India’s Wildlife History (2001) give a clear and comprehensive description of the uses and perceptions of forests during the colonial regimes. Rangarajan provides a trajectory of human impact on nature from the ancient times to the post-independence period. The sport hunt and war against dangerous vermins, existed mainly during the colonial period had resulted in vanishing of many species in the Indian subcontinent. The Indian government, after independence took some serious steps to halt all kinds of illegal activities with bringing more areas under the domain of PAs. What followed was a notion of total preservation of nature by adopting the exclusionary policies to nature conservation. In the process, the local communities inhabiting forests for ages were alienated from their access to forests for livelihood. Following this, the decade 1980s saw growing conflicts between the FD and local communities. The crisis within the Indian conservation scene would persist as long as the state does not give a greater voice to these communities.
Madhav Gadgil's book, *The Science and Politics of Conservation in India: Ecological Journey (2001)* is a wonderful collection of articles each of which deals with different facets of nature’s biodiversity and their interactions with the world of humans. In this tract, Gadgil discusses how developments of scientific knowledge in the present societies, human being have put their knowledge to tremendous use of handling nature. Science has served as the handmaiden of technology and technology has helped people gain increasing access to natural resources. This has of course developed a strong chain of science-technique appropriation. He strongly believes that the practice of prudent use of natural resources will create a sustainable man-forest relationship.

The pioneer work of Guha and Gadgil on the environment, *The Use and Abuse of Nature (2000/2010)* provides an extensive understanding of the ecological history of the Indian sub-continent. This work has sensitively addressed the nuances and dynamics of man-forest interactions during the colonial and post-colonial periods. It explicitly mentions that it is the state which is always playing a bigger role in the abuses of nature. Indeed, it started with the colonial state interventions in the management of forest and its resources. The state in independent India continued with this colonial legacy. The ‘commons’ have been destroyed in the process of meeting its diverse needs of commercial appropriation. Guha and Gadgil basically argue that the biases of state’s development process have allowed a certain section of the society to gain at the cost of communities for whom forest is the life supporting system.

Richard P. Tucker’s *A Forest History of India (2012)* provides an excellent history of imperial forest management in India. He explains how the colonial intervention in the form of commercial utilisation of forest and its resources has resulted in widespread destruction of nature. The book is endowed with vivid historical accounts of colonial resources extractions in different Indian provinces, such as the forests in Western Himalayas, The Kumaon, The Thana District, as well as the nexus between the planters, foresters and the peasants in Assam and Kerala. However, it elucidates the situation prevailed in the colonial Assam in terms of how virgin forests in the region opened up avenues for commercial exploitation and cash crop plantations. Assam’s landscape came under severe attack with the reservation of forests, coming up of tea gardens in large
numbers for revenue maximisation and import of immigrants to work in the plantations. The ‘commons’ of the natives were shattered with the imperial intrusion. All these resulted in scarcity of agricultural land for the indigenous peasants.

Saberwal and Rangarajan’s *Battles over Nature: Science and the Politics of Conservation* (2003) is a collection of essays that call for an effective mechanism for sustainable coexistence of man and forests. The efforts to curtailed access to forests for local communities’ use have not really helped in the total preservation of nature. Rather, local alienation has triggered animosities in different forms leading to poaching, smuggling and conflict with the foresters. Mahesh Rangarajan article in this volume, “The Politics of Ecology: The Debate on Wildlife and People in India, 1970-95” historicises the absence of a social context in the current stand-off jeopardising Indian conservation. He makes the case of exclusivist policies that have been a part of the Indian political landscape for centuries. Therefore, arguing against the exclusionary approach to conservation, this volume on collected essays points out that conservation without local communities’ stake is bound to fail in Indian situation. This calls for an inclusive model of conservation that reconciles livelihood needs with conservation measures.

*People, Park and Wildlife: Towards Coexistence* (2001) by Saberwal et al. also echoes a similar opinion of forest conservation in India. This tract argues that crisis within the Indian conservation scene can be located within the exclusionary policy. It examines the inadequacies of the official conservation policies to recognise the survival needs of the communities. Some of the initiatives to provide stake to communities (for example, JFM, Eco-development) are still woefully inadequate and weak in some fundamental aspects. It thus argues that an effective conservation would only be possible with greater involvement of people.

Areas (2004), Sachchidananda’s Man, Forest and the State in Middle India (2004), etc are some of the excellent works reflecting the present scenario of conflict and coexistence between man and forest. Ashish Kothari et al. edited volume on Communities and Conservation: Natural Resources Management in South and Central Asia (1998) has examined various case studies of community-based-conservation from countries of South and Central Asia. The collected essays in this volume argue that the community-based-conservation is the best method to involve the communities into conservation of natural resources which is characterised by shift from the convention top-down approach.

However, the range of literature on forest conservation in the present day context of Assam is rather thin. Whatever books that are available have also not systematically dealt with the issue of man–forest relationship, more particularly the present situation concerning the human settlements in and around the protected forest areas. In Aaranyak (1980), the author Shiva Prasad Kotoky who was a Forest Officer under the Assam FD since 1929 till 1961 describes the conditions of the forests in the state from his own experiences. His work provides a glimpse to the plans and policies adopted by the British with regard to the protection, development as well as exploitation of the forest wealth. He contends that forest conservation policies during the colonial times hardly took the concern of the local people into consideration and often adopted an ‘isolationist model’ of conservation. He laments that the same ‘isolationist model’ persists in the post-colonial Indian state too. Similar opinion is echoed in Ganesh Das’s book Manas, Manuh Aru Trimurty (1988).

However, forest historian Arupjyoti Saikia has significantly contributed a number a writings on forest and environmental history of Assam. His work on Forest and Ecological History of Assam, 1826-2000 (2011) provides an excellent and detailed account of changing forest landscapes of Assam from the days of the Imperial rule to the present. In fact, this is the first comprehensive historical work on forest and ecology in Assam. Rajiv Handique’s British Forest Policy in Assam (2004) also provides an account of the changes that the colonial forest policies had brought about in the Assam. Besides the above, the works of H.K. Barpujari, S.K. Bhuyan, A.J. Moffat Mills, John Butler,
Richard P Tucker and others have been a rich source of data and insights into the dynamics of man-wildlife interaction in Assam in different phases of its history.

7. The Objectives

The present study has the following objectives:

1. To map out the ecological history of the area under study, especially in the context of the man-forest interactions in the overall background of Assam;

2. To assess the changes in the demographic patterns in the area under study over the years and its impact on the forest resource and the livelihood patterns of the local communities. In doing so, it seeks to examine the emerging status of and competing claims around the forest resources in the area;

3. To comprehend the current patterns of utilisation of the forest resources to meet subsistence as well as commercial demands and the extent of stakes of different categories of people in it;

4. To explicate the impact of various forest policies on the local forest villagers in terms of their livelihood and their response to the issue of conservation.

8. Period and Area of Study:

The study is based on the data collected through an extensive fieldwork in two non-tribal FVs located near the Nameri National Park (NNP), more precisely, in the West buffer areas of the Nameri Tiger Reserve (NTR) over a period of two years from late 2009 to late 2011. While NNP and NTR have a co-terminus core area, like all tiger reserves, NTR too has a buffer area of 144 sq. km of which the West buffer constitutes an area of 64 sq. km and the East buffer an area of 80 sq. km. The West buffer area comes under the Balipara Reserve Forest (RF), the East buffer comes under the Naduar RF. Thus, Sopalonga and Gamani, the FVs where the present study was carried out come simultaneously under the West buffer of NTR and the Balipara RF. The Balipara (and Naduar) RF is now shorn of any worthwhile forest cover and has already been full of human settlements and agricultural fields. Although the FVs in the buffer areas of NTR come under two separate RFs, the entire area is referred to as ‘Nameri’ in popular parlance. In this work too, the reference to the ‘Nameri area’ implies the larger area
including the NNP and its buffer areas under the Balipara and the Naduar RF which together constitute the area of NTR.

A number of FVs (tribal and non-tribal) are located in this buffer zone. These forest dwellers have their distinct rhythm of life especially tied up with agriculture. As per their level of development and occupational patterns, they are small and marginal peasants. Unlike, the forest dwellers in Scheduled V areas (Jharkhand, Orissa, Chhattisgarh and Madhya Pradesh) whose day-to-day subsistence primarily revolves round forest resources, in Assam, they are mainly cultivators. Their dependence on forest is only supplementary. At present, it is limited to the collection of firewood. Therefore, an attempt has been made to study the distinctive features of forest villagers in Assam. The critical understanding of the issues concerning the livelihood aspects, man-forest interactions, relations between the FD and the local communities, challenges towards the conservation of forests, etc involves a proper and close understanding of the existing ground realities in these FVs. I have spent considerable period of time in the two years of field study in the area trying to develop a comprehensive understanding of these forest dwelling peasant societies, their livelihood patterns, nature of dependence on forests, cultural idioms and the emerging forms of their conflicts with the forest.

9. Methodology

The methodological orientation of the study is that of qualitative research. The study is based on both primary as well as secondary data. Primary data have been generated through a field-based ethnographic study in a couple of FVs in the area which is required to understand the dynamics and the complex nature of man-forest interface. Different sets of data collection techniques were used under the ethnographic method which includes: 1) in-depth interviewing and focus group discussions with various stakeholders, 2) personal observation, 3) extensive field-notes on interactions with the local villagers, forest officials and other stakeholders, and last but not the least, 4) oral history in the form of villagers’ narratives. Besides, secondary data sources including books, journals, official records, policy documents, newspaper articles, etc have been extensively used for this study. It is to be pointed out that this study has had to deal with many sensitive issues and information in the wake of its field work. Evidently, negotiating with such issues
requires some amount of methodological flexibility on the part of the scholar. Thus, this study also collected the data of such sensitive nature mostly through informal discussions and conversations with various stakeholders.

Working among the villagers as a quasi-participant observer was a challenge during the initial visits as the villagers were sceptical about the objective of my research. They were reticent in giving out information and many a times they gave incorrect information too. I had to convince them that I did not have any affiliation to the government and that I was a researcher from a university. However, the initial problems were gradually overcome with the elapse of time and with increasing informal interactions with villagers. Building good rapport with the local villagers was necessary before discussing the sensitive issues including the issue of illegal timber trading in which many local youths are also involved.

My stay in these FVs immensely helped me understand the social dynamics of these villages and revealed many facets of the lives of people therein which are hardly noticed by occasional visitors. Talks, discussions and participation in various meetings, festivals and other events in the villages helped me acquire a host of information and significant insights into the lives of the villagers.

However, despite a careful attempt to understand every detail about the field through an ethnographic study, many important issues/questions could not be resolved. For instance, information on the exact time of formation of human settlements in the Namneri area, declaration of these existing settlements as FVs during the colonial period, and so on could not be ascertained. Besides, checking the reliability of the collected data was again a challenge. Conversations with the villagers clearly suggested that even today they were not very particular with dates and numbers. They narrated the past history of the area but were vague about the dates when their forefathers had migrated to the area in search of agricultural land. This was due to two reasons: one, their forefathers were mostly illiterate; and second, lack of documents in their possessions. However, they could well relate the times in the past to some important events, like World Wars, India’s independence movement, Indo-China war, etc. The information, thus received from the villagers was cross-checked through extensive discussions with other villagers as well as
the FD officials. Amazingly, the FD officials could neither provide any documentary evidences in support of the villagers' claims nor could they contradict it. Thus, in the absence of any historical records on human settlements, I had to depend mainly on the narratives of the villagers. However, I found receipts of old khajana payments and other documents with some villagers in both the FVs which even the forest officials denied having them in their possession. Besides, information provided by the villagers and the FD officials were also at variance on many occasions. In view of such a situation, I often had to arrive at my own tentative conclusions about specific historical data by using inferences from the available data. Moreover, whenever there was any doubt with reference to any specific year in the past, instead of pinpointing a particular year, I have used a broader time frame and the qualifier 'around' to indicate the time (for example, around 1920s and 1930s).

It is mentionable here that prior to undertaking my field study, I made a number of trips to the villages of the Nameri area to acquaint myself with the area as well as to identify the village(s) for my fieldwork. The preliminary visits to the area also helped me establish contacts and know the routes and modes of communication with the various stakeholders. In my subsequent visits, I have been able to develop good rapport with the villagers and most of the officials from the FD. Although finally I chose two non-tribal FVs for my intensive fieldwork, practically I have visited all the nearby FVs in order to have a broader understanding of the area.

10. Significance of the Study

It is widely acknowledged that the state interventions in forest management have resulted in increasing conflicts over natural resources in independent India. The conservation regime in Assam also reflects the official 'park-centric approach'. The national forest policies are being implemented in the state without properly sensitised by its specific local realities. However, it is also true that Assam’s unique history of land alienation among indigenous peasantry and forest use has remained vastly understudied. There are some studies on certain aspects of man-forest interactions in the state. The short-term studies are mostly conducted by the NGOs and also by state’s agencies. These studies exhibit fragmented knowledge since they lack long-term engagements and thus are
inadequate in explicating the dynamics of man-forest interactions. These studies have failed to provide the existing grass root realities pertaining to the working of forest conservation measures, local communities’ responses towards these measures as well as their needs and aspirations.

In that context, long-term engaged studies on the dynamics of man-forest interactions are highly warranted in understanding the complex nature of man-forest relationship in Assam. The present study involves a long-term engagement in understanding the complex relationship between wildlife and forest dwellers in the FVs of the Nameri area in particular and in Assam in general. This relationship has been examined both in the historical and contemporary perspectives. Though this study is focused on the contemporary scenario, it delves into the history in order to understand the present. The significance of the study lies in the fact that this is the first long term ethnographic work carried out in the FVs of Assam to understand the nitty-gritty of the forest villagers’ interactions with the forest, their day-to-day responses to and negotiations with the state-initiated conservation measures as well as their problems and aspirations. Intensive fieldwork helped broaden my understanding on a wide spectrum of critical issues of forest governance in the state.

This study examines the history of migration of peasants into the RFs of the Nameri area, the formation of the human settlements during the colonial times, the labour services provided by the forest dwellers, their engagements with the forests since the time they had migrated to the area, and so on. It also takes into account the dominant economic activities of the present forest dwellers, dependence on forest, relations with the FD, their role in forest management, and other related issues. The study pays special attention to the implementation of the FRA 2006 in Nameri. The findings of the study may be instructive in understanding the specific challenges in the implementation of the Act among other forest dwelling communities of Assam as well.

11. The Outline of the Chapters
The thesis has six (6) Chapters including the Introduction and the Conclusion. Chapter One (The Introduction) presents the theoretical perspective of the present study. It
delves into the issues arising out of the various approaches to conservation and its
relationship with the question of human livelihood. It shows how an increasing anxiety
about these issues and concerns has contributed to the rise of a new interest in
environmental studies and to the emergence of Environmental Sociology as an academic
discipline during the 1960s. The Chapter then discusses the contribution and relevance of
the sociologists, from classical to contemporary times, to the study of environment. It
then briefly explains the history of the relationship between man and forest in India and
in that context gives an account of this relationship in the specific setting of Assam
before presenting a review of selected literature relevant to the area of research. Finally,
the Chapter introduces the area of the present study and its basic methodological
orientation.

Chapter Two (Man and Forest: Contextualising a Critical Relationship) provides an
account of the changing man-forest relationship in both historical and contemporary
perspectives in India with special reference to Assam. It examines the agendas and
priorities of forest management during the colonial period and thus provides a historical
exploration of the origins of the contemporary conservation policy of the state. In
addition to documenting these agendas, it analyses the process of formation of PAs in the
post-independence period. The Chapter shows how current drive to keep people out of
PAs can be traced to political and cultural agendas of the nineteenth and early twentieth
century colonial policies. Over the years, the rationale for excluding humans from the
PAs has resulted in serious local resentment and conflict. It also provides some examples
of conservation-induced displacements from various PAs and disruptions of forest based
livelihoods of the poor forest dwellers. Informed by this understanding of the historical
accounts of the man-forest interface in the Indian context, the Chapter delineates the
complex man-forest interactions in Assam in historical and contemporary perspectives.

Chapter Three (The Field Setting: Sopaloga and Gamani Forest Villages) gives an
account of the field-setting of the present study. It provides a general background of the
forest landscape of the field area which constitutes both NTR and Balipara RF along with
their human settlements. It then provides a detail profile of the two FVs of the area,
namely Sopaloga and Gamani, on which the study is primarily focused. It historicises the
migration of people into these forest areas and throws light into their sources of livelihood, dependence on forests, and day-to-day subsistence.

**Chapter Four (Issues of Conservation and Livelihood in Sopaloga and Gamani)** delineates the various state initiatives toward forest conservation and then makes a critical evaluation of their achievements in the FVs under study. It finds that over the years the conservation initiatives in these FVs have failed to evoke positive responses from the villagers. This has been attributed largely to the fact that the conservation policies of the state have remained ineffective in formulating such forest policies that would also address the specific livelihood needs of the community. The Chapter examines the nature of the increasing conflict between the forest villagers and the FD over the issue of land and access to forest resources in the face of the new conservation initiatives of the FD.

**Chapter Five (The Forest Rights Act 2006 and the Forest Dwellers of Nameri Area)** evaluates the newly implemented Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act 2006, briefly known as FRA 2006, in bringing about the much expected paradigm shift in the domain of forest conservation in India. This new Act has been hailed as a historic piece of legislation for the restoration of the long denied traditional rights of the forest dwelling communities. Despite this, the Act has been criticised for being too much informed by the central and eastern Indian experiences. This appears to have created many doubts and apprehension about the benefits of the Act as far as the forest dwelling communities in Assam are concerned. The Chapter documents the grass root realities in Nameri forests with regard to such apprehensions. While bringing out the shortcomings of the Act, the Chapter also highlights its potential in addressing the imperatives of people’s livelihood as well as forest conservation in Assam.

**Chapter Six (Conclusion)** presents a brief summary of each of the Chapters and then delves into the major findings of the study. It contends that the various national forest policies and conservation measures implemented in Assam have not borne much fruit either in effectively putting a halt to the illegal activities in the forests or in providing
justice to the forest dwellers. It argues that there has been no meaningful provision in these policies to integrate the survival needs of these forest dwellers with the official conservation measures further alienating the forest dwellers from the process of conservation. Moreover, the Chapter also emphasises the importance of accommodating the regional and cultural specificities while implementing any conservation policy. It thus argues that an effective conservation policy for Assam should be informed by its unique history of man-forest relationship which significantly varies from a general all Indian perspective.