

# Population Pressure on Forest with Special Reference to Assam

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## I. INTRODUCTION

Forest is the plant community, predominantly of trees or other woody vegetation occupying an extensive area of land. Forest is one of the most important natural resources on this earth, covering the earth like a green blanket. Forests produced not only innumerable material goods but also provide different environmental services which are essential for most of the living being.

Forest covered about one third of earth's land surface of which about 50% is occupied by Tropical Forest. So far India is concerned of the total geographical area 22.74% is forest.

The total forest area of the world was estimated to be 7000 million hector in 1900 which was reduced to 2890 million hector in 1975 and it fell down to just 2300 million hector by 2000 and this downfall of forest area is increasing year after year. It may be noted here that in the developing countries though governments have taken various steps to protect forest but due to population explosion and scathe hands of multinational companies of developed countries they have faced problem to protect the forest area up to the expected level. According to a report of government of India we have only 19.27% of our land area covered by forest. (Data based on satellite picture of 1998). Our national forest policy have made a target for achieving 33% forest area but we are still far behind the target and we are having only 63.38 million hector of forest area out of total land covered by the nation.

Assam is one of the most important states of North-East India which covers an area of 78,438 sq. km and lies in between Latitude 24.8' to 27'55' and Longitude 89'45' E to 96'02' E. The whole Assam may be divided in to four parts such as – The Brahamaputra Velly, The Borak Velly, The Karbi

Plateau and The North Cachar Hills. According to a report of 1992 the reserve forest in Assam stands at 17,580'54 sq. km and around 2334 sq. km has been dedicated to wild life sanctuaries and national parks. It is to be noted that by the year 2002, the area under wild life sanctuaries and national park has been increased up to 3000 sq km. There are mainly five major groups of forest in Assam. Such as – Tropical wet evergreen forest, Tropical semi evergreen forest, Tropical most deciduous forest, Littoral and Swamp Forest and Tropical dry deciduous forest.

Many unique wild life are found in the forest areas of Assam who are struggling for their survival due to encroachment of human being in the homeland of wild life. World famous Rhino which is mainly found in Kazaringa and Manash is in great denger as their inhabitable area is reducing due to excess population pressure in these two reserved forests. Illegal Bangladeshi migrants and their encroachment mainly in the kazaringa reserve forest is a great threat for the life of wild Rhino. Golden Languor, Wild buffalo, Wild Elephant and Tigers which are available in different forest area of Assam are considered as rare wild groups. The Manash reserve forest which is in the Indo-Bhutan border is famous for many wild life species is in great danger due to illegal feeling of trees and illegal cultivation in the area of this forest land, which is also the result of growing population to some extent.

The elephant habitats are mainly found in the foot hills of Assam-Bhutan border area, Assam-Arunachal border area and Assam-Meghalaya border area. But the forest areas of this foothill are gradually occupied by human being as a result of which man-elephant conflict is increasing every year. Conversation of elephant habitats is going to support the sources of life in many ways including bindings of soils, reducing flash flood, supplying adequate

water free of charge from forest to cultivate various groups and stop sanitation on the agricultural area in the foothills and downstream.

Extensive deforestation and habitats fragmentation continue at alarming rate throughout the state and the survival of some rare forest species of world which is available in Assam is in jeopardy.

Forest are an important natural resource of Assam. They have moderate influence against floods and thus they protect the soil erosion. Forest also play an important role in enhancing the quality of environment by influencing the ecological balance and life support system by checking soil erosion, maintaining soil fertility, conserving water, regulating water cycles and floods, balancing carbon-di-oxide and oxygen content in atmosphere etc.

## II. METHODOLOGY

This Paper is an empirical one based on secondary data. Data are collected from published and unpublished government sources, magazine, news paper and research papers prepared by different scholars. Collected data were processed by using computer devices for analytical purposes.

## III. OBJECTIVES

The main objectives of this paper are –

1. To find out the negative impact of population pressure on forest in the state of Assam.
2. To find out how population pressure on forest creates a problem on biodiversity conservation.

3. To help the scholars for further study on the topic on basis of the information given by the study and
4. To provide suggestion on the basis of the study for solution of the problem.

## IV. PROBLEMS OF PREPARING RESEARCH PAPER REGARDING FOREST AND WILD LIFE

Generally, the researchers have relied on one or two data sources but this data are always not reliable. Many times the department of forest and other departments exaggerate some information to hide their weakness. Again collection of data regarding forest is not fully scientific many times. It is always not possible for scholars to make spot verification for collection of data relating to all matters of forest. So they have to depend on secondary data where there is some suspect regarding the 100% validity of such data.

Collection of data regarding forest and wild life is highly time and money consuming. Moreover, it requires various modern scientific equipments which is not easily possible to acquire for a research scholar.

Growing population and pressure on forest in Assam: Increase in population due to large scale illegal immigration from Bangladesh and natural population growth are forcing people to make claim on forest land for their permanent settlement. The following two tables shows the encroachment position in forest area of Assam in January, 1996.

Table No – 01 Encroachment Position in Forest Areas in Assam as on 1<sup>st</sup> January 1996.

No.	NAME OF FOREST DIVISION	TOTAL FOREST AREA (IN SQ KM)	ENCROACHMENT AREA (In sq km)	NUMBER OF ENCROACHERS
1.	Kachugaon	261.04	11.99	577
2.	Aie-valley	594.51	185.48	8961
3.	Haltugaon	778.23	265.97	16225
4.	Dhubri	Not Available	18.21	1219
5.	Darrang	172.16	17.80	744
6.	Sonitpur East	541.26	165.93	11467
	Sonitpur West	653.94	139.54	15782
7.	Lakhimpur	699.62	247.57	6546

8.	Nagaon	100.09	4.85	1157
9.	Nagaon South	340.91	10.92	820
10.	Kamrup East	93.87	6.03	1231
11.	Kamrup West	682.43	6.86	998
12.	Kamrup North	127.47	38.55	2533
14.	Doomdooma	189.13	67.33	1241
15.	Digboi	478.36	8.03	386
16.	Dibrugarh	127.26	10.31	187
17.	Sibsagar	223.57	86.26	1926
18.	Golaghat	1036.27	861.18	22081
20.	Cachar	758.58	12.64	1846
20.	Karimganj	767.38	31.22	3360
21.	Karbi-Anglong East	816.69	42.38	2125
22.	Karbi-Anglong West	1026.46	10.55	588
23.	Hamren	48.43	46.65	1938
24.	N.C. Hills	617.66	38.55	1538
TOTAL		11135.32	2334.80	105476

(Source: Department of Forest, Assam)

Table-2: Forest areas encroached in the Inter-state Border of Assam

NAME OF THE AREA	No. Of RF and PRF	AREA ENCROACHED (in sq km)
Assam-Nagaland Border	10	1017.50
Assam-Meghalaya	31	7.62
Assam-Arunachal Pradesh	30	250
Assam-Mizoram Border	3	2.40

[RF= Reserved Forest; PRF = Proposed Reserved Forest],

Source: Department of Forest, Assam

Increasing demand for fuel wood by the growing population has contributed to a large extent in the destruction of forest. The poor people who live near by the forest mainly rely on wood as a source of fuel leading to loss of tree covered and cleared lands are turned into the garaging land. But this process is now though very slow is very dangerous. The picture is clear in Kaziranga and other forest in Assam.

The people who settle in forest area illegally, they slowly cleaning the forest for agricultural purpose to meet their demand of food. Increasing population within the forest area again contributed in deforestation.

Raw materials for industrial uses particularly wood for making furniture, plywood etc. has exerted tremendous pressure on forest.

Power politics in Assam is also responsible for increasing population pressure on forest. In our political system it is not possible for a department to execute a policy without political support. The politician for their nasty political interest is not ready to take any step against the illegal settler in the forest land and this is one of the main reasons that the forest area of Assam is gradually destroying though in pen and papers total area of forest land has increased. Within the forest area of Assam instead of tree and wild animal illegal human shelter is increasing. This

illegal settler is used as vote banks by some political party.

Well organized encroachments with in the support from political leaders are destroying the forest cover in Sonitpur district and these encroachers are armed and prepared to fail evection at the risk of life. In one occasion on 28<sup>th</sup> April, 2002, when the forest officials' accompanied by police personals started evection drive against encroachers in Namari National Park of Sonitpur district, the local MLA, Mr. Praneswar Basumatory along with his supporters set ablaze the Rangajan Chapari anti-poaching camp inside the national park to halt the eviction drive. A case was registered against him in Rangapara Police Station (Case no. 74/2002) for violating section 147/148/149/353/436/447 and 506 of Indian Penal Code. The MLA has been interfering in this evection drive against encroachments for a long time, Ever science he was elected as MLA. Similarly against the suspected Bangladesi settler in the kazaringa National Park no step has been taken by the authority though many organizations and responsible citizens are shouting against such encroachment and to protect the world famous Kaziranga reserved forest. The people of Assam have started to think that there is some nasty political reason for which no care has been taken in this regard.

Forest land becomes the first choice of rehabilitation of people affected by various natural calamities thereby adds to further reduction of actual forest area. Mass destruction of forest in Karbi Along district of Assam is due to illegal procuring of coal and obtaining limestone for use of Cement factory. As population is increasing rapidly the demand for such commodities is also increasing but on the opposite side forest is decreasing.

The reserved forest along Assam border with Nagaland, Meghalaya and Arunachal Pradesh were the worst victims of encroachment and about 12% of reserved forest is under border encroachment. This takes place because with the development activities in the plains people who used to live in hill areas came down to set up habitation in the reserved forest area of plain to enjoy the benefits of development.

With the growth of small tea gardens in upper Assam many forest covers have to give way to tea plantation, thus causing further shrinking in the total forest area.

This happens due to increased unemployment which is result of population explosion in Assam.

In the last two decades for various developmental projects like – road construction, big dumps, mining etc. a large forest cover area is destroyed in Assam and these development projects are required to meet the demand of excess population.

The following table shows the population density in Assam has increased during the year 1971-2001.

Table No –3 Population density in Assam (Per Sq. km.)

1971	1981	1991	2001
186	230	286	340

(Source: Statistical abstract of India 1971-2001)

Population pressure on forest and its impact on environmental degradation:

In Assam the growth of population is expected to be faster than the expected improvements in forest land availability as well as forest cover of quality, despite the governmental initiatives in Joint Forest Management on the tree growers' co-operative movement etc. Over the last 8-10 years have not produced any tangible result and the forest depletion and degradation continues unabated.

Biodiversity is the verity and variations occurring in nature, which has sustained the harmonious existence of life on earth. The components of this diversity are so interdependent that any change in the system leads to a major imbalance and threatens the normal ecological cycle. Due to destruction of forest mainly by human being biodiversity is loss along with that genetic diversity is eroded in the state.

Due to deforestation in Arunachal hill flood and soil-erosion has resulted loss of fertility of soil in large area of Assam, particularly in Dhemaji and Lakhimpur district. Deforestation in the hill area of Bhutan has resulted to soil erosion in many river sides of Kamrup. Nalbari, Gowalpara and Bongaingaon district of Assam.

Due to deforestation landslides occur in hilly areas, the hilly areas of Guwahati city which were covered by natural forest is fully destroyed by the people for their settlement. During rainy season, every year due to land slide many people have to loss their lives. On 24<sup>th</sup> March, 2011 four people had died in Guwahati city due to landslides.

Due to deforestation of the rain forest there are various climate changes, such as temperature of the state increasing year after year and desiccation of previously moist forest soil. The character of moist humid region changes to a large extent. The process of deforestation in various geographical regions is destroying this unique environment. Consequently, many animals and plants that live in the rainforest face the specter of extinction.

The growing human population and livestock pressure gradually widening the gap between demand and supply of natural resources. This impact will cut across multiple dimensions of day today life affecting not just the environment but the communities as well. Climate change thus could impose a variety of stress on sustainable livelihood of the poor inhabitants of Assam through stresses on ecosystem function. The major concerns are erratic and irregular rainfall patterns, longer dry spells and implications on presumed that there would be a change in distribution, abundance of species, more particularly wild, endemic species, crop plants, pests and vectors.

Table No – 4 Reserve Forest and area of Dhemaji district.

Sl. No.	Reserve Forest	Area ( in hectares)
01	Subansiri	17465.26
02	Jiadhah	1816.00
03	sissi,	906.26
4	0 Simen	881.26
05	Archiac (Dimow)	606.25
05	Jamjing	1618.71
07	Senga	9060.00
08	Gali	10647.24
09	Pova	10521.75

(Source: Department of Forest, Assam)

Due to encroachment, illegal feelings of trees and illegal cultivation, all these forests have lost their existence except pova forest. Pova covering 10521.75 hectares land is situated in the Assam-Arunachal border is gradually destroying due to encroachment. Various organizations of Dhemaji district like AASU, TMPK, AJYCP, KMSS etc. along with conscious local people have called for urgent measures to save the Pova reserve forest. The present lone reserve forest of the district and declare it a Wild Life Sanctuary to save it from encroachment, illegal feeling, of trees, erosion, flood and cultivation. The

Due to inhabitant condition, displacement both human and wilderness would take place. Apart from this, the food security, mitigation of hazards and addressing the epidemics like malaria, encephalitis etc are other issues of major concerns for the region. Under such circumstances, there is possibility of conflict over reduced natural resources causing strained social relations taking toll on to the cultural and spiritual services provided by ecosystems. The gap in information and lack of scientific comprehensive data base on climate change and its implications has become a hindrance for taking up appropriate site-specific adoption and mitigation strategies and action plan.

Population pressure on Reserve Forest of Dhemaji district and its present scenario:

In Dhemaji district, there are 9 reserve forests namely Subansiri, Jiadhah, sissi, Simen, Archiac (Dimow), Jamjing, Senga, Gali and Pova in pen and papers at present. Total forest area in the district is shown in the following table

local people and organizations appealed to all to come fore ward to save the biodiversity of Pova forest. Around 2000 hectares of land of this forest is under illegal cultivation. It is interesting that all these happens in front of the Forest Beat Office of Pova reserve forest.

In jiadhah forest a few number of trees are standing showing its existence. There is no wild life at present in this forest. The trees planted by forest department become the victims of illegal feeling.

The proposed Kabu reserve Forest under Dhemaji district is also facing danger due to encroachment and

erosion. More than 200 hectares of land, out of 9400 have been eroded. The main cause of deforestation in Dhemaji district is population pressure on forest.

The forest of the Dhemaji district is mainly destroyed by illegal cultivation of local people besides erosion and illegal felling of trees. After Sonitpur, Dhemaji district has most probably secured second position in deforestation in the state.

#### V. SUGGESTION:

The following measures will be helpful to protect forest by reducing population pressure on it –

1. Illegal encroachment in forest area particularly in Assam occurs due to irresponsibility of many officers and lack of political support. As soon as the illegal encroachment occurs in any forest area Forest department does not show any interest to take step. But when the problem becomes more severe the department rise from deep sleeping and starts to take action. In the mean time the problem takes such a shape that politician also tries to catch fish from the deep sea of the problem. Now the problem of illegal encroachment in Kaziranga Reserved Forest and forest area of Guwahati hill sides are the best examples. If the politician and forest department perform their duties and responsibilities in due time population growth would not be able to create more pressure on forest.
2. One problem is related to another like a chain. The problem of population growth in the same way is highly responsible for creating the problem of deforestation. No plan and programme would be successful until and unless population growth is controlled. In our country particularly in the state of Assam for controlling population growth no more strict step has been taken. Different institution and organizations have been doing workshop, seminar and other programmes but on the matter of population control the number of seminar, workshops etc. are very few.
3. In Assam illegal migration from Bangladesh is mainly responsible for deforestation though many intellectual persons and groups for their political and other nasty interest try to deny this truth. If we have to save the remaining forest of

Assam and our future generation illegal migration must be stopped.

4. Peoples awareness regarding protection of forest and reducing population pressure on it another important point. If we destroy our forest to fulfill our present demand then we shall pave the way of destroying our future generation. The organization and groups who are fighting to protect forest should be supported by the elite groups and public for the greater interest of the society.
5. Non-governmental organizations and educational institutions can play greater role by awering the people of grassroots regarding impact of population pressure on forest.
6. Law to protect forest in not enough, until they are executed strictly. In Assam forest law have not been executed properly in time as a result of which the problem of population pressure on forest goes beyond control

#### REFERENCE

- [1] Kaushik Anubha and Kaushik C.P., Perspectives in environmental studies, New Age International Publishers, New Delhi, 2004.
- [2] Kumar, H.D., Forest resources: Conservation and Management, Affiliated East West Press Pvt. Ltd., 2001.
- [3] Purohit, Shammi and Agrawal., Environmental science., Student Edition, Jodhpur. 2004.
- [4] Monga, G.S., Environment and Development, Deep & Deep Publications Pvt. Ltd. New Delhi, 2001
- [5] Talukdar Bibhab kumar, Status, trend and challenges of forest conservation in Assam, PhD Abstract.
- [6] Bujarbarua P and Baruah S., Vulnerability of fragil forest ecosystem of NEI in context with the global climate change: an ecological projection, IOP Publishing. 2009.
- [7] Sinha M B, Report of North-East India: The Development Paradigm.
- [8] Assam tribune, an English daily newspaper. December 26, 2010.