

CHAPTER 1

INTRODUCTION

“My land is my backbone..... I only stand straight, happy, proud and not ashamed about my colour because I still have land. I can dance, create, paint and sing as my ancestors did before me..... my land is my foundation. I stand, live and perform as long as I have something firm and hard to stand on. Without land....we will be the lowest people in the world, because you have broken down our backbone, took away my arts, environment, history and foundation. You have left us with nothing.”

---- Aboriginal Leader from Australia¹

1.1 STATEMENT OF THE PROBLEM:

The various countries of Asia, Africa and Latin America were decolonized during the second half of the twentieth century. India was also liberated during this period from centuries of brutal colonial dominance. The major challenge before the newly independent country was revitalizing its fragmented economic structure through emphasizing on ‘economic growth model’ characterized by industrialization, privatization and modernization. It was believed that ‘economic growth’ has the magic of reducing or removing all social ills, such as, poverty, injustice, unemployment, epidemic,

¹Roberts, Jaine, (1978) “From Massacre to Mining: The Colonialisation of Aboriginal Australia London, CIMRA

hunger, etc.² In this backdrop, the Govt of India started to give emphasis on building mega dams in different parts of the country in the hope of generating electricity, providing irrigations to the drought prone regions as well as for providing protection against flood and erosion.³

But it does not go according to the plan. Pt Nehru's 'temples of development' immediately transformed into 'burning ghats' for the indigenous people, because in the name of bringing 'development' indigenous people were displaced from their own ancestral land-which was their backbone-with whom they have developed close affinity since time immemorial.⁴

The statistics speaks a lot. According to the World Bank, since 1990, around ten million people have been displaced every year globally due to various developmental projects. Hirakud dam, the first major multipurpose river valley project of independent India, affected 249 villages, 22,199 families, 18,432 houses and 112,038.59 acres of acculturated land.⁵ In India, large dams are estimated to have displaced about 77% of all people displaced by developmental projects.⁶

According to Walter Fernandes, various development projects have displaced some 50 to 60 million people between 1947-2000 in India. Among the oustees, tribal people or ethnic minorities are the worst victims of whole paradigm of development. According to the report of World Commission on Dam 2000, in India 40 to 50% of those displaced by development projects were tribal people, who accounts for just 8% of the 1 billion

²Kuznets, Simon, (1995) "Economic Growth and Income Inequality", *American Economic Review*, March, pp: 1-28

³Joyce, Stephanie, (1997) "Is It Worth a Dam?", *Environmental Health Perspectives*, Vol.105, No. 10, October, pp: 1050-1055

⁴Parajuli, Pramod, (1991), "Power Knowledge in Development Source- New Social Movements and the State in India, *International Social Science Journal*, Feb, P. 180.

⁵Baboo, Balgobind(1992) *Technology and Social Transformation : The Case Study of Hirakud Multipurpose dam project in Orissa*, New Delhi : Concept Publishing Company, P. 2.

⁶World Commission on Dams(2000) *Dams and Development: A New Framework for Decision Making*, London: Earthscan Publication

people.⁷ Till date, 75% of total displaced people have not been resettled and rehabilitated properly which pushed them into the state of acute impoverishment.⁸

Displacement has an inevitable consequence, i.e., impoverishment. In this respect, Michael Cernea has developed a theoretical model of ‘impoverishment risk and reconstruction’ for the uprooted people. According to this model, the displaced people will face eight inevitable risks which push them into the state of acute poverty and destitution. Since these risks were inevitable, bold steps should be taken by the project designers and policy makers ‘to attack those risks and prevent them from becoming reality.’ Cernea’s model has not been confined to discussion of problems or risks. Rather he has identified various workable guidelines for reconstruction. His model has been applied upon almost 200 dam projects funded by the World Bank in 1993-1994.⁹

The research work tries to look at how these eight impoverishment risks that M.Cernea identified has engulfed the lives of project affected people in North East India in general and Assam in particular. The study also tries to find out how and what reconstructive measures have been carried out by the Central Government, State Government, project implementing agencies, such as, NEEPCO, NHPC, Brahmaputra Board, etc in North East India in general and Assam in particular.

1.2 OVERVIEW OF THE STUDY:

North East India is the home of innumerable tribes, ethnic cultures and a wide variety of socio-cultural-religious as well as national minorities. The region is well known for its biodiversity hotspot all over the globe. Arunachal Pradesh has recognized as World’s

⁷Fernandes, Walter (2004) *Dams and Displacement Woes*, The Statesman, 15th July 2004.

⁸ Ibid.

⁹Cernea, Michael (1990)*Impoverishment Risks, Risk Management and Reconstruction: A Model of Population Displacement and Resettlement*,The paper is presented to the UN Symposium on Hydropower and Sustainable Development, Beijing, P.4. See <https://commdev.org>

second cultural biodiversity hotspot. In spite of innumerable natural resources this region has always been treated as periphery of ‘mainland’ India. Unfortunately, the region has declared as one of the ‘disturbed areas’ of the nation due to massive and continuous ethnic violence in the post independent period. The region has to face environmental degradation in the forms of unprecedented floods, landslide, earthquake, etc. Especially the devastating earthquake of 1950 changed topography of the region, particularly in Upper Assam. In this backdrop, development has remained a subject of contestation for India’s North East.¹⁰

But the situation has started to change gradually since 1970s onwards. In order to minimize ethnic tensions, the Government of India has decided to invest more and more for developmental activities in this region. For this purpose, a ministry of “Development of North East Region”(DONER) has been created at the Centre. Due to ‘geographical space’ abundantly available in this region the Government of India has decided to make this region as ‘powerhouse of India’. Hence, the Centre has approved of 168 dams including both mega dams and small dams to be built in the region. Among them a few have been completed and many more are in the pipeline. It has been estimated that North East India alone can generate 38 per cent of India’s total hydroelectric power. It has the potentiality to generate 63,328 MW electricity. Among the eight states of the region, Arunachal Pradesh has been considered as most suitable site for construction of mega dams due to its low density of population. Therefore, out of 168 projects, 89 have been reserved for Arunachal Pradesh by the Centre. The task of constructing these dams have been vested in the hands of National Hydroelectric Power Corporation (NHPC), North Eastern Electric Power Corporation (NEEPCO), the Brahmaputra Board and State Electricity Boards. According to the deal, host state would receive 12% out of the total

¹⁰Hussain, Monirul (2007), *Interrogating Development: State, Displacement and Popular Resistance in North East India*, SAGE publication, New Delhi, P. 100

power generated freely. For this reason state governments usually do not raise any questions against such mega dams¹¹ but in practice every mega dam projects carry long stories of people's agony, atrocities as well as grievances.

There are a lot of examples in this regard. The Pagladiya Project is one of them. The project is proposed to be built in the Pagladiya River at the village Thalkuchi in the Nalbari district of lower Assam based on an investigation by the Central Works and Planning Commission of India during 1968-71.¹² Being started as a minor flood detention project, it has extended its wings into a multi-purpose dam projects including both flood detention and irrigation components within it. The most tragic part of the project is that it is going to displace more than 50,000 and 5,000 people and families respectively. But only 18,473 people and 3,271 families are covered by the Brahmaputra Board within its resettlement and rehabilitation package. But due to continuous and massive resistance from people and resistance committee like "Pagladiya Bandh Prkalpar Kshatigrastha Alekar Sangram Sammittee" the project had been postponed regularly. Unlike all mega dam projects, the Pagladiya project carries the risk of potential displacement of 90% tribal population of the total displaced people.¹³

The proposed Tipaimukh multi-purpose project has been facing continuous resistance from the people of Manipur, specially from the Zeliangrong Nagas and the Hmars, because these two tribes will be worst affected of the project. The project is going to displace about 15,000 people without ensuring their proper rehabilitation and resettlement schemes. Apart from Manipur, the people of Mizoram are also demanding for immediate cancellation of the project because the Mizo people will also be victims of

¹¹ ibid

¹² Bharali, Gita (2004) *'Development Induced Displacement: The Struggles behind It'*, paper presented on International Conference on Development induced displacement: Afro-Asian Perspective, P. 3.

¹³ Dutta, AkhilRanjan (2003) *'Pagladiya Project: Poor Rehabilitation of Oustees'*, published on Economic and Political Weekly, P. 5150

the project. The “Mizoram Population Control Board” (MPCB) has expressed its apprehension in this regard through a public hearing on 2nd December, 2004.¹⁴

Khuga dam of Manipur also has been facing serious challenges from the potential displaces since 1984 onwards. The Dumbur Hydroelectric Project (DHP) of Tripura displaced an estimated 8000 tribal families and approximately 40,000 people from the project site. For a small state like Tripura, 40,000 people are a huge number.¹⁵

Arunachal Pradesh has to bear the burden of development in a most pathetic way in the land of seven sisters. The state has received the highest number of dams (89 dams) due to its very low density of population. An MoU was signed in 2000 between the then Chief Minister of Arunachal Pradesh Mukut Mithi and the NHPC in order to build a series of mega dams. Among them, Upper Siang Project, East Siang Project, West Siang Project, Lower Subansiri Project, Upper Subansiri Project, Middle Subansiri Project, etc. are prominent. If the Upper Siang project is commissioned, it will submerge about 200 villages inhabited by indigenous tribal people. These series of mega projects will displace an estimated 2,00,000 tribal people and disrupt their community life abruptly and block their access to the natural resources. In the hope of generating 2000 megawatts of electricity, the Lower Subansiri Project will directly displace and affect the livelihood of about 8,000 people. The Himalayan foothills between Arunachal Pradesh and Assam have been the natural habitats of wild elephants for ages. The project has already blocked a natural elephant corridor to pave the way for construction.¹⁶

In this backdrop, Michael Cernea has developed a theoretical model of ‘impoverishment risk and reconstruction model’ for the uprooted people in the 1990s. According to this

¹⁴Hussain, Monirul (2007), *Interrogating Development: State, Displacement and Popular Resistance in North East India*, SAGE publication, New Delhi, P. 14

¹⁵Ibid, P. 30.

¹⁶Ibid, pp: 117-118.

model, Impoverishment is an inevitable consequence of displacement. Therefore, there is an urgent need to find out suitable means for the policy makers and project designers so that the risk of ‘impoverishment’ can be removed or reduced to a greater extent. Cernea identified eight different risks of ‘impoverishment’. They are as follows:

- a) Landlessness.¹⁷
- b) Joblessness¹⁸
- c) Homelessness.¹⁹
- d) Marginalization.²⁰
- e) Food insecurity²¹.
- f) Increased morbidity.²²
- g) Loss of access to common property resources.²³
- h) Community disarticulation.²⁴

The internal logic of IRR model suggests that to prevent and overcome the patterns of impoverishment, it is necessary to act in time to attack the risks and stop them from becoming reality. Risk identification is not an exercise carried out for academic

¹⁷ Expropriation of land removes the main foundation upon which people’s productive system, commercial activities, and livelihoods are constructed.

¹⁸ The risk of losing wage employment is very high both in urban and rural displacements for those employed in enterprises, services and agriculture. Yet creating new jobs is difficult and requires substantial investment.

¹⁹ Loss of shelter tends to be only temporary for many resettlers; but, for some, homelessness or a worsening in their housing standards remains a lingering condition. In a broader cultural sense, loss of a family’s individual home and the loss of a group’s cultural space tend to result in alienation and status deprivation.

²⁰ Marginalization occurs when families loss economic power and spiral on a “downward mobility path”. Middle income farm households do not become landless, they become small land holders; small shopkeepers and craftsmen downsize and slip below poverty thresholds.

²¹ Forced uprooted increases the risk that people will fall into temporary or chronic undernourishment, defined as calorie-protein intake levels below the minimal necessary for normal growth and work.

²² Massive population displacement threatens to cause serious declines in health levels. Unsafe water supply and improvised sewage systems increase vulnerability to epidemics and chronic diarrhea, dysentery, etc.

²³ For poor people, particularly for the landless and assetless, loss of access to the common property assets that belonged to relocated communities results in significant deterioration in income and livelihood levels.

²⁴ Forced displacement disperses and fragments communities, dismantles patterns of social organization and interpersonal ties; kinship groups become scattered as well.

purposes; it is carried out to design for action, for risk reversal. Thus, he has identified certain reconstructive measures, such as-

- (i) From landlessness to land based resettlement
- (ii) From Joblessness to reemployment
- (iii) From homelessness to house reconstruction
- (iv) From disarticulation to community reconstruction
- (v) From marginalization to social inclusion
- (vi) From expropriation to restoration of community assets/services
- (vii) From food insecurity to adequate nutrition
- (viii) From increased morbidity to better health care.

Although Cernea has developed this model in the context of USA, the model has general applicability in terms of displacement all over the world. Various studies have conducted regarding feasibility of this model in case of development induced displacement in different parts of the globe.

1.3 CONCEPTUAL FRAMEWORK:

The proposed study is carried out within the conceptual framework of development and social justice. There are various dimensions to look at 'development'. According to John Martinussen, "development implies some sort of advancement in positive directions." In the words of David Harrison, "development indicates change from one state to another." Again, according to A.Schumpeter, "development is a discontinuous and spontaneous change in the stationary state which forever alters in a gradual and steady change."

In the 1950s, economists equated 'development' with 'economic growth'. In fact, they used the term 'development' and 'economic growth' interchangeably. Hence, W.A.

Lewis, in his work ‘The Theory of Economic Growth’ (1955) said- “our subject matter is growth; not distribution.” Similarly, Paul Baran in his work, ‘The Political Economy of Growth’ (1957) has defined growth or development as “the increase in the per capita production of material goods” but this view has been receiving severe criticisms since 1960s, because, despite economic growth, inequality and poverty remained higher in many countries. Therefore, focus has been shifted to ‘growth with equity’ (GWE) and ‘growth with justice’ (GWJ). The ‘Economic and Social Council’ also suggested that there should be a ‘balance’ between ‘economic growth’ and ‘social development’ in 1962.

The United Nations Development Programme (UNDP) has been publishing a Human Development Report (HDR) annually since 1990. Each and every HDR provides a new insight towards development. It considers that the overall development of a nation cannot be measured on the basis of per capita income only. Hence, UNDP has introduced several new indicators of development like Human Development Index (HDI), Inequality-adjusted Development Index, and Multidimensional Poverty Index (MPI) and so on and so forth. The introduction of such several indicators has implied that apart from economic angle, development has environmental, social, cultural as well as gender angles.

Nobel laureate economist Amartya Sen has interpreted development as a “process of expanding the real freedoms that people enjoy”. He pointed out that “development requires the removal of major sources of unfreedom: poverty as well as tyranny, poor

economic opportunities as well as systematic social deprivation, neglect of public facilities as well as intolerance or over activity of repressive states.”²⁵

Approaches to Development: The Indian Experience-The Indian state was confronted by two different versions of reconstruction: the Gandhian project of reviving the village economy as the basis of development and the Nehruvian plan for prosperity through modernization and industrialization.²⁶

After independence, Indian state has adopted the Nehruvian model of development. It was believed that rapid economic growth could take place and the cumulative gains from the growth of GNP would automatically trickle down to the poor in the form of increased employment and income opportunities.²⁷ But in practice, the benefits of the economic growth have not percolated down to the vast majority of the people resulting forced displacement of millions of people. Despite large scale displacement, the resettlement and rehabilitation of project affected people has been minimal.²⁸

1.4 OBJECTIVES:

1. To give an overview of the problem of development induced displacement, rehabilitation and resettlement in India.
2. To analyse the IRR model and to highlight its drawbacks or challenges.
3. To assess applicability of IRR model over the hydroelectric dams of North East India with special reference to Lower Subansiri Hydroelectric Project.
4. To suggest for an alternative model which specially address the need of the development induced displaced people of North East India.

²⁵ Dutta, AkhilRanjan(2011), ‘*Political Theory: Issues, Concepts and Debates*’ (edited), ArunPrakashan, Guwahati, P. 228.

²⁶ Baviskar, Amita(1995), ‘*In the Belly of the River*’, Oxford University Press, New Delhi. P.16.

²⁷ Wingaraja, P (1993), ‘*New Social Movements in South: Empowering Poor*’, Vikas, New Delhi. P.28.

²⁸ Seabrook, J(1993) ‘*Victims of Development-Resistance and Alternatives*’, Veocso, London. P. 39.

1.5 RESEARCH QUESTIONS:

1. What is the significance of IRR model in addressing development induced displacement in North East India?
2. What steps have been taken by Government of India to rehabilitate and resettle the project affected people with special reference to North East India?
3. What are the major obstacles in the successful implementation of rehabilitation and resettlement policies in North East India in general and Assam in particular?
4. (a) What are the workable solutions to avoid or minimize the number of displaced people?
(b) How to make appropriate rehabilitation and resettlement plan for the displaced people?

1.6 METHODOLOGY:

The methodology for the research is purely qualitative in nature. Qualitative method helps in understanding the social reality as it is.

The study is largely based on secondary sources, such as books, journals, newspaper articles as well as internet but the primary sources too are judiciously used. The information are also collected from various reports published by the Government, UNDP, World Bank, Asian Development Bank, World Commission on Dam etc. and interviews with experts on dam induced displacement.

The methodology also includes content analysis of the newspaper reporting on a number of hydropower projects in North East India in general and Assam in specific.

1.7 CHAPTERIZATIONS:

There are five chapters in the work including introduction and conclusion.

Chapter 1- **Introduction:** This chapter includes statement of the problem, overview of the study, objectives, research questions, methodology, chapterisations, review of literature, significance as well as limitations of the study.

Chapter 2- **Impoverishment Risk and Reconstruction (IRR) Model: Significance and Limitations:** This chapter deals with the theoretical dimensions of IRR model provided by Michael Cernea in detailed. The chapter tries to look at how the IRR model is significant for the whole discourse of development induced displacement and what is its practical limitation in case of North East India.

Chapter 3- **Literatures on Development Induced Displacement and Rehabilitation in India: An Overview:** The chapter starts with the debate between Mahatma Gandhi and Pt. Jawaharlal Nehru regarding ‘model of development’. It looks at how Indian government has dealt with rehabilitation and resettlement problem of development induced displacement both in paper and practice. The chapter makes an attempt to look at ‘tragedy of development’ behind the major hydroelectric dams of India, specially, the Hirakud Dam, the Sardar Sarovar Dam, the Nagarjunasagar Dam, the Tehri Dam, the Bhakra Dam and the Pong Dam as well as application of IRR model over these hydroelectric projects.

Chapter 4-: **Impoverishment Risk and Reconstruction Model and Development Induced Displacement in North East India with Special Reference to Lower Subansiri Hydroelectric Project:** The chapter is divided into two parts. The *first part* tries to look at the factors behind allocating large number of dams to the northeastern belt

of India in the new millennium. It makes an attempt to study the effects of these series of mega dams on the lives of the indigenous tribal people as well as women in the region. The attitudes of the respective state governments towards the oustees and potential oustees are included. The *second part* makes an attempt to discuss applicability of IRR model on the hydroelectric dams in the region with special reference to Lower Subansiri Hydroelectric Project.

Chapter 5- **Conclusion:** This chapter includes summary and main findings of the research. The chapter tries to find out suitable as well as workable alternative model which can rightly address the needs, atrocities as well as grievances of the people of North East in general and Assam in particular.

1.8 REVIEW OF LITERATURE:

There are substantial number of literature on development, dams, displacement as well as rehabilitation.

Books:

In the book “**Interrogating Development**”, the author **Professor Monirul Hussain** has described whole paradigm of dam induced displacement in North East India in a very lucid manner. He highlighted the politics behind the big dams, centre’s outlook towards the periphery of the country, the huge gap between official data and number of actual affected people and many other aspects. Professor Husain and his team found surprising gap of data collected by two official sources- the district administration and gazettes of the government of Assam. The book has discussed the Siang and Lower Subansiri Dams in Arunchal Pradesh, Tipaimukh Multipurpose Hydroelcetric projects in Manipur and Pagladiya Dam Project in Assam.

In the book **“Morubhumi Ahe Lahe Lahe”**, the author **Akhil Gogoi** explored why Assam do not need mega dams especially in the context of Lower Subansiri Hydropower project. He highlighted twenty reasons in this regards with various examples. According to the researchers, the Subansiri river is the home to 169 different species of fishes. The Subansiri and Kulashi are only two tributaries of Brahmaputra where Dolphins are found. The NHPC has blocked the ‘Subansiri-Dulung’ elephant corridor for the construction of the Lower Subansiri mega dam which has accelerated conflict between men and elephants. Again, the author has included several other political dialogues, debates over mega dam in the Assam Legislative Assembly and an open letter to the then Chief Minister of Assam Tarun Gogoi requesting the immediate action against all those dams which may cause serious threats upon the people of Assam.

In the book **“Uprooted for Whose Benefit-Development Induced Displacement in Assam 1947-2000”**, the authors, **Walter Fernandes and Gita Bharali** have made a comprehensive survey from all relevant sources regarding development induced displacement in Assam during post independent period. The book helps the researchers by providing authentic statistics. With the help of the organized data, the policy makers and project designers can understand the seriousness and extent of the problem. Both the authors elaborated the total amount of land acquired for different projects in Assam, the number of displaced people as well as project affected people in a systematic and organized way.

Articles:

In the article **“Pagladiya Project: Poor Rehabilitation of Oustees”**(published in Economic and Political Weekly on 6th December, 2003), **Prof. Akhil Ranjan Dutta** has made a comprehensive analysis of compensation, rehabilitation and resettlement issues

in case of Pagladiya hydropower project. The author has described the root cause behind the ‘incompatibility’ between the Brahmaputra board (the implementing agency of the Pagladiya dam project) and the project affected people. He also explored the issue of weak and unorganized leadership in case of the Pagladiya project. The whole debate of democracy VS development has been raised in the article.

In the article “**Big Dams, Big Floods: On Predatory Development**” (published in Economic and Political Weekly on July, 2008), **Prof. Hiren Gohain** discussed about the politics behind the construction of Lower Subansiri Hydro-power Project. Being built on the geographically fragile zone, the North East India always carries the potentiality of heavy earthquake at any cost. In such case the heavy earthquake may break the very basic fabric of the dam resulting unprecedented release of water from the big reservoirs. Again, around 32,00,000 tonnes of boulders were used for the construction of the subansiri dam which were collected from the sands of the river. As a result of taking away the boulders, ‘the currents become stronger and the danger of siltation increases manifold.’ Again, Prof. Gohain has talked about the ‘agony of the tribal’ and improper Environment Impact Assessment (EIA) of the Subansiri dam.

In “**Damming Rivers Damming Cultures**”, the author **Michael P. Lawrence** has provided a global outlook to look at the whole discourse of development induced displacement, rehabilitation and resettlement. The book is written in the context of United States. The author has explored the numerous debates on dam which gave birth to World Commission on Dam (WCD) in 1998 as well as major findings and recommendations of WCD. The book discussed a prolonged history of dam building in the United States. The author has beautifully articulated the accumulated benefits and costs from those dams in the bygone days. Apart from discussing dams induced

marginalization, he also suggested a number of means so that cultural resources can be protected from dams in the United States.

In the article “**Dams**” (published in The Quarterly Journal of Economics on May, 2007), the authors-**Esther Duflo and Rohini Pande** give a vivid picture of all the technical sides related to construction of a dam. The viability and suitability for any dam construction depends upon the extent and nature of river gradient. Irrigation dams are most suitable for low river gradient areas. On the contrary, hydroelectric dams are most suitable for very steep river gradient areas. There should be no construction of dams where river gradient is either flat or somewhat steep. The article is written on the basis of empirical survey. The authors collected annual agricultural production data for 271 districts for 1971-1999 and poverty data for 374 districts for five years: 1973, 1983, 1987, 1993, and 1999. On the basis of these empirical data they come to know that the districts which are located downstream from the dam are more in advantageous position in terms of both agricultural production and poverty reduction than the areas in which the dam is build.

In the article ‘**Dam, Development and Popular Resistance in Northeast India**’, the author **Prof Chandan Kumar Sarma** has raised the factors behind peoples’ resistance against mega dam projects in this region. In the very beginning Prof Sarma has made a detailed account of the Brahmaputra river system and the Barak river system as well as economy and cultures associated with both the river systems. The entire region is ‘seismically very active, geologically fragile and ecologically sensitive’, hence extremely unfavourable for big river embankments. He also depicted the pictures of tribal people’s agony and apprehension regarding loosening their age long community and cultural life styles within the ambit of ‘national development’.

In the article '**The Impoverishment Risk Model and its Use as a Planning Tool**', the author **Hari Mohan Mathur** said that anthropological and sociological research on IRR model in recent years has acquired new prominence. According to the author Mathur, the new research on IRR model is a hopeful one: impoverishment from displacement is not inevitable, it is preventable. He has made a study on application of IRR model in hydroelectric projects in Rajasthan. In addition to the eight recurrent characteristics, the study found one more, equally important, characteristics, i.e. loss of access to basic public services in the hydroelectric projects carried out by the Government of Rajasthan. He also mentioned 'class' factor as a key player as in the Mahi Bajaj Project in Rajasthan where on the one hand people with influence were relocated in a flourishing town i.e. Kandu Colony with fully operational civic amenities and on the other hand the poor tribal Bhils were resettled in the camps too far away from their original habitat with no or very limited civic amenities. In order to put the IRR model into practice the author made some guidelines like, involving the affected people in the project, initiating risk analysis, planning with anticipated risks, research methodology, conduct socio-economic survey, use of data as a tool for monitoring and evaluation, strengthening institutional capacity and last but not the least staff training.

In the article '**Addressing Impoverishment Risks: Some Examples from World Bank-assisted Projects**', the author **Sam Thangaraj** addressed risks in the World Bank assisted projects in India in general and the Upper Indravati Project in particular. Due to adequate application of IRR model in the R&R action plan in the Upper Indravati Project, the government of Odisha can prevent the risks from becoming reality. The displaced persons have been provided with either 1.25 acres of irrigated land or 2.5 acres of unirrigated land as the minimum resource base. The government has decided to reconveyance of unnecessary land to original owners. The compensation for land has

been given at 'replacement value' rather than 'market value'. The government has made an effort to provide employment to at least one person from each displaced family, housing grant to project affected people; establishment of NGOs like 'Aragamee', 'Udyogi Mahila Sanghas', 'Development of Women and Children in Rural Areas' and so on and so forth.

1.9 SIGNIFICANCE OF THE STUDY: Development is a relative concept. It cannot be absolute in nature, because one man's development may be at the cost of another. That's why, 'pains' and 'gains' of development are not equally enjoyed by everyone.

Since independence our country has achieved tremendous progress in the fields of agriculture, industry, art, culture, medicine, law and so on and so forth. But in due courses, it has pushed indigenous people and weaker sections of the society into poverty and backwardness. Apart from the Central Government, various State Governments, many public service undertakings have adopted their own rehabilitation and resettlement policy. In spite of having large numbers of extensive policies, the problem has not come to an end.

In spite of massive mass protests, no systematic research work has come out on hydro-power projects of Assam in compared to other regions of the country. Although intellectuals, experts and geo-political scientists have contributed scholarly articles in this regard, but most of them have studied the whole issue from a singular perspective.

The tragic part is that while some hydroelectric projects receive too much attention from the state, civil society, intellectuals as well as media people, some remained under the veil of ignorance to a great extent. Here lies the significance of the study. Michael Cernea has developed his theoretical model in the context of USA. Although almost more than 200 studies have been conducted upon the feasibility of IRR model over

various dams funded by the World Bank, yet no extensive research work has been conducted regarding feasibility of IRR in the North Eastern regions of India.

1.10 LIMITATIONS OF THE STUDY:

Like all social science research this study is also not free from limitations.

Firstly, the study is confined to ‘development induced displacement’. Other aspects of displacement like conflict induced displacement, disaster induced displacement, etc is not taken into consideration. *Secondly*, when we talk about ‘development induced displacement’, we basically refers to all those displacement caused by various developmental projects like oil sector, paper mills, roads and connectivity, dams, railways, telecommunication, industries, universities and so on and so forth. But study covers only ‘dam induced displacement’. *Thirdly*, the study is very much region specific. It is confined to north east India in general and Assam in particular. *Fourthly*, the study is conducted from social science perspective. The technical, mechanical and financial aspects of dams are not covered by the study. Though the study is limited in nature yet it seeks to provide an alternative model of development.
