

DEVELOPMENT AND REGIONAL PLANNING

(Special Focus on North-East Region)



**DR. B.K.B. COLLEGE, PURANIGUDAM
NAGAON, ASSAM - 782141**

Editor: Abinash Bharali

**DEVELOPMENT AND
REGIONAL PLANNING**
(Special Focus on North-East Region)



Edited by

Abinash Bharali
Dr. B.K.B. College, Puranigudam

DEVELOPMENT AND REGIONAL PLANNING (Special Focus on North-East Region)

The book is a collection of selected research based articles presented in the UGC sponsored National Seminar "Regional Planning and Development in North-Eastern Region of India" organized by the Department of Economics, Dr. B.K.B. College, Puranigudam on 23rd February, 2018.

December, 2019

ISBN : 978-93-84679-59-0

Editorial Board

President : Dr. Nripen Ch. Das

Editor : Dr. Abinash Bharali

Members : Dr. Kamal Ch. Saikia, Bipul Chakraborty, Biju Bora, Dr. Mallika Bora, Anurupa Bora, Dr. Jatin Sarma, Akashee Bhuyan, Juli Thakuria, Shradhanjali Bhattacharjee, Purabi Hazarika.

Published by : Dr. B.K.B. College, Puranigudam

Printed at : Ajanta Press, Nagaon, Assam

Price : Rs. 500/-

Copyright © Dr. B.K.B. College, Puranigudam, Nagaon, Assam

Disclaimer: The editor and the editorial board shall not be responsible for any insufficiency and inaccuracy of data or relevant facts provided in support of their arguments, and the opinion expressed in the research papers, published in this volume is a matter of author's direction.

MESSAGE FROM PRINCIPAL

North-East India is well known as a backward region in the country. Here development is the panacea for all the problems the region is submerged in. It is a fact that without proper planning development is not possible. So development and planning are actually two sides of the same coin. It is said that this region is lagging behind the rest of the country due to lack of proper planning in the regional level. It is allegedly claimed that this region is bypassed in the central policy and planning. To uplift this region at par with the national level North Eastern Council (NEC) and Ministry of Development of North Eastern Region (MDoNER) are there. The researchers will verify the facts and figures associated with these claims and counter claims.

Research is a sine qua non for development of a country. Research should be part and parcel in higher education. But in the colleges of Assam research is not satisfactory due to reasons very obvious to understand. Because of burden of classes and clerical work load among the teachers, and the financial crunch, research in the colleges is not encouraging. In the draft New Education Policy (NEP)-2019 of the country research universities are proposed to focus equally on research and teaching. A special agency named National Research Foundation (NRF) is also proposed to grant competitive funding for outstanding research proposals across all disciplines. But it seems the scope of research in the colleges is going to be reduced in the NEP-2019.

This collection of selected research based articles is the outcome of the UGC sponsored National Seminar organized by the Department of Economics on 23rd February, 2018. This research endeavour by the Department of Economics certainly created a spate of research environment in the campus.

Dr. Abinash Bharali, Assistant Professor in Economics, edited this anthology and made a good attempt for publication of this anthology, though the last instalment of the financial assistance is not received from the UGC. So another work is added to the corpus of publications by Dr. B.K.B. College, Puranigudam, Nagaon.

I hope this publication will be a remarkable contribution for understanding the development scenario of the North-Eastern region. Students, researchers and academics of different disciplines will find in this publication new thoughts and views for better understanding this region which is still an enigma for the rest of the countrymen.

Nripen Ch. Das
Principal
Dr. B.K.B. College, Puranigudam

PREFACE

Geographically India comprises a vast area with large disparities in its natural environment. Climate and soil differences are very distinct in different parts of the country. Socially the country is highly differentiated in terms of language, religion and culture, and the factors of production are also not equally distributed. All these are demanding different patterns of economic development and claim for regional planning and development. Regional planning helps in injecting dynamism in backward regions and stimulates the process of growth.

Dr. Y. Venugopal Reddy stated that "in such a situation, it is axiomatic that unilevel centralised planning would be relatively inefficient to comprehend and deal with such a diversity of factors. It would be particularly difficult to deal with enormous and diverse non-quantifiable socio-economic situations within a democratic framework". (*Venugopal Reddy, Y., Multilevel Planning in India (New Delhi, Vikas Publishing House Private Ltd., 1979), pp. 1*)

Indian Planning is commonly single-level economic planning with a heavy reliance on the sectoral approach. Sectoral plans, integrated into a single whole and fitted into the framework of national goals and objectives, were prepared and implemented since 1951. The planning process in India is still highly centralised. A brief review on the literature of regional planning in India reveals the fact that no positive action or attempt is made to prepare plans at lower territorial levels such as the State, District/Development Block or Region with the same competence and seriousness as at the national level. The regional dimensions have been left for the State Governments to incorporate into the State plans.

Development of the North-East Region (NER) has remained high on the agenda of both the Central and the respective State Governments. The North Eastern Council (NEC) which was set up in 1972 has been playing a major role for balanced development of the region. To provide further developmental initiatives in the North-East, the Government has set up the Department of North Eastern Region (DONER) in 2001. In line with the priority given to this region, per capita levels of Central assistance to State Plans in the NER are among the highest in the country as compared with the all-India level. The Government of India has also been providing special Central assistance in respect of some of the States in the NER for special area programmes such as the Hill Area Development Programme (HADP) and the Border Area Development Programme (BADP). The main objectives of eco-preservation and eco-restoration are the focus of HADP with an emphasis on sustainable use of bio-diversity while keeping in view local needs and

aspirations. The BADP is designed to take care of special needs of people living in remote and inaccessible areas situated near international borders.

The NITI Aayog (National Institution for Transforming India) was established in 2015 with the aim to achieve sustainable development goals with cooperative federalism by fostering the involvement of State Governments of India in the economic policy-making process using a bottom-up approach. The NITI forum has outlined five development missions for promoting sectors like horticulture, tourism, food processing, bamboo-based handicrafts and medium scale industries for North-East region (NER) with focus on 'Make in North-East'.

Thus reasonable progress is taking place in NER under these initiatives. The flow of funds to this region is also increasing as compared to the previous time period, but still North-East region stands as a marginal player in the field of development strategy. It is one of the backward regions of India with its geographical isolation, proneness to natural calamities, unutilized and underutilized natural resources, sensitive borders, disturbed law and order conditions, poor transport and communication facilities, etc. So, regional planning can be exercised for all round development of the region emphasizing more on the interests of the society in general. It needs to be used in such a way that the seeds of sustainable development are sown so that the growth of the region becomes self-propagating.

The book is a collection of selected research based articles presented in the UGC sponsored National Seminar "Regional Planning and Development in North-Eastern Region of India" organized by the Department of Economics, Dr. B.K.B. College, Puranigudam on 23rd February 2018. It provides a platform to the authors for sharing their ideas, knowledge and systematic investigations related to different fields, like – agriculture, Act East Policy, industry, tourism, handloom, etc. for socio-economic development of the region through developing effective regional policies.

Abinash Bharali
Dr. B.K.B. College, Puranigudam

Contents

- Economic Development through the Development of Handloom
Micro-Entrepreneurship in North-East India // 9
Dr. Kishor Goswami & Kalpana Handique
- Socio-Economic Development in India:
An Interregional Comparative Analysis // 24
Dr. Amarjyoti Mahanta
- How Real is the Act East Policy for the North Eastern Region of India: A Review on
Act East Policy and its Ground Realities // 37
Bishmita Medhi & Sailajananda Saikia
- Regional Planning and the Role of Traditional Institutions in
Eco-Tourism: A Study of the *Sattras* of Assam // 48
Ankita Dutta
- An Empirical Study on the Status of
Child Health Care in North-East India // 59
Suraj Goswami & Dibyojyoti Bhattacharjee
- India's Trade with South Asia and South East Asia: It's Potential in the
Development of North-East Region of India // 87
Arifa Tabassum
- Intra-Regional Disparity in providing Agricultural Credit by
Commercial Banks: A Study of North-East India // 97
Chayanika Sarma
- Prospects of Eco tourism Development in Nagaon, Assam // 109
Dewajit Bora
- A Peep into the Tourism Industry in Assam: Trends and Potentialities // 115
Neha Tiwari & Muhammad Shahbaz
- Migration and its Socio-Economic impact on the Economy of Assam // 126
Dr. Parag Dutta & Mrs. Tulika Choudhury

ECONOMIC DEVELOPMENT THROUGH THE DEVELOPMENT OF HANDLOOM MICRO-ENTREPRENEURSHIP IN NORTH-EAST INDIA

Dr. Kishor Goswami*

Professor of Economics

Department of Humanities & Social Sciences,
Indian Institute of Technology (IIT), Kharagpur

Kalpana Handique

Research Scholar (Economics)

Department of Humanities & Social Sciences
Indian Institute of Technology (IIT), Kharagpur

ABSTRACT :

The rural non-farm handloom micro-entrepreneurial activities in North-East (NE) India offer immense business opportunities which are crucial to the region's economic development and upliftment of its people. It has the potential to alleviate poverty, generate employment and empower the females, who dominate most of the handloom activities in the rural areas. Despite having the highest proportion of handlooms, the region is characterized by the lowest proportion of commercial looms. Outmoded production techniques, unorganized production system, limited working capital, lower productivity, traditional product range, and absence of market linkages characterize the handloom micro-enterprises of NE India. Based on the primary data collected from 332 respondents, the study analyzes the impact of various demographic, socio-economic, and institutional factors on the performance of the handloom micro-enterprises using a Mincerian earning equation. The study considers two performance measures, namely, the volume of production per annum and the annual income. Gender, maintenance of bookkeeping, risk aversion attitude, firm size, access to technology, type of clothes, family labor, access to training, and access to capital is found to significantly influence the volume of production and income levels in a handloom micro-enterprise. Location of a micro-enterprise is found to influence its income levels. The study suggests for policy initiatives to impart vocational education and training programs which emphasize on financial risk management strategies, particularly among the rural female micro-entrepreneurs of the region. Awareness programs to sensitize the micro-entrepreneurs on the practice and maintenance of bookkeeping and other associated business and financial issues

Conditions and Attributes towards Developmental Issue with special reference to Dima Hasao District // 135
Roboni Khawbung

Organic Farming: It's Socio-Economic Importance for the Farmers of North-East India // 146
Tamalika Sikder & Dr. Amrit Pal Singh

Role of "Deen Dayal Antyodaya Yojana - National Rural Livelihoods Mission" (DAY-NRLM) towards Agriculture Development through SHG Participation // 155
Vidisha Saikia

Impact of Female Literacy in Reducing Infant Mortality in India // 167
Shraddhanjali Bhattacharjee & Ritusmita Gautam

Agricultural Modernization and Its Impact on the Rural Ecology and Economy of A Floodplain Village in Nagaon District, Assam // 176
Manash Jyoti Bhuyan & Nityananda Deka

Role of Self-Help Groups in Rural Development of Assam with reference to Dimoria Block of Kamrup (M) District // 193
Isha Bora & Bhaswati Das

Brick Kiln Industry: Prospects, Problems and the Road Ahead // 202
Dr. Reshma Kumari Tiwari & Ms. Priya Jaiswal

A Study on the Role and Performance of Institutional Credit in Assam for Agricultural Development // 208
Jayashree Bordoloi

Look East Policy as A Development Strategy for NER // 219
Oanannya Duarah & Risha Das

Eco-Tourism in the Namphake Village of Assam : A Sociological Study // 230
Silpi Sikha Dowerah

Regional Planning and Industrial Sector in North Eastern Region of India // 236
Malabika Kalita

Regional Planning and Agriculture Sector in North-East of India : Hills vs Plains // 243
Krishna Saikia

Look/Act East Policy the Take for North-East India // 250
Neha Kar

needs to be addressed. Easy access to credit facilities, raw materials, subsidized high-valued silk yarns, market linkages and programs for encouraging technology adoption are crucial to improve the performance of the rural handloom micro-entrepreneurs.

Keywords: Handloom, Micro-Entrepreneurs, Volume of Production, Income, Rural and Non-Farm.

INTRODUCTION:

Entrepreneurship is considered as an important catalyst for economic development as it promotes employment, innovation and welfare in the economy (Anokhin, Grichnik, & Hisrich, 2008; Acs, Desai & Hessels, 2008). The Government of India has undertaken numerous initiatives and introduced policy measures and programs like "Make in India" and "Start-up India" to develop the ethos of innovation and entrepreneurial potentials in the country. A majority of the entrepreneurs in a developing country like India are employed in the micro and small enterprises, most often in the informal sector (Roy & Wheeler, 2006). In India, out of the total population of 1.21 billion, 68.84 percent resides in the rural areas while only 31.16 percent resides in the urban areas (Ministry of Home Affairs, 2011). The non-farm micro-entrepreneurial activities are immeasurably vital to the development of the rural areas of a country like India where the rising population has resulted in overcrowding in the agricultural sector (Bhagavatula, et al., 2010). In India, the handloom industry has the potential to develop the entrepreneurial undertakings for the rural masses, given that the industry stands as the second largest provider of rural employment after agriculture (Ministry of Textiles, 2015).

In India, the North-East (NE) region constitutes more than 65 percent of the country's total handloom households. The NE region also registered an increase of 3.4 percent of handloom households, from 1.46 million to 1.51 million during 2009-10, whereas, the national trend shows a decline in the number of handloom households by 34 percent (NCAER, 2010). However, concerning the commercial production, it is only 4.26 percent of the total working looms in the NE states are used for commercial purposes (NCAER, 2010). The majority of the looms in the NE states are used for domestic purposes. A small proportion of the looms are used for both domestic and commercial purposes (Ministry of Textiles, 2015). However, given the prevalence of handloom activities in NE India, developing the rural non-farm handloom micro-entrepreneurial activities in the region may offer immense business opportunities which are crucial to the region's economic development and up-liftment of its people.

According to a study on development and employment generation potential of the NE states, during 2011 and 2021, the region will have only 2.6 million jobs. While there will be a supply of 17 million people in 2011-22, indicating an excess of 14 million job seekers (Indian Chamber of Commerce, 2013). As per the 2013 report of the Indian Chamber of Commerce, economic empowerment as a vital component of development should ideally focus on developing the capacities of rural communities to plan and manage funds for various economic initiatives and common activities for the public. In this context, development of the rural-based handloom micro-entrepreneurial activities in NE region, particularly among the females, who dominate

most of the handloom activities, will generate employment, promote economic development and gender empowerment. Developing the entrepreneurial potentials of the handloom industry in NE India will there by contribute towards the rural economic development of the region.

However, the region's handloom micro-entrepreneurial activities are at a premature stage, characterized by informality and remain unorganized with very less commercialization in production activities (Hazarika & Goswami, 2014). Mentioned earlier, some of the common problems of the region's handloom industry are its age-old production techniques, disorganized production system, limited working capital, low productivity, traditional product range and weak market linkages. Adoption of up-to-date technology, employment of skilled workers, enhancement of business network, availability of credit, development of improved market infrastructure, etc., can significantly improve the handloom micro-entrepreneurial scenario in NE region given the growing market challenges. Such measures will enable the handloom industry of NE India to compete in the national and global market (Hazarika, Bezbaruah & Goswami, 2016; Goswami, Hazarika & Handique, 2017).

The present study thus examines the influence of various determinants on the micro-entrepreneurial performance of handloom micro-entrepreneurs in NE India. Understanding the challenges faced by the micro-entrepreneurs is essential in designing effective policies which help in the development and commercialization of the handloom industry in NE India.

OVERVIEW OF THE HANDLOOM INDUSTRY IN NE INDIA:

In the NE region of India, the handloom is an established cottage industry. All the four varieties of silk, namely *Mulberry*, *Oak Tassar*, *Eri*, and *Muga* silk are produced in NE India, there by giving it a unique status. It contributes 15 percent of India's total silk production. Assam is the 4th largest silk producing state in India. The NE region of India produces 100 percent *Muga*, 99 percent *Eri*, 60 percent *Oak Tassar*, and 1 percent *Mulberry* silk in the country (Central Silk Board, 2015). The industry in NE India employs a large number of skilled and unskilled workers, where the majority of the workers are females. The share of the females in the total handloom workforce in NE India is 98.54 percent, while, at the national level, it is 77.94 percent (NCAER, 2010). In India, out of the 2.54 million units engaged in different handloom activities, 1.46 million units, comprising both the households and non-households, are concentrated in the five NE states, namely, Arunachal Pradesh, Assam, Manipur, Nagaland, and Tripura (NCAER, 2010). The handloom sector in India employs 4.33 million persons who are engaged in 2.37 million handlooms across the country. Out of the total employment in the industry, NE India has 2.16 million weavers (49.87%) and 1.55 million handlooms (42.06%) (NCAER, 2010). Assam alone accounts for 1.24 million (44.59%) handloom households, whereas Arunachal Pradesh and Meghalaya have 0.03 million (1.1%) and 0.01 million (0.4%) of such households respectively.

LITERATURE REVIEW:

Given the required financial and human costs that inevitably arise from a business failure, researchers over the years have studied the various influencing factors of entrepreneurial

performance (Watson, 2007). The literature identifies several factors influencing entrepreneurial performance which includes risk attitude, gender, age, education, work experience, training, access to credit, access to technology, access to raw materials, firm size, networks, etc. The ability to undertake risk has received consideration as an important trait among entrepreneurs across studies (Knight, 1921; Cressy, 2006; Nybakk & Hansen, 2008; Willebrands, Lammers & Hartog, 2012). Studies advocate the risk-taking activity as one of the principal dimensions of entrepreneurial orientation that influence show an individual acquires and utilizes the necessary marketing information and positively impacts the entrepreneurial performance. In the case of micro-enterprises, however, it is not very clear as to what extent firms participate in acquiring information and utilization of that information, and consequently how it influences the entrepreneurial performance (Lumpkin & Dess, 1996). Micro-entrepreneurs undertaking risks have a greater possibility of achieving positive growth in incomes as compared to those who do not take risks (Nybakk & Hansen, 2008). Studies also show that the entrepreneurs as risk lovers often try to optimize their level of risk, and their performance is better when they are more cautious (Cressy, 2006; Willebrands, Lammers & Hartog, 2012).

Studies investigating whether the gender of the entrepreneur affects the performance of the enterprise yield mixed results. Some studies provide evidence of female underperformance (Rosa, Carter & Hamilton, 1996), while others do not find gender-based differentials in entrepreneurial performance (Bardasi, Sabarwal & Terrell, 2011). Age is found to negatively impact an entrepreneur's success, indicating that the younger entrepreneurs are more likely to succeed (Harada, 2003). Schooling significantly and positively affects entrepreneurial performance (Bosma, Van Praag & Wit, 2000). In contrast, other studies found that the entrepreneur's educational background demonstrates a significantly negative effect on income (Harada, 2003). Again, the results considering the effects of prior entrepreneurial experience are somewhat mixed but suggest that the ventures that are run by people with prior entrepreneurial experience have higher profits (Bosma, et. al., 2000). Training also has measurable impacts on business profitability or employment levels (Unger, et. al., 2011). Research conducted on small and medium enterprise failures in South Africa revealed that a lack of management skill and training caused failure (Rogerson, 2008). Lack of access to credit is commonly regarded as a key problem for micro and small enterprises, which positively influence the entrepreneurial performance (Kamunge, Njeru, & Tirimba, 2014). Studies show that the access to credit improves performance and that formal credit has a greater impact than the informal credit (Fajnzylber, Maloney & Montes, 2005). Credit is strongly and positively associated with productivity across firms (Love & Gatti, 2006). The performance of firms using new technologies in their production activities is better (Wiklund & Shepherd, 2003). Considering the firm size, the initial size of the firm has a significantly positive effect on profitability and sales. It means that larger firms tend to have higher probabilities of success (Harada, 2003). The social network of entrepreneurs also explains the differences in the performance of entrepreneurial firms, where a network with stronger ties determines entrepreneurial success (Bhagavatula, et. al., 2010).

DATA AND METHODOLOGY:

The present study is based on primary data collected from 332 handloom micro-entrepreneurs from Assam, Arunachal Pradesh and Meghalaya. The states are selected on the basis of the commercial concentration of handloom activities. Assam is a state with a high predominance of commercial handloom activities while Arunachal Pradesh and Meghalaya have a low concentration of handloom activities. In the study, a handloom micro-entrepreneur is defined as an individual running a handloom enterprise with not more than 10 paid employees or 10 working looms in the year of survey. Enterprises not completing one year of operation during the surveyed year were not considered for the sample.

The study follows a mixed sampling framework. The districts, blocks, and villages were selected based on the commercial concentration of the handloom activities. The respondents were selected from across 25 villages to obtain a representative sample of the region. In Assam, from Kamrup (Rural) and Baksa, 10 villages were selected. Similarly, in Arunachal Pradesh's East Siang and Papum Pare districts, 7 villages were selected, and finally, in Meghalaya, 8 villages were selected in Ri-Bhoi district. The number of the micro-entrepreneurs interviewed in Arunachal Pradesh, Assam and Meghalaya were 84, 153 and 95 respectively. Before the primary data collection, a list of the micro-entrepreneurs was prepared at each selected village. From the defined sample framework, from each selected village, a minimum of 10 percent of the total handloom micro-entrepreneurs was randomly chosen as the final sample units using the Random Number Table. The required data from the micro-entrepreneurs was obtained using a semi-structured interview schedule, and the personal interview lasted for about 40 minutes each. A few focus group discussions (FGDs) were also organized to have an insightful understanding of the issues related to the performance of handloom micro-entrepreneurial activities.

The influences of the different demographic, socio-economic, institutional and firm-level determinants on the performance of the micro-entrepreneurs are estimated and analyzed using a Mincerian earning equation. The two performance measures namely, the volume of production per annum and the annual net income of the handloom micro-entrepreneurs are considered. As the production pattern of the handloom micro-entrepreneurs varies widely, a comparison of the physical volume of production may not be efficient. Hence, the volume of production here is measured in monetary terms (sum of the quantity of output multiplied by the respective market price of the handloom products). The annual net income of the handloom micro-entrepreneurs is considered instead of self-reported income to analyze the income in the handloom industry. The annual net income is found out by deducting the production and transaction costs from the gross income. The cost on labor, raw materials, and other costs associated with the pre-loom and post-loom activities are incorporated into the production and transaction costs. In estimating the income functions, the hourly income is often used as the dependent variable (Hundley, 2001; Leung, 2006; Lechmann & Schnabel, 2012). However, the present study takes into account the annual net income from the handloom activities due to the inadequacy as well as difficulty in obtaining the hourly income data of the micro-entrepreneurs.

The two performance indicators are estimated in the Indian Rupee (INR), and their natural logarithm values are used in the econometric models. The performance model is specified as

$$\ln(Y) = \beta_0 + \beta_1 \text{ State} + \beta_2 \text{ Caste} + \beta_3 \text{ Gender} + \beta_4 \text{ Marital status} + \beta_5 \text{ Children} + \beta_6 \text{ Age} + \beta_7 \text{ Education} + \beta_8 \text{ Bookkeeping} + \beta_9 \text{ Risk attitude} + \beta_{10} \text{ Firm size} + \beta_{11} \text{ Access to technology} + \beta_{12} \text{ Type of cloth} + \beta_{13} \text{ Family labor} + \beta_{14} \text{ Constrains} + \beta_{15} \text{ Access to training} + \beta_{16} \text{ Access to capital} + u_i$$

Where Y represents the volume of production and annual net income respectively in the two models of estimation. The first performance model uses the volume of production as the indicator of performance while the second performance model uses the annual net income as the performance indicator.

CHOICE OF DETERMINANTS:

Based on the literature review, several determinants are examined to analyze their influence on the volume of handloom production and the income of the handloom micro-entrepreneurs in Arunachal Pradesh, Assam, and Meghalaya (Table:1). Literature establishes that the risk-averse entrepreneurs perform poorly (Rauch, et. al., 2009; Willebrands, Lammers & Hartog, 2012). The human capital aspects are captured by age, education, training, and maintenance of book keeping. The respondents' age is considered as a proxy to experience. The handloom activities in NE India are inter generational, mostly carried out as a family tradition and cultural activity. Hence, in the present context, the age of the respondent is considered as a proxy for experience as considered by others (Bortamuly, et. al., 2015). Education and experience help in attaining business-related knowledge and information which enhances the entrepreneurial abilities with favorable effects on the entrepreneurial performances.

Firm size, access to technology, and types of cloth produced are considered to represent the firm characteristics. Larger firm size gives rise to economies of scale which enhances an enterprise's performance. The access to and adoption of modern technology results in cost-effectiveness and improvement in the production quality, which increases the profit margins of micro-entrepreneurs (Bortamuly & Goswami, 2015; Hazarika, Bezbaruah & Goswami, 2016). The study also considers both silk and non-silk products. The silk products are mostly high-value products and their production favorably influences the performance of the handloom micro-entrepreneurs. The handloom micro-entrepreneurial activities in NE India are mostly home-based, which is labor intensive. Hence, the study also considers the influence of family labor on micro-entrepreneurial performance. Three determinants such as difficulty in accessing the raw material, access to handloom related training and access to capital are considered to capture the institutional and market environments in the study.

RESULTS AND DISCUSSIONS:

Determinants of the volume of production in NE India

Table: 2 presents the ordinary least square estimates of the determinants of the volume of production (in natural log of money value) for the pooled sample of handloom micro-

entrepreneurs in NE India. The Model is found significant with F-value of 238.75 at 1 percent level. The VIF values show that the problem of multicollinearity is not severe. The heteroskedasticity in the observations is taken care of by using the robust standard error. The results indicate that the gender, maintenance of bookkeeping, risk aversion attitude, firm size, access to technology, type of clothes, family labor, access to training, and access to capital influence the volume of production in a handloom micro-enterprise significantly.

Considering the gender as a dummy determinant, the model reveals that the volume of production in the female-owned handloom micro-enterprises is 15.40 percent lower compared to the male-owned micro-enterprises, other things remain constant. This difference might be because of the variation in scale of operation and the type of clothes produced in the female-owned handloom micro-enterprises compared to the male-owned micro-enterprises. It is found that the scale of operation is small for the females as compared to the males. Moreover, most of the female micro-entrepreneurs produce one or two types of handloom products (such as cotton and silk-cotton blended products) which are often low-priced. In contrast, the male micro-entrepreneurs produce high-value products such as *Mulberry*, *Eri*, and *Muga* silk products with a higher degree of product diversification.

The influence of maintenance of bookkeeping for different handloom activities is found to be positive and significant in the volume of production in the handloom micro-enterprises. Ceteris paribus, the volume of production is found to be 13.56 percent more for the micro-entrepreneurs who maintain bookkeeping of their handloom activities. Such book keeping helps in checking the transactions and efficiently managing the financial activities. It is an important practice which helps the micro-entrepreneurs to figure out the costs, losses incurred or profits generated if any and thereby evaluate their business performance and make better business decisions.

Literature greatly emphasizes the role of risk attitude in the production activities of micro-entrepreneurs. Supporting the previous studies, the present study also finds that the volume of production is lower for a micro-entrepreneur who is a risk-averse. The handloom micro-entrepreneurs face many risky situations while undertaking different handloom activities. They encounter risk associated with spiraling prices of raw materials, shortage of skilled labor, measurement errors in the production process, increasing interest rates in the informal credit market, inadequate marketing linkages and stiff competition from the power loom industry.

The influence of scale of operation is found to be positive and significant in the volume of production of the handloom micro-entrepreneurs. Ceteris paribus, the volume of production increases by 27.65 percent with an increase in the firm size by one more working loom. A larger scale of operation enables not only a large scale of production but also enhances the product differentiation. Similarly, the use of technology tends to increase the volume of production. Ceteris paribus, the volume of handloom production is 95.63 percent more for a micro-entrepreneur who is working with some modern weaving machines such as doobby or jacquard. The study also found that the volume of production for the micro-entrepreneurs who produce high-value silk products is 67.69 percent more compared to that of the low-value non-silk products.

The influence of family labor on the volume of production is found to be positive and significant. The volume of production increases by 10.50 percent with an increase in the family labor by one more person, *ceteris paribus*. The micro-entrepreneurs' production activities rely greatly on the labor services of their spouse and children, who have a well-defined task to perform at each stage of production, right from pre-loom processing to weaving of the clothes. Hence, the presence of family labor assures an uninterrupted supply of labor services that contribute to a higher level of production.

The influence of access to capital is found to be positive and significant in the volume of production. *Ceteris paribus*, the volume of production for the micro-entrepreneurs who have access to capital is 9.74 percent more compared to those who do not have access to capital. Access to capital increases the investment capacity regarding technology adoption, labor, and raw materials which have favorable impacts on the production level.

The present study fails to provide sufficient empirical evidence for significant impacts of age and education on the volume of production. Interestingly, the access to training which often imparts the managerial, technical, and financial know-how is found to have negative and significant impacts on the volume of production. After training, most of the trainee emphasizes on the production of high-valued handloom products instead of producing a higher quantity of ordinary handloom products. This results in higher returns, though their volume of production may be less.

Determinants of income of the handloom micro-entrepreneurs in NE India

Table: 3 presents the determinants of income for the pooled sample of handloom micro-entrepreneurs in NE India. The estimated model is found significant at 1 percent level with F-value of 182.33. The VIF values for the determinants show the absence of severe multicollinearity among them. The problem of heteroskedasticity in the observations is taken care of by using the robust standard error. The estimated results show that the income of the handloom micro-entrepreneurs is influenced by location, caste, gender, risk aversion attitude, maintenance of bookkeeping, firm size, availability of family labor, access to technology, and access to capital. *Ceteris paribus*, the micro-entrepreneurs in Meghalaya earn less income by 14.12 percent as compared to the micro-entrepreneurs in Arunachal Pradesh. The micro-entrepreneurs in Meghalaya mostly produce low-valued handloom products with minimal designs for regular wear made out of cotton, wool and polyester yarns which are sold in the local market or from their homes. Whereas, apart from producing the low priced regular wears, the micro-entrepreneurs in the sampled areas in Arunachal Pradesh were also found to produce the high-valued indigenous apparels with intriguing patterns of designs used by the tribes on special occasions, which helped them to generate more income. There is no significant difference in the earnings between the micro-entrepreneurs from the OBCs and STs compared to that of the general group.

The estimated result shows that the female micro-entrepreneurs earn less than their male counterpart. *Ceteris paribus*, the income from the different handloom activities for the females is 13.86 percent lower compared to the males. Such differences can be attributed to the higher

risk aversion attitude, lower financial knowledge, low level of technology adoption, and small scale of operation of the female micro-entrepreneurs (Goswami, Hazarika & Handique, 2017). More emphasis on the production of low-value products other than silks by the female micro-entrepreneurs is another important issue which results in a lower income for the female micro-entrepreneurs.

The influence of maintenance of bookkeeping is found positive and significant on the income of the micro-entrepreneurs. *Ceteris paribus*, the income of a micro-entrepreneur who maintains bookkeeping is 9.70 percent higher than the one who does not maintain the same. Analysing the influence of risk aversion attitude on income level, the micro-entrepreneurs who are less risk-averse are found to be more successful in business. *Ceteris paribus*, the entrepreneurial income decreases by 3.79 percent as a micro-entrepreneur becomes more risk-averse when exposed to the risk and uncertainties related to different handloom activities.

Use of modern handloom weaving technology plays a crucial role in determining the level of income of the handloom micro-entrepreneurs in NE India. *Ceteris paribus*, the income of the micro-entrepreneurs adopting modern weaving machinery in their enterprise increases by 71.26 percent than those who operate with the traditional technologies. Modern weaving machinery facilitates the production of fine and intricately woven handloom products which yield higher prices and thereby generate higher income. Similarly, micro-entrepreneurs producing silk products earn much higher income compared to the non-silk products. *Ceteris paribus*, their income is 62.60 percent more than those producing the non-silk handloom products. The availability of family labor positively and significantly influence the income of the handloom micro-entrepreneurs, given the essential role they play in the rural home-based handloom micro-enterprises as discussed above. *Ceteris paribus*, the income of the micro-entrepreneurs increases by 8.57 percent with an increase in the family labor by one more person. Focusing on the institutional aspects, the limited access to capital appears as a binding constraint towards the development of the handloom micro-entrepreneurial activities. The inaccessibility of capital often limits the investment opportunities of the handloom micro-entrepreneurs which has an adverse impact on their earning potential.

CONCLUSION:

The rural home-based handloom micro-entrepreneurial activities of NE India can play an important role in generating employment and empowering the rural communities that undertake weaving and other handloom activities as a profession. Handloom micro-entrepreneurship also has the potential to bring local and regional economic development, and thus the ground work to develop a sustainable handloom industry in NE India that can reach out to the national and global markets is essential. The present study attempts to examine how different determinants influence the performance of the handloom micro-entrepreneurs in NE India.

The findings of the study show that gender, maintenance of bookkeeping, risk aversion attitude, firm size, access to technology, type of clothes, family labor, access to training, and access to capital have a significant influence on the volume of production and income levels in a handloom micro-enterprise. Location of a micro-enterprise is found to influence its

income levels. The present study is important from the policy perspective as it helps to examine and identify the various underlying factors that influence the handloom micro-entrepreneurial performance in NE India and thus, enable the policy makers and Government to take appropriate measures. Based on the findings of the influence of the determinants on handloom micro-entrepreneurial performance, policy initiatives should be made to impart vocational education and training programs which emphasize on financial risk management strategies, particularly among the rural female micro-entrepreneurs across the states. They must be sensitized to the practice and maintenance of book keeping and other related business and financial issues. Credit facilities through various financial inclusion programs with follow-up programs are also necessary to monitor the effective utilization of the credit by the handloom micro-entrepreneurs. Easy accesses to raw materials, subsidized high-valued silk yarns, improved market linkages and programs for encouraging technology adoption are vital to improving the performance of the rural handloom micro-entrepreneurs.

The study, however, is not free from limitations. It does not include an in-depth analysis of social capital and its influence on micro-entrepreneurial performance across the states. Further, it is restricted only to three selected states of NE India. Other states and regions are not included in the study. Besides, the study has not taken into account the location-specific cultural aspects such as cultural norms, identity, and social networks that may influence the micro-entrepreneurial performance across states.

Acknowledgment:

Authors are thankful to the Indian Council of Social Science Research (ICSSR), New Delhi, India for providing financial support to this work (Grant No.: F. No. 02/5/2013-14/RPR, Dt. 28-12-2013).

REFERENCE:

Acs, Z. J., Desai, S., & Hessels, J. (2008), "Entrepreneurship, economic development and institutions", *Small Business Economics*, 31(3), 219-234
 Anokhin, S., Grichnik, D., & Hisrich, R. D. (2008), "The journey from novice to serial entrepreneurship in China and Germany: Are the drivers the same?", *Managing Global Transitions*, 6(2), 117-142
 Bardasi, E., Sabarwal, S., & Terrell, K. (2011), "How do female entrepreneurs perform? Evidence from three developing regions", *Small Business Economics*, 3(4), 417-441
 Bhagavatula, S., Elfring, T., Tilburg, A., & Bunt, G. G. (2010), "How social and human capital influence opportunity recognition and resource mobilization in India's handloom industry?", *Journal of Business Venturing*, 25(3), 245-260
 Bortamuly, A. B., & Goswami, K. (2015), "Determinants of the adoption of modern technology in the handloom industry in Assam", *Technological Forecasting and Social Change*, 90, 400-409
 Bortamuly, A. B., Goswami, K., Hazarika, B., & Handique, K. (2015), "Do different determinants affect differently across gender and location in handloom entrepreneurship development?", *Journal of Small Business & Entrepreneurship*, 27(5), 427-449
 Bosma, N., Van Praag, M., & de Wit, G. (2000), "Determinants of successful entrepreneurship",

Research Report 0002/E, Scientific Analysis of Entrepreneurship and SMEs, <http://www.ondernemerschap.nl/pdf-ez/H200002.pdf>
 Central Silk Board (2015), "Annual Report 2013-14", Bangalore: Central Silk Board.
 Cressy, R. (2006), "Why do most firms die young?", *Small Business Economics*, 26(2), 103-116
 Fajnzylber, P., Maloney, W., & Montes, R. G. (2005), "Releasing Constraints to Growth or Pushing on a String? The Impact of Credit, Training, Business Associations, and Taxes on the Performance of Mexican Micro-Firms (December 2005)", World Bank Policy Research, Working Paper No. 3807, Retrieved from <https://ssrn.com/abstract=875639>
 Goswami, K., Hazarika, B., & Handique, K. (2017), "Determinants of financial risk attitude among the handloom micro-entrepreneurs in North-East India", *Asia Pacific Management Review*, 30(17), 1-8
 Harada, N. (2003), "Who succeeds as an entrepreneur? An analysis of the post-entry performance of new firms in Japan", *Japan and the World Economy*, 15(2), 211-222
 Hazarika, B., & Goswami, K. (2014), "Rural non-farm micro-entrepreneurship or not: Gender issue in decision making", Presented in 6th Bolivian Conference on Development Economics in Cochabamba, Bolivia, 28-29 August, Retrieved from <http://www.inesad.edu.bo/bcde2014/papers/BCDE2014-59.pdf>
 Hazarika, B., Bezbaruah, M. P., & Goswami, K. (2016), "Adoption of modern weaving technology in the handloom micro-enterprises in Assam: A double-hurdle approach", *Technological Forecasting and Social Change*, 102, 344-356
 Hundley, G. (2001), "Why women earn less than men in self-employment", *Journal of Labour Research*, 22(4), 817-829
 Indian Chamber of Commerce (2010), "India's North-East Diversifying Growth Opportunities", Retrieved from https://www.pwc.in/assets/pdfs/publications/2013/north-east_summit-2013.pdf
 Kamunge, M. S., Njeru, A., & Tirimba, O. I. (2014), "Factors affecting the performance of small and micro enterprises in Limuru Town Market of Kiambu County, Kenya", *International Journal of Scientific and Research Publications*, 4(12), 1-20
 Knight, F. H. (1921), "Risk, Uncertainty and Profit", Chicago: University of Chicago Press
 Lechman, D. S., & Schnabel, C. (2012), "Why is there a gender earnings gap in self-employment? A decomposition analysis with German data", *IZA Journal of European Labour Studies*, 1(1), 6
 Leung, D. (2006), "The male/female earnings gap and female self-employment", *The Journal of Socio-Economics*, 35(5), 759-779
 Love, I., & Gatti, R. (2006), "Does access to credit improve productivity? Evidence from Bulgarian Firms (May 1, 2006)", World Bank Policy Research Working Paper, (3921), Retrieved from http://papers.ssrn.com/sol3/papers.cfm?abstract_id=917492
 Lumpkin, G. T., & Dess, G. G. (1996), "Clarifying the entrepreneurial orientation construct and linking it to performance", *Academy of Management Review*, 21(1), 135-172
 Ministry of Home Affairs (2011), "Census of India", Office of the Registrar General Census Commissioner, India, Retrieved from www.censusindia.gov.in
 Ministry of Textile (2015), "Annual Report 2014-15", New Delhi: Government of India
 NCAER (2010), "Handloom Census of India 2009-10", New Delhi: Government of India
 Nybakk, E., & Hansen, E. (2008), "Entrepreneurial attitude, innovation and performance among Norwegian nature-based tourism enterprises", *Forest Policy and Economics*, 10(7), 473-479

Rauch, A., Wiklund, J., Lumpkin, G. T., & Frese, M. (2009), "Entrepreneurial orientation and business performance: Cumulative empirical evidence", *Entrepreneurship Theory and Practice*, 33(3), 761-788

Rogerson, C. M. (2008), "Tracking SMME Development in South Africa: Issues of Finance, Training and the Regulatory Environment", *Urban Forum*, 19(1), 61-81

Rosa, P., Carter, S., & Hamilton, D. (1996), "Gender as a determinant of small business performance: Insights from a British study", *Small Business Economics*, 8(6), 463-478

Roy, M. A., & Wheeler, D. (2006), "A survey of micro-enterprise in urban West Africa: Drivers shaping the sector", *Development in Practice*, 16(5), 452-464

Unger, J. M., Rauch, A., Frese, M., & Rosenbusch, N. (2011), "Human capital and entrepreneurial success: A meta-analytical review", *Journal of Business Venturing*, 26(3), 341-358

Watson, J. (2007), "Modeling the relationship between networking and firm performance", *Journal of Business Venturing*, 22(6), 852-874

Wiklund, J., & Shepherd, D. (2003), "Knowledge-based resources, entrepreneurial orientation, and the performance of small and medium-sized businesses", *Strategic Management Journal*, 24(13), 1307-1314

Willebrands, D., Lammers, J., & Hartog, J. (2012), "A successful businessman is not a gambler: Risk attitude and business performance among small enterprises in Nigeria", *Journal of Economic Psychology*, 33(2), 342-354

Table 1: Descriptions and measurements of the variables

Dependent variables	Description	Measurement unit	Expected sign
Performance variables			
Total Production	Annual total handloom production in a micro-enterprise	In INR (natural log value)	
Handloom Income	Income of the micro-entrepreneurs from handloom activities	In INR (natural log value)	
Independent variables (Determinants)			
State	State of domicile of the respondent	Categorical: Arunachal Pradesh = 1; Assam = 2; and Meghalaya = 3	
Gender	Gender of the respondent	Binary: Male = 0 and Female = 1	-
Caste	Caste of the respondent	Categorical: General = 1; OBC = 2; SC = 3; and ST = 4	
Married	Marital status of the respondent	Binary: Unmarried = 0 and Married = 1	+
Children	Having children at home	In numbers	-
Age	Age of the respondent	In years	+
Education	Years spent in school	In years	+
Bookkeeping	Maintain bookkeeping for different handloom activities	Binary: Yes = 1 and No = 0	+
Risk aversion	Respondent's attitude towards risk	Ordinal: 1 for extremely less risk averter to 10 for extremely high-risk averter	-
Firm size	Number of working handlooms	In numbers	+
Access to technology	Respondent's access to handloom weaving machinery	Binary: Yes = 1 and No = 0	+
Type of cloths	Types of cloths produced by the respondent	Binary: Silk = 1; Non-silk = 0	+
Level of profit	Average profit per piece of cloth produced	In INR (natural log value)	+
Family labor	The number of family members working in own enterprise on the full-time basis	In numbers	+
Constraints	Constraints in accessing the raw material for own enterprise	Binary: Yes = 1 and No = 0	-
Access to training	Respondent's access to handloom training	Binary: Yes = 1 and No = 0	+
Access to capital	Respondent's access to capital	Binary: Yes = 1 and No = 0	+

Table 2: Determinants of the volume of production of the handloom micro-enterprises in NE

Determinants	Coef.	RSE	t-value	p-value	95% Confidence Interval	
					Lower	Upper
State (base category: Arunachal Pradesh)						
Assam	0.097	0.121	0.800	0.423	-0.141	0.335
Meghalaya	0.013	0.057	0.230	0.821	-0.100	0.126
Caste (base category: General)						
OBC	0.051	0.121	0.430	0.671	-0.186	0.289
SC	0.230	0.077	2.990	0.003	0.079	0.382
ST	-0.112	0.149	-0.760	0.451	-0.405	0.180
Gender	-0.154	0.054	-2.860	0.005	-0.260	-0.048
Married	-0.028	0.088	-0.320	0.747	-0.202	0.145
Age	0.000	0.003	-0.050	0.963	-0.005	0.005
Education	0.003	0.006	0.490	0.624	-0.009	0.015
Risk aversion	-0.028	0.015	-1.920	0.055	-0.057	0.001
Access to technology	0.956	0.147	6.500	0.001	0.667	1.246
Children	0.010	0.022	0.470	0.637	-0.033	0.054
Bookkeeping	0.136	0.060	2.250	0.025	0.017	0.254
Access to training	-0.153	0.074	-2.070	0.039	-0.298	-0.008
Firm size	0.276	0.025	10.900	0.001	0.227	0.326
Type of cloths	0.677	0.083	8.160	0.001	0.514	0.840
Family labor	0.105	0.034	3.070	0.002	0.038	0.172
Constraints	-0.054	0.045	-1.190	0.236	-0.142	0.035
Access to capital	0.097	0.051	1.910	0.056	-0.003	0.198
Constant	9.518	0.240	39.740	0.001	9.047	9.989
Sample	332					
F-value	238.750					
df	19, 312					
p-value	0.001					
R ²	0.922					
Root MSE	0.373					
Adjusted R ²	0.917					

Notes: (i) RSE stands for a robust standard error
(ii) df stands for degrees of freedom

Table 3: Determinants of income of the handloom micro-entrepreneurs in NE India

Determinants	Coef.	RSE	t-value	p-value	95% Confidence Interval	
					Lower	Upper
State (base category: Arunachal Pradesh)						
Assam	0.083	0.122	0.680	0.499	-0.158	0.323
Meghalaya	-0.141	0.060	-2.330	0.020	-0.260	-0.022
Caste (base category: General)						
OBC	0.088	0.111	0.790	0.428	-0.130	0.305
SC	0.158	0.073	2.170	0.031	0.015	0.302
ST	-0.105	0.146	-0.720	0.472	-0.392	0.182
Gender	-0.139	0.053	-2.590	0.010	-0.244	-0.033
Married	-0.129	0.091	-1.410	0.159	-0.308	0.051
Age	0.000	0.003	0.080	0.939	-0.005	0.006
Education	0.009	0.006	1.480	0.141	-0.003	0.021
Risk aversion	-0.038	0.014	-2.710	0.007	-0.065	-0.010
Access to technology	0.713	0.136	5.260	0.000	0.446	0.979
Children	0.013	0.024	0.550	0.583	-0.034	0.061
Bookkeeping	0.097	0.055	1.750	0.080	-0.012	0.206
Access to training	-0.105	0.075	-1.410	0.161	-0.252	0.042
Firm size	0.260	0.023	11.170	0.000	0.214	0.306
Type of cloths	0.626	0.079	7.910	0.000	0.471	0.782
Family labor	0.086	0.033	2.590	0.010	0.021	0.151
Constraints	-0.063	0.046	-1.360	0.175	-0.154	0.028
Access to capital	0.092	0.048	1.910	0.057F	-0.003	0.186
Constant	8.450	0.235	35.970	0.000	7.988	8.913
Sample	332					
F-value	182.330					
df	19, 312					
p-value	0.000					
R ²	0.904					
Adjusted R ²	0.899					
Root MSE	0.376					

Notes: (i) RSE stands for a robust standard error
(ii) df stands for degrees of freedom

SOCIO-ECONOMIC DEVELOPMENT IN INDIA: AN INTER REGIONAL COMPARATIVE ANALYSIS

Dr. Amarjyoti Mahanta
Associate Professor & Head
Department of Economics, Dibrugarh University

INTRODUCTION:

Regional inequality has been a problem commonly seen in the countries across the globe. Though countries have experienced development in terms of the indicators that are common in use, such development has remained uneven. Geographical differences in the availability and utilization of the facilitators of development might have caused the entire development experience skewed.

Regional equality does not necessarily mean equal growth and development in all regions of a state or country. Regional equality does not refer either to similar level of industrialization or similar degree of urbanization, nor does it mean self-sufficiency of all regions. Regional imbalance is a state where relatively developed and backward regions co-exist. Regional equality is said to have been achieved if a country has explored and utilized the potentials of development of different areas to the fullest possible extent so that benefits are realized by all.

Inequality in the early stage of development of a country is not exceptional. A country may not possibly take initiatives for pervasive development. There may be different historical, geographical, institutional etc. factors that may cause inequality in the early stage of development. In this context Hicks (1959) opines that due to geographical advantages, proximity to minerals or sources of power or to areas particularly suitable for specialized crops; alternatively, due to naturally good communications, the minerals or sources of power can be supplied from many sources rather easily even though their sources of supply are at a distance, some particular places within a country can grow easily.

But, in the later stage of development a country should be able to remove the obstacles to equal regional development and hence, existence of regional inequality in the later stage of development is a cause of serious concern.

Despite being a country with more than six decades of planned development era, India has not yet been able to harness the development potentials of all her regions. Therefore, inequalities in social, economic and human development parameters have been noticed. Studies have also reported such inequalities.

A study (Ahluwalia, 2000) observed that inequality in real per capita gross state domestic product tended to rise particularly in the 1990s. Another study by Shetty (2003) found that regional disparity in India increased during the period from 1980-81 to 2000-01. Examining the impact of pro-market reforms on regional inequality in India, Kar and Sakthivel (2007) found that regional inequality in India remained largely unchanged during the 1980s, but rose dramatically after the adoption of the reforms. The rise in regional inequality was attributed to the convergence of per capita output from the industrial and service sectors before the reforms and divergence afterwards.

Nayyar (2008) studied whether the selected 16 Indian states exhibit any tendency in the data of the period 1978-79 to 2002-03 to converge to common steady-state paths. The study found that the states were not converging to identical levels of per capita income in the steady-state and there was an increase in the dispersion of per capita incomes across states over time. The divergence was attributed to increasing inter-state disparities in levels of private and public investment and an insignificant equalizing impact of centre-state government transfers.

Contrastingly, Singh et.al (2003) show that regional inequality, when interpreted in terms of human development indices, do not show the same increase. Furthermore, indicators like consumption and credit for regions disaggregated below the state level also show that inequality trends may not be as bad as suggested by State Domestic Product. Yet another study (Singh and Srinivasan, 2002) for the period 1990-91 to 1998-99, has not found definite evidence on convergence or divergence across the 14 major states.

Rise in inequalities in some other Asian Countries in the recent past has also been documented by few studies. For instance, a study in China (Liu, 2006) for the post-reform period (i.e. 1980-2002) observes that rural regional inequality has an overall increasing trend with a short period of decrease during the entire reform period. Moreover, inter-regional inequality has been found more significant than intra-regional inequality among provinces within the regions since 1987.

While evaluating the impact of development policies on regional development of Pakistan, a study (Siddiqi, 1981) finds that the centralized sectoral planning policies have increased inter regional development inequalities in Pakistan. The changing scenarios of multi-dimensional inter-temporal spatial inequality and the level of development in Pakistan during early 1980s and late 1990s have been studied by Jamal and Khan (2003). The study observes that inequality in Sindh, the NWFP, and the Balochistan provinces has increased over time.

OBJECTIVE:

In the backdrop of the empirical results of the past studies, this paper tries to examine the inequalities across different regions of India viz. North, East, North-East, Central, West and South in socio-economic development. More specifically, the paper evaluates the performance of these regions in three dimensions of social sector development such as housing, education and health along with the performance in economic dimension. The paper compares the performance of these regions to understand the inter regional inequalities in the levels of development.

DATA AND METHODOLOGY:

The data required to address the objectives of the paper have been sourced from the National Family Health Survey (NFHS - 4), 2015-16. The NFHS-4 has provided a great pool of data on socio-economic profile, fertility, family planning, infant and child health, maternal health, nutrition, morbidity, etc. for different regions of India viz. North, East, North-East, Central, West and South.

The achievements of these six Indian regions in housing sector have been examined through four housing characteristics. These are - percentage of households with electricity, percentage of households with improved source of drinking water, percentage of households with toilet facility and percentage of households living in a pucca house. NFHS-4 considers piped water, public taps, stand pipes, tube wells, boreholes, protected dug wells and springs, rainwater, and community reverse osmosis (RO) plants as improved sources of drinking water. Likewise, *pucca* houses are those that are made with high quality materials throughout, including the floor, roof and exterior walls.

The achievement in education of the regions has been studied in terms of two parameters i.e., median number of years of schooling completed by males and that completed by females.

As regard to the achievement in health, two parameters namely infant mortality rate and under five mortality rate have been taken. While infant mortality has been defined as the probability of dying between birth and the first birthday, the under-five mortality is defined as the probability of dying between birth and the fifth birthday.

The economic achievements of these six Indian regions have been examined considering three parameters such as percentage of population in the highest wealth quintile, percentage of men currently employed and percentage of women currently employed. NFHS-4 has defined currently employed as those who were employed in the seven days before the survey. It also includes those who did not work in the past seven days but are regularly employed and were absent from work for leave, illness, vacation or any other such reasons.

The performance of a state in a parameter of any selected dimension is examined by taking the deviation of the achievement of the state in the parameter from the national achievement in that parameter. Symbolically,

$${}^x S^i N = {}^x S^i - {}^x N$$

where, ${}^x S^i N$ is the deviation of the achievement of the i^{th} State in parameter x from the national achievement, ${}^x S^i$ is the achievement in parameter x of the i^{th} State and ${}^x N$ is the achievement in parameter x of the nation as a whole. To measure the performance of a region in a selected parameter, the average of the deviations of the achievements of the states of the region from the national level performance in that parameter of the selected dimension has been estimated as follows:

$${}^x R = \frac{\sum {}^x S^{i-n} N}{n}$$

where, ${}^x R$ is the performance of a region in a selected parameter x , $\sum {}^x S^{i-n} N$ is the sum

of the deviations of the states (S^{i-n}) of the region from the national level performance in parameter x and n is the number of states in the region.

Furthermore, a weighted average of the performance of each of the regions in all the selected parameters of any selected dimension has been estimated which has also been used as the index of development of the regions in a particular dimension. The weights have been estimated by applying Principal Component Analysis. The factor loadings for each parameter in the rotated component matrix have been applied as the weights to the performance of each of the regions in the respective parameter.

FINDINGS:

This section presents the findings of the study. The section is divided into four sub-sections, one each for the four dimensions of development taken into consideration such as, housing, education, health and economic.

Achievements in Housing

The NFHS-4 reveals that the percentage of households with electricity facility is the highest in Daman and Diu which registered 100 per cent coverage of electricity while Bihar is placed last with 58.6 per cent households with electricity facility. The average deviation of the achievements of the states of a region from the national achievement in electrification is the highest in the Southern region (10.48) of India while it is the lowest in Eastern region (-8.73). Thus, the achievement in electrification of the Southern region is the best while that in the eastern region is the worst.

Likewise, the percentage of households with improved source of drinking water facility is the highest in Chandigarh (99.5) while Manipur (41.6) is placed last. The average deviation of the achievements of the states of a region from the national achievement in improved source of drinking water facility is the highest in the Northern region (1.69) of India while it is the lowest in North-East India (-10.19).

As regard to the toilet facility it is found that the achievement is the highest in Lakshadweep which registered 100 percent households with toilet facility while Jharkhand with only 30 percent households is placed last. The average deviation of the states' achievements from the national achievement in toilet facility is the highest in the North-East region (4.63) of India while it is the lowest in Central India (-47.8).

The achievement in households with pucca house is the highest in Lakshadweep (97.5) and lowest in Manipur (17.7). The average deviation of the achievements of the states of a region from the national achievement is the highest in South India (22.79) and lowest in Central India (-21.4).

The weighted average of the performance of each of the regions in these four selected parameters of the housing dimension which has been stated as the index of development of the regions in the housing dimension is found to be the highest in North India with a value of 5.23 followed by South India (4.16) and Western India (3.29). The performance of the Eastern India is the worst with an index value -14.29.

Achievements in Education

Table 2 shows the median years of schooling for males and females across the states and union territories of India. The median years of schooling for males and females in India has been reported as 6.9 and 4.4 years respectively, which shows a gender gap of 2.5 years. Chandigarh recorded the highest median years of schooling for males with 9.6 years followed by Kerala and Puducherry each with 9 years while Meghalaya has the lowest (4.5 years). The average deviation of the states of a region from the national achievement in median years of schooling for males is the highest in the Northern region of India (1.21), while it is the lowest in Eastern India (-1.33).

On the other hand, Puducherry has been ranked first in the list of median years of schooling for females along with Kerala each registering 8.6 years. Bihar, with a substantially low value of just 0.9 years, could find itself last. The average deviation of the states of each region from the national achievement is the highest in South India (1.96) and lowest in East India (-1.48).

The weighted average of the performance of each of the regions in both the parameters of the education dimension is found to be the highest in South India with a value of 1.49 followed by West India (1.36). The performance of the Eastern India is the worst with an index value -1.4. Thus, in the education dimension Southern India is the most developed while Eastern India is the least developed region of India.

Achievements in Health

Inequality in the achievement in the health sector is also prominent across states and regions. The NFHS-4 reveals that the infant mortality rate is the highest in Uttar Pradesh and lowest in Kerala. While Kerala registered 5.6 infant deaths per thousand live births, Uttar Pradesh experienced as high as 63.5 infant deaths per thousand live births against the national average of 40.7 per thousand live births. Similarly, Kerala and Uttar Pradesh have also experienced the highest and lowest under-five mortality rate respectively among all states and union territories of India. While Uttar Pradesh experienced 78.1 deaths, Kerala registered 7.1 deaths of children under five years of age. As low infant mortality rate and low under-five mortality rate reflect better health condition, therefore less average deviation from the national average is more desirable. However, in order to make the health parameters unidirectional to the parameters of the other three selected dimensions, the signs of the deviations of the achievements of each state in both parameters from the national averages are altered by first adding 100 to the deviations of each state from the national averages and then subtracting the sum from 100. Thus, the region with higher average deviations from the national levels will have a better performance in health dimension.

The average deviation of the states from the national achievement in infant mortality rate is the highest in South India (19.74), while it is the lowest in Central India (-15.53). Thus, the achievement in infant mortality rate in the Southern region is the best, while that in the eastern region is the worst.

With regard to the under-five mortality rate, the average deviation of the states of the regions from the national achievement is the highest in South India (25.04) and lowest in

Central India (-19.3). Thus, as like infant mortality rate, the achievement in under-five mortality rate in the Southern region is the best while that in the Central region of India is the worst.

The index value of development in the health dimension is found to be the highest in South India with a value of 22.39 followed by Western India (15.21). The performance of Central India is the worst with an index value -17.42.

Achievements in Economic Status

Table: 4 presents some economic characteristics across the regions. It is seen that in India, Chandigarh is concentrated with the highest percentage of wealthiest households (80.8) and Bihar has the lowest households (3.3) in the highest wealth quintile. The average deviation of the states of a region from the national achievement in the percentage of population in the highest wealth quintile is the highest in the Northern region of India (24.98), while it is the lowest in Eastern India (-12.88).

As regard to employment levels it has been reported that the percentage of men and women currently employed in India is 75.3 and 24 respectively which shows a gender gap of 51.3 percentage points. Daman and Diu recorded the highest percentage of currently employed men (83.5) followed by Puducherry (82.8) and Gujarat (81.8), while Bihar recorded the lowest (63.6). The average deviation of the states of a region from the national achievement in the percentage of men currently employed is the highest in the Western region of India (4.62), while it is the lowest in Northern region (-3.69).

On the other hand, Manipur has been ranked first in the list of percentage of women currently employed (41.3), while Jammu and Kashmir was placed last with a substantially low value of 13.7 percent. The average deviation of the states of each region from the national achievement in the percentage of women currently employed is the highest in Central India (4.13) and lowest in East India (-4.85).

It is interesting to note that the gender gap in current employment level is the highest in Daman and Diu (66.1 percentage points) followed by Assam. But, Daman and Diu recorded the highest percentage of men currently employed. This indicates gender imbalance against the women in the opportunities of employment. Expectedly, Manipur has the lowest gender gap in current employment level.

The weighted average of the performance in all the parameters of the economic dimension is found to be the highest in North India with a value of 5.77 followed by West India (5.46) and South India (3.79). The performance of the Eastern India is the worst with an index value -5.82.

Table: 5 summarizes the achievements of the six geographical regions of India in the selected four dimensions of development. The weighted average of the performance in a dimension, which has been used as the index of development in that dimension being the highest, the North India ranks first in the housing dimension followed by South India and West India, while the performance of the East India is the worst with the lowest weighted average of the performance. In case of the education dimension, the performance of South India is found

to be the best with the highest index value (1.49) followed by West India (1.36) whereas the performance of the East India is the worst with the lowest index value (-1.4). The index value of the health dimension shows that South India's (22.39) development achievement is the best followed by West India (15.21). On the contrary, Central India (-17.42) has achieved least development in health dimension. In case of economic dimension the value of the index of development of Northern region of India is found to be the highest among all the regions of India followed by Western India (5.46) and Southern India (3.79) and the performance of the Eastern India (-5.82) is the worst.

Finally, an index of overall development comprising housing, education, health and economic dimensions has been constructed in order to examine the relative differences in the achievement of development across the geographical regions of India. The index is constructed by estimating the weighted average of the dimension indices of all the four dimensions. The weights have been estimated by applying Principal Component Analysis. The factor loadings for each dimension index in the rotated component matrix have been applied as the weights to the value of the index of each region in the respective dimension.

In the study, South India has emerged as the most developed region with the largest index value followed by West and North India. By contrast, Central India is found to be the least developed region in India.

CONCLUSION:

The study reveals that there exists sharp inequality in the levels of development across the geographic regions of India. The coefficient of variation is the highest for the series of index value of overall development. This substantiates the fact that the variability in the achievement of development across the regions of India is very high. While South India is the most developed region, Central India is the least developed region of India. North-East India has been ranked fourth developed region among the six geographical regions of India. It is seen that most of the variability in the achievement in overall development is due to the variability in the achievements in education and economic dimensions. The findings also indicate that regional inequalities in different dimensions of development. Therefore, government has to intervene to facilitate the inequalities in overall development. Relatively more government investment in the less developed areas is required to unfold the potentials of development hidden in each area.

Table: 1
State/Union Territory wise percentage of Households with Select Housing Facilities

Region	State/U.T.	Electricity	Drinking Water	Toilet Facility	Pucca House	Weighted average of the performances of the regions*	
North	Chandigarh	99.6	99.5	99.5	94.2		
	Delhi	99.8	80	96.0	90.3		
	Haryana	98.8	91.6	89.8	76.3		
	Himachal Pradesh	99.5	94.9	85.7	70.2		
	Jammu & Kashmir	97.4	89.2	79.3	70.9		
	Punjab	99.6	99.1	92.9	80.8		
	Rajasthan	91	85.5	54.0	64.2		
	Uttarakhand	97.5	92.9	82.9	64.5		
	Average deviation from the national level*		9.7	1.69	-6.09	20.13	5.23
	Central	Chhattisgarh	95.6	91.1	41.3	35.9	
Madhya Pradesh		89.9	84.7	42.8	35.7		
Uttar Pradesh		70.9	96.4	45.8	33.1		
Average deviation from the national level*		-2.73	0.833333	-47.8	-21.4	-13.65	
East	Bihar	58.6	98.2	33.5	25.9		
	Jharkhand	80.1	77.7	30.0	37.9		
	Odisha	85.5	88.8	35.0	44.5		
	West Bengal	93.7	94.6	74.9	46.5		
	Average deviation from the national level*		-8.73	-0.075	-47.75	-17.6	-14.29
Northeast	Arunachal Pradesh	88.7	87.5	90.8	23.9		
	Assam	78.2	83.8	88.9	25.2		
	Manipur	92.4	41.6	98.7	17.7		
	Meghalaya	91.4	67.9	92.4	43.0		
	Mizoram	95.9	91.4	99.1	54.7		
	Nagaland	96.9	80.6	98.3	28.4		
	Sikkim	99.4	97.6	99.7	71.6		
	Tripura	92.7	87.3	97.9	26.6		
	Average deviation from the national level*		3.75	-10.19	4.63	19.91	-2.86
West	Dadra & Nagar Haveli	97.4	77.5	60.6	50.6		
	Daman & Diu	100	89.4	93.6	92.9		
	Goa	99.8	96.3	89.1	84.2		
	Gujarat	96	90.9	71.0	77.1		
	Maharashtra	92.5	91.5	71.2	72.9		
	Average deviation from the national level*		8.94	-0.78	-14.0	19.24	3.29
South	Andaman & Nicobar Islands	97	94.3	84.7	66.0		
	Andhra Pradesh	98.8	72.7	61.3	81.5		
	Karnataka	97.8	89.3	65.8	62.9		
	Kerala	99.2	94.3	99.2	89.0		
	Lakshadweep	99.9	91.5	100.0	97.5		
	Puducherry	99.6	95.4	69.1	81.9		
	Tamil Nadu	98.8	90.6	61.7	78.9		
	Telangana	98.3	77.9	69.0	75.0		
	Average deviation from the national level*		10.48	-1.65	-14.75	22.79	4.16
India		88.2	89.9	91.1	56.3		

Source: NFHS - 4 (2015-16)

*Estimated by the author

Table 2
State/Union Territory wise Median Years of Schooling for Males and Females

Region	State	Male	Female	Weighted average of the deviation from the national level for the region*	
North	Chandigarh	9.6	8.7	1.24	
	Delhi	8.9	7.4		
	Haryana	8	4.9		
	Himachal Pradesh	8.8	6.7		
	Jammu & Kashmir	7.8	4.6		
	Punjab	7.8	6.5		
	Rajasthan	6.3	1.7		
	Uttarakhand	7.7	4.9		
Average deviation from the national level*					
Central	Chhattisgarh	1.21	1.28	-0.77	
	Madhya Pradesh	6.4	4.2		
	Uttar Pradesh	6.0	3.6		
	Average deviation from the national level*	6.1	3		
East	Bihar	-0.73	-0.8	-1.4	
	Jharkhand	4.6	0.9		
	Odisha	5.8	2.3		
	West Bengal	6.1	4.0		
	Average deviation from the national level*	5.8	4.5		
North-east	Arunachal Pradesh	-1.33	-1.48	0.22	
	Assam	5.7	3.5		
	Manipur	5.8	4.6		
	Meghalaya	8.2	6.8		
	Mizoram	4.5	4.5		
	Nagaland	7	6.5		
	Sikkim	6.5	5.4		
	Tripura	6.7	5.8		
	Average deviation from the national level*	7	5.4		
	West	Dadra & Nagar Haveli	-0.48		0.91
Daman & Diu		7.8	4.6		
Goa		8.4	6.6		
Gujarat		8.8	7.5		
Maharashtra		7.3	4.9		
Average deviation from the national level*		8.1	6.1		
Karnataka		1.18	1.54		
South	Andaman & Nicobar Islands	8.1	7.5	1.49	
	Kerala	6.2	3.9		
	Lakshadweep	7.3	5.1		
	Puducherry	9.0	8.7		
	Tamil Nadu	8.9	7.5		
	Telangana	9.0	7.6		
	Average deviation from the national level*	7.9	6.7		
	India	6.69	3.9		1.01
		6.9	1.96		4.4

Data Source: NFHS - 4 (2015-16)
*Estimated by the author

Table 3
State/Union Territory wise Infant Mortality Rate and Under 5 Mortality Rate

Region	State	IMR	USMR	Weighted average of the deviation from the national level for the region*
North	Chandigarh	38.3	38.3	7.3
	Delhi	31.2	42.2	
	Haryana	32.8	41.1	
	Himachal Pradesh	34.3	37.6	
	Jammu & Kashmir	32.4	37.6	
	Punjab	29.2	33.2	
	Rajasthan	41.3	50.7	
	Uttarakhand	39.7	46.5	
	Average deviation from the national level*	5.8	8.8	
	Central	Chhattisgarh	54	
Madhya Pradesh		51.2	64.6	
Uttar Pradesh		63.5	78.1	
Average deviation from the national level*		-15.53	-19.3	
East	Bihar	48.1	58.1	1.29
	Jharkhand	43.8	54.3	
	Odisha	39.6	48.1	
	West Bengal	27.5	31.8	
	Average deviation from the national level*	0.95	1.63	
Northeast	Arunachal Pradesh	22.9	32.9	10.76
	Assam	47.6	56.5	
	Manipur	21.7	25.9	
	Meghalaya	29.9	39.6	
	Mizoram	40.1	46	
	Nagaland	29.5	37.4	
	Sikkim	29.5	32.2	
	Tripura	26.7	32.7	
	Average deviation from the national level*	9.71	11.8	
	West	Dadra & Nagar Haveli	33	
Daman & Diu		34.4	34.4	
Goa		12.9	12.9	
Gujarat		34.2	43.5	
Maharashtra		23.7	28.7	
Average deviation from the national level*		13.06	17.36	
South		Andaman & Nicobar Islands	9.8	13
Andhra Pradesh	34.9	40.8		
Karnataka	26.9	31.5		
Kerala	5.6	7.1		
Lakshadweep	26.9	30.2		
Puducherry	15.7	16.2		
Tamil Nadu	20.2	26.8		
Telangana	27.7	31.7		
Average deviation from the national level*	19.74	25.04		
India		40.7	49.7	

Data Source: NFHS - 4 (2015-16)
*Estimated by the author

Table 4
Percentage of population in the highest wealth quintile, percentage of men and women currently employed by States/Union Territories

Region	State	% of households with highest wealth quintile	% of men currently employed	% of women currently employed	Weighted average of the deviation from the national level for the region*	
North	Chandigarh	80.8	75.6	30.9	5.77	
	Delhi	62.8	69.2	18.6		
	Haryana	47.1	73.8	18.1		
	Himachal Pradesh	32.3	70.9	24.4		
	Jammu & Kashmir	25.2	69.9	13.7		
	Punjab	62	78.4	16.6		
	Rajasthan	19.8	67.4	19.7		
	Uttarakhand	29.8	67.7	17.2		
	Average deviation from the national level*					
	14.3					
Central	Chhattisgarh	16.2	72.9	29.1	-1.42	
	Madhya Pradesh	15.5	76	30.1		
	Uttar Pradesh	-4.67	72	19.2		
	Average deviation from the national level*					
8.8						
East	Bihar	3.3	-1.67	4.13	-5.82	
	Jharkhand	8.8	63.6	14.9		
	Odisha	7.3	71.2	22.8		
	West Bengal	9.1	75	19.7		
Average deviation from the national level*						
-12.88						
North-east	Arunachal Pradesh	9.2	-2.65	-4.85	-1.90	
	Assam	6.1	67	24.2		
	Manipur	10.4	80.5	14.8		
	Meghalaya	6.3	74.4	41.3		
	Mizoram	34.7	74.6	35.2		
	Nagaland	11.3	81.3	34.5		
	Sikkim	11.7	72	28.1		
	Tripura	6.2	71.3	19.8		
	Average deviation from the national level*					
	-8.01					
West	Dadra & Nagar Haveli	18	-0.34	2.94	5.46	
	Daman & Diu	33.1	76	24.3		
	Goa	55.9	83.5	17.4		
	Gujarat	29.4	79.1	23.7		
	Maharashtra	25.9	81.8	31.7		
Average deviation from the national level*						
12.46						
South	Andaman & Nicobar Islands	31	4.62	1.46	3.79	
	Andhra Pradesh	17.7	81.2	17.7		
	Karnataka	20.5	79.6	33.5		
	Kerala	48.5	80	29.3		
	Lakshadweep	37.6	71.6	17.3		
	Puducherry	36.6	69.1	16.9		
	Tamil Nadu	22.7	82.8	20		
	Telangana	23.2	77.4	28.2		
Average deviation from the national level*						
9.73						
India		20	1.83	1.21	24	

Data Source: NFHS - 4 (2015-16)
*Estimated by the author

Table 5
Indices of Development by Regions of India

Region	Value of the Dimension Index				Weighted Average of the Dimension Indices (Overall Development Index)
	Housing	Education	Health	Economic	
South	4.16	1.49	22.39	3.79	27.31
West	3.29	1.36	15.21	5.46	21.99
North	5.23	1.24	7.3	5.77	17.63
Northeast	-2.86	0.22	-0.76	-1.90	4.42
East	-14.29	-1.4	1.29	-5.82	-19.82
Central	-13.65	-0.77	-17.42	-1.42	-29.8
Coefficient of Variation (in %)	-295.97	342.10	208.82	481.23	648.95

REFERENCE:

Ahluwalia, M S (2000), "Economic Performance of States in Post-reforms Period", *Economic and Political Weekly*, May
 Hicks, J.R. (1959), "Essays in World Economics", Oxford: Clarendon Press, p. 163
 Jamal, H and Khan, A.J. (2003), "The Changing Profile of Regional Inequality", *The Pakistan Development Review*, Vol. 42, No. 2, pp. 113-123
 Kar, S and Sakthivel, S. (2007), "Reforms and Regional Inequality in India", *Economic and Political Weekly*, Vol. 42, No. 47, pp. 69-73, 75-77
 Liu, H (2006), "Changing Regional Rural Inequality in China 1980-2002", *Area*, Vol. 38, No. 4, pp. 377-389
 Nayyar, G. (2008), "Economic Growth and Regional Inequality in India", *Economic and Political Weekly*, Vol. 43, No. 6, pp. 58-67
 Shetty, S L (2003), "Growth of SDP and Structural Change in State Economics: Interstate Comparisons", *Economic and Political Weekly*, December
 Siddiqi, A.H. (1981), "Regional Inequality in the Development of Pakistan", *GeoJournal*, Vol. 5, No. 1, Southern Asia — Geography of Contrast, pp. 17-32
 Singh, N. and Srinivasan, T. N. (2002), "Indian Federalism, Economic Reform and Globalisation", paper prepared for CREDPR project on Globalisation and Comparative Federalism
 Singh, N., Bhandari, L., Chen, A. and Khare, A. (2003), "Regional Inequality in India: A Fresh Look", *Economic and Political Weekly*, Vol. 38, No. 11, pp. 1069-1073

HOW REAL IS THE ACT EAST POLICY FOR THE NORTH EASTERN REGION OF INDIA:

A REVIEW ON ACT EAST POLICY AND ITS GROUND REALITIES

Bishmita Medhi

Assistant Professor

Dept. of Geography, Tihu College

Tihu, Nalbari, Assam

Sailajananda Saikia

Associate Professor

Dept. of Geography, Rajiv Gandhi University

Itanagar, Arunachal Pradesh

ABSTRACT:

After 1990s there was a radical change in the relations among nations in terms of political and economic development in different parts of the world, resulting in the emergence of an era of globalization. South East Asia is one of the most dynamic region both economically and geopolitically. Starting of the process of formation of ASEAN Community in 2015, it is bound to be one of the most integrated regions after European Union. ASEAN, with a combined GDP of \$ 2.3 trillion (2013), a largest market of 630 million people, good connectivity and free trade agreement with major partners a dynamic region which exercises substantial collective economic influence region and globally. In this context Act East policy plays a critical strategy both economically and geopolitically. The Look East (now Act East) policy stressed on regional integration, reform and liberalization, rapid economic growth and development of the North Eastern region of India, adapting the approach of focusing on geographical proximity of regions, sub-regional cooperation and stress on free trade agreements.

Through this paper an attempt will be made to look into the Act East Policy and its implications on the development of the region. Its economic integration with South East Asian countries and security, trade, investment, connectivity and capacity building and strengthening people to people contact. At the same this attempt will be made to understand how it will impact the development of North-East India.

Keywords: Act East Policy; North-East India; Regional Development and South East Asia.

INTRODUCTION:

Today when we speak about Look East Policy it seems like something new, a new policy for the development of North-Eastern States of India but in real sense "Look East Policy" has been here from the Vedic past. As we know India is an old civilisation of Sun worshippers and according to Hindu mythology Sun was regarded as the most powerful. In this respect, it may not be correct to trace India's Look East Policy (LEP) to the beginning of the nineties, when the Cold War ended as is usually done. The Look East Policy of India, framed by the Narasimha Rao government in the early nineties, is a substantial manifestation of India's focused foreign policy orientation towards South-East Asia; an immensely resourceful and flourishing region.

The North-East India is commonly referred to the eight states of Assam, Arunachal Pradesh, Manipur, Meghalaya, Mizoram, Nagaland, Sikkim and Tripura. The whole area encompasses 262,230 square km with a total population of 38, 495,089 (2001 Census), which is about 3 per cent of India's total population. These states are only connected to the "mainland" of India through the so-called chicken neck. This small channel constitutes only about 1 per cent of the region's borders, thus, the region is surrounded by thousands of kilometers of international border. The partition of the land and the creation of East Pakistan led to the North-East being virtually disconnected from other parts of India with the only remaining link being "chicken neck", the narrow 27 km Siliguri corridor (North-East Region Vision Document). This had immense effects on the economic situation of the North-East and its capability to trade its goods. Further, the variety of different identities and cultures represented in this region, together with the geographical distance to the main part of India and a feeling of 'distinctiveness', led in many parts of the North-East to violent conflicts. Independent demands in some states led to armed insurgencies since the early 1950s. Thus, "the quest for ethnic and regional identity, nationalism, and ideological motivations have fomented a climate of insurgency in several parts of the North Eastern region, which has led to political fragmentation of the region; the climate has been further fuelled by the slow pace of development" (North-East Region Vision Document 2020), that followed the aftermath of independence. There are ample possibilities for North-East India to reap benefits from India's thriving relations with South East Asia as the process of globalization provides the countries with the opportunities to grapple with cross-market accessibility and enabling them alleviate their poverty and economic backwardness.

North-East India stands as a geostrategic point from geographical point of view and many things need to be looked in while considering this region. It is the deviation from complete economic issues to the broader agenda involving security cooperation, actively constructing transport corridors and erecting pillars of linkages and connectivity. This phase of India's Look-East Policy renders ample relevance to the development of its North-Eastern Region because of its geographical proximity to South-East Asia. The incessant conflict scenario in this part seems to be far away from the "mainland" of India, not only from the geographical perspective, but also from the notion of how it is perceived. To engage in the region is a great challenge for the Government of India, as well as a necessity. Therefore, this paper aims at reviewing

the involvement of Central Government in the North-East. However, due to the scope of the paper it will focus only on particular aspects of those broad and complex issues surrounding the North Eastern Region (NER).

Before coming to the present context on the importance of LEP we have to look the matter from the historical perspective as to understand the importance of the very policy that has generated so much debate for the last two decades.

HISTORICAL EVOLUTION OF LEP:

There is evidence of India's dynamic and extensive relations with its eastern neighbours since the first century. This phase lasted until the 12th century and can be described as the first wave of "Look East" in cultural and commercial engagement. During this period, the first Hindu Empire (in what later became the Indo-China region) flourished based entirely on cultural and philosophical contacts with India. No military missions were launched and no wars took place, save the South Indian emperor Rajendra Chola's periodic encroachments into the Srivijaya Empire in Malaya and Indonesia in the 10th and 11th Century.

COLONIAL PERIOD:

The advent of Islam in the 12th century and the colonial expansion that followed Muslim rule in India disrupted these cultural and commercial links. During the British colonial period, the Second World War engulfed East Asia rather extensively. The war added a strategic dimension to British links with South-East Asia and the importance of North-Eastern Region gain importance geopolitically. The British grasped the strategic centrality of India in Asia and sustained their colonial presence "East of the Suez" including in South-East Asia, on the basis of their Indian empire. They built India as the bastion of their power and influence in Asia that protected their colonial holdings as far in the east as possible, up to Hong Kong. This period may be considered as the second wave of India's LEP when strategic interests were brought upfront along with the commercial interests, at the cost of cultural and civilizational links. The legacy of India's colonial sway persists in many subtle and diverse ways. It alerts East Asian countries and interested major powers to project and even exaggerate India's possible, expansionist and adventurist intents even when there is no evidence to support such intents.

POST-INDEPENDENCE PERIOD:

The third wave of India's LEP was set in motion with the advent of independence. The eastern neighbours constituted one of the priority areas in India's commitment to work for Asian resurgence. Nehru called the Asian Relations Conference in March 1947 even before the formal beginning of "India's tryst with destiny". He, as the philosopher and architect of independent India's foreign policy, in general and its Asia policy, in particular, articulated this commitment while underlining the rationale and significance of Asian resurgence in India's world view.

The emphasis on geography and culture in Nehru's early east ward policy was aimed at building Asian solidarity. He took into account the aspirations of a new, independent and resurgent Asia. The first Afro-Asian Conference held in Bandung, Indonesia, in 1955, was the

culmination of these early Indian initiatives and efforts to promote Asian resurgence. India strongly pleaded for China's integration into the international community in the interest of Asian solidarity and pleaded that China should be treated more as a nationalist country than a communist revolutionary force. The characteristic feature of the third wave of India's LEP was decolonization and Asian resurgence. Both of these aspects were primarily emotional and ideological in content. The Nehruvian vision had a strong political content to back them but was bereft of much tangible substance; of commerce, culture and economy, as was evident during the first wave period. Nor was much attention paid, save rhetorical recognition, to the security imperatives of the developments in Indian Ocean, except during the late sixties and early seventies when India encouraged and backed the proposals for reducing the great powers arms race in the Indian Ocean by getting it recognized as a "Zone of Peace". Therefore, India's efforts and initiatives with regard to Asian resurgence and Asian solidarity, though appreciated, could not be sustained as desired.

The Look East Policy is viewed as post cold war development in the realm of India's foreign policy. Although, many policies have been initiated by the Central Government for the development of North Eastern Region but most of the policy had been on papers only and never reached the ground. In the post independent era, the policy had shifted many a times. While discussing LEP we need to look into the main paradigm and in recent years the paradigm has shifted from Cultural to development:

The first of these paradigms is the 'Culture Paradigm': that the North-East is a phenomenally diverse mosaic of cultures which have to be preserved and enriched; this paradigm was perhaps preponderant largely in the 1950s and the 1960s. Somewhere in the mid 1960s, the 'Security Paradigm' came into greater prominence. Probably after the Chinese invasion of 1962, the North-East began to be seen as a strategically significant region not only in a geographical sense, but in a larger geopolitical sense of India's role in East Asia and South-East Asia.

In the early 1970s, a transition to the 'Politics Paradigm': the region required political representation; the diverse tribal cultures and diverse sub-nationalities required participation in 'mainstream' democratic process. This was when new states began to be formed on the idea that people here required a voice - representation in the democratic process - and that once they have voice and representation through the instrument of representative, pluralistic parliamentary democracy, many of the problems associated with this region would tend to get nullified or minimized.

As we moved from a culture paradigm to representative politics, in the '80s, we hit upon the new mantra, the fourth for the North-East - the 'Development Paradigm'. We have to look back on the factors responsible for this paradigm shift from the central government for North-Eastern region. The main points are:

1. The end of cold war and the eventual rise of the US as the only super power making the policy of non-alignment virtually redundant.

2. The worldwide trend towards regionalism since the eighties posing new challenges before India and considerably weakening India's faith in multilateralism.
3. East Asia's exemplary growth performance under an outward looking strategy of development contrasting with India's sluggish growth under protectionist and all pervasive government control policy regime.
4. The "China factor" - China was seen as the principal source of insecurity and the greatest potential threat to India's long-term interests. Closer links with the East and the South-East Asia were thus considered to be possible ways to "set limits on China's influence" or perhaps to "balance" China's expanding power in the region.
5. The emergence of the look east policy as a role model of development for the northeast is often dubbed as the new development mantra or a new paradigm of development in the northeast development perspective.

It is here to understand the main reasons that had led the central government to divert its policy for the development of North-Eastern region. The main points for this new emphasis can be summed up as under:

SECURITY CONCERNS:

Security is one of the main factors for the economic development of any region and it is the most important issue for the North-Eastern states both external and internal. As for the external concerns, the China factor again emerges as the crucial one. China even today does not openly accept Arunachal Pradesh as part of India.

The internal security problems relates to the North-East India having serious international dimensions.

- i) The extremist/insurgent outfits are internationally well connected;
- ii) The porous borders are frequently used by the extremists/outfits to escape from the Indian army;
- iii) These outfits have their hide outs in the neighbouring countries;
- iv) The Pakistan through the ISI is also involved in fomenting trouble in this region using Bangladesh as a base.

NEW PARADIGMS OF DEVELOPMENT:

The admission of Myanmar to the ASEAN Club in 1997 could be another reason since the Myanmar is strategically situated between India and Indochina. It is here to be mentioned that Geopolitics plays an important role in the change of government's attitude or policy on North-Eastern region, as both India and China are two of the fast emerging economic powers in the world. And in order to grow their economy both needs new areas for their trading purposes. And for India the geostrategic situation of Myanmar is important as it gives an alternative way to reach out to the East and South-East Asian markets.

The North-East being a "top priority" for the government of India today, this seems to be a justifiable reason for the inclusion of North-East in the look east policy. Clearly, this demonstrates a development concern for the northeast. This new development paradigm in a

way was the result of the failure of the 'Old development paradigm' where the major thrust of development policy as articulated by various packages of development under the aegis of successive Prime Ministers since Deve Gowda was to pump in as much money as possible for the development of this region.

But this new paradigm of development will have if at all only a very limited on the development of the region. The region was exposed to a massive scale of international trade during the 19th century but its impact if any on the economy was very negligible. This is a sad lesson from the past history of the region.

What began as 'Look East' decades back transformed into 'Act East' in 2014 after the NDA government came to power. The policy came as an assertion that India values its east and wants to engage and act more.

THE REAL ISSUE WITH ACT EAST POLICY AND NORTH-EAST REGION:

Though India's trade with countries bordering the North-East has seen the most dramatic expansion, this expansion has had little or no impact on North-East economy as most of this trade expansion is through seaports. In spite of huge potential, the Indo-Myanmar trade remained insignificant, amounting to few crores per year. The traded items between India and Myanmar are mostly third country products and there is no concerted effort on the part of the government to develop the border regions and expand the tradable items.

Following their research on India, Goldman Sachs and Co. economists Jim O'Neill and Tushar Poddar have come up with a report on "Ten Things for India to Achieve its 2050 Potential". Some of the findings like improve governance, increase trade with neighbours, increase agricultural productivity and improve infrastructure are very much needed in this region. In order to reap the benefits of this policy and from FTAs with the economies of the east, the key variables are transit arrangements, proliferation of trade routes and custom check post, easy visa regime making it possible for traders, business persons and transport operators to move in and out of the region.

Therefore, it requires massive investments in infrastructure: construction of roads, railways, air transport and communication facilities, which are largely absent. Hotels, restaurants and resorts needs to be built for tourists. The Shukla Commission on "Transforming the North-East", estimated that such investment would exceed Rs. 25,000 crores. As envisaged in North Eastern India Vision 2020, a substantial increase in investments as well as a significant improvement in productivity is required for the North eastern region to catch up with the rest of the country by 2020. This huge investment cannot come from the government alone. As a result, private investment and loans from Asian Development Bank and World Bank is needed. However, the present political and security environment cannot attract private investors. The government needs to create a secure environment by initiating dialogue with radical elements to bring peace and stability in this conflict-ridden region.

Industries in the North-Eastern region need to produce goods, which can be exported to the neighbouring countries. Processing industries have to be set up to manufacture quality goods, which can be offered in international markets at acceptable prices. Agriculture has to

be improved both in terms of production and in terms of productivity. The new North-East Industrial Policy 2007 has practically made the whole region a special economic zone. The industry departments of various states of the region have only benefited the "subsidy eaters" till now. Otherwise, the region would just be a corridor between mainland India and Southeast Asia. India's policy of strengthening its ties with eastern neighbours has been limited to counter insurgency efforts as seen in Bhutan and Myanmar. The Look East policy is used as a means to convince the neighbouring countries to drive out insurgents taking shelter in these countries. Sincere and political negotiations and not militaristic approach to insurgency will bear lasting solution. However, such negotiations should also involve, as Samir Kumar Das (2001) points out, civil society and all the contending parties as one negotiation may antagonize the other group/groups.

The role of North-Eastern states in the Act East policy is negligible till date. So far, it seems to be a dictated policy of the central government. This is in sharp contrast to the role played by Yunnan province of China in search of closer relationship with its South-East Asian neighbours. The Yunnan province plays a role in the institutions of the Greater Mekong sub-region. However, there is little room for India's North eastern states in the Mekong Ganga Cooperation or in BIMSTEC. It is through concentrated efforts in various thrust areas that North-East India will be able to stand not only the challenges of the Act East policy but also to fully participate in the new milieu. Only then, North-East can hope to be a part of the bridge connecting India and Southeast Asia. Giving the North-Eastern states a direct role in this policy by taking advantage of the region's history and shared cultural ties with East and Southeast Asia can ensure a successful Act East policy.

PROBLEMS OF DEVELOPMENT:

The crux of the problem of development is therefore not the lack of integration with the booming East and the South-East Asian markets. The crucial problems of development faced by the region are:

- i) The lack of intra-regional as well as intra-state connectivity
- ii) Infrastructure, and
- iii) The issues of security and governance.

The new paradigm of development seems to ignore these issues by diverting attention to an issue (like connectivity with the outside world) which may have if at all marginal impact upon the economy. The correct strategy of development should therefore be to address the latter issues more seriously instead of focusing upon connectivity with the outside world.

The region should have both short term and long term visions of development where the ultimate objective should be to increase the size of the market by allowing scope for trade and specialization within the northeast through the improvement of intra-regional connectivity, creation of infrastructure and maintenance of proper security and governance and by initiating a participatory development process with the grass root levels of participation in order to increase agricultural productivity.

The failure of the old paradigm of development set the tone of the new mantra or the new

paradigm of development – integrate the northeast region with the booming markets of the East and the South-East Asia through the so called “The Gate way of India” – a possible land route from the northeast to the China and the other east Asian markets – an attempt to rediscover the Old Silk Route.

The basis of this argument is that integration will allow increasing trading opportunities for the northeast region with the promising markets of the East and the South-East Asia. International trade is expected to play the role of an “engine of growth” so as to transform the northeast into a highly modernized industrial region and also as an alternative route to reach out the outside markets as entrepote trade facilities for the hinterland.

The real issue is not lack of integration which caused slow growth in the northeast but insurmountable developmental constraints resulting in the failure of the region to integrate with the rest of India. The North-East had been having relatively very high levels of border trade with the neighbouring countries which will continue to exist irrespective of any policy. But such border trade was mainly determined by scarcity and surplus situation in the geographical proximity of the subsistence village economies, and not market economies where production is mainly for market surplus.

The distance to be covered from the “gateway to the East and the South-East Asia” is very long covered by uneven topography causing high transportation cost, uncertainties and perhaps too many border to cross.

THE REAL FACTS ON DEVELOPMENT POLICY:

Constraints: Connectivity within the region and absence of internal security and governance are the primary constraints. Many believe that the opening of Stillwell Road will open new avenues for trade and commerce. But in reality it may act in a different way, firstly in India we have only about 60 km. of road length in Myanmar more than 1000 km., which is not under control of government and most of the insurgence groups had their hideout in this region and the rest about 600 kms with China.

Moreover, it is here to be mentioned that with the opening up of Stillwell road, China will be the beneficiary as Yunnan Province will develop which is the most underdeveloped province of China and is landlocked region. China will have an easy passage through North-East India to Bangladesh port and which will help their trade to boom in a massive way.

If we observe carefully then we will see that there is no market as such in this region and the interstate connection is also not to the mark. Moreover, the proportions of large trader in this region are always from outside the region. From the recent document published by the Planning Commission clearly reveals the North-East states of transport cost and law and order in the region is at very bad shape.

What we can Trade: To put it other words given the present pattern of India’s trade with the East and the South-East Asian countries, do we find any array of goods that are being produced in the northeast and in the production of which the northeast can possibly realize comparative advantage? The answer is an absolute no. the region doesn’t have any product

that we can bank upon to sell once the policy is implemented. The region will only consume others product instead of trading any products.

It is here to be mentioned that India experienced a spectacular 10 per cent cumulative annual rate of growth in tea exports over the period 1858 to 1901 and Assam’s contribution to India’s exports of tea was nearly 90 per cent. Why then such a massive trade could not play the role of an engine of growth for the region? And in today’s context we don’t have that proportion of tea nor do the region boots any other sector that can induce growth or development.

CONCLUSION:

The Act East policy is expected to usher in a new era of development for the North-Eastern part of India through network of pipelines, road, rail and air connectivity, communication and trade. However, several hurdles need to be overcome of which the region is embroiled for the past several decades before any meaningful activity can take place. Starting from various forms of insurgent activities to the problem of illegal migration and drug trafficking, which are all transnational in character; the Government of India need to forge cooperation from the neighbouring countries.

The trans-border communities can be restored through border trade and inter-country trade which the border region should not act merely as a transit corridor but as a source of local manufacture and enhancing people-to-people contact. The emphasis should be on industrialization and growth. The Indian government and the North-Eastern states must adopt proactive role and provide not only infrastructures but also political stability and good governance. Greater participation of the local people in production and distribution activities and raising agricultural productivity should be given prime importance. Trade alone will not be sufficient to transform the region into a sustained development path. In addition, growth in trading activities will only benefit those people who possibly are from outside the region and who are economically more powerful to exploit the resources of the region. India’s Act East policy should include goals such as encouraging public debate and participation as well as opening doors and windows in the political and economic arena.

In order to develop the region the inter state communication should be developed. As the Shukla Commission report (Shukla, 1997) states, the regions’ infrastructure should be developed in order to develop. The central government should look into this matter more seriously before any other activity in the region.

The policy envisages the region not as the periphery of India, but as the centre of a thriving and integrated economic space. Thus, many people see it as an excellent opportunity to integrate not only with Indian mainland economy but also with India’s neighbouring countries and even beyond. In contrast, others view this policy as an extension of India’s new imperialism in a new form in that the north eastern will only provide a bridge between the rest of India and South-East Asia. The main argument of the critiques is that India is more concerned with the East but not to India’s North-East.

Increased regional and international trade can shape the future destiny of the North-Eastern region by providing the scope for industrialization and growth. But mere facilitation of trade

through the region with the neighbouring countries will have only marginal impact on the economy unless the region can be converted into a production hub. For this the Central Government and the various State Governments of the region must adopt proactive role. Instead of providing tax holidays for investment in the region, the Governments should provide infrastructures, political stability and good governance. They should adopt more outward rather than inward looking policies for development.

Greater participation of the local people in production and distribution activities, the education sector should be given the prime importance. However, the vast rural masses have to be brought into the process of industrialization for political viability of the trade as a strategy of industrializing the region. For this the utmost importance should be given to raise the agricultural productivity in the region with proper flood control measures and other steps. As it had happened in the past, without a parallel agricultural revolution in the region, trade alone will not be sufficient to transform the region into a sustained development path. The growth in trading activities will only benefit those people who possibly are from outside the region and who are also economically more powerful to exploit the resources of the region.

In conclusion, it seems that there is an urgent need for the policies and approaches towards the North-Eastern Region to be specifically applicable to the needs and specificities of that region. Also, the government policies for the development of the region must not only be framed keeping local needs in mind, but also, be implemented efficiently in order to achieve concrete results.

REFERENCE:

Address of the External Affairs Minister, Pranab Mukherjee, at the Institute of Foreign Affairs and National Security, Republic of Korea on 'India's Look East Policy', 17/09/2007
 Ahmed, R. & Biswas, P. (2004), "Political Economy of Underdevelopment of North-East India", New Delhi: Akansha
 Baruah, S. (2004), "Between South and Southeast Asia: North-East India and the Look East Policy", CENISEAS Paper No. 4, OKDISCD, Guwahati
 Kumar, B.B. (2007), "India Looking East", *Dialogue*, Jul-Sept., Vol. 9, No. 1
 Das, G. (1995), "The Tribes of Arunachal Pradesh in Transition", Delhi: Vikas Publishing House
 Das, S.K. (2001), "Tribal politics in Contemporary India", in RakhahariChatterji (ed.) *Politics India: The State Society Interface*, New Delhi: South Asian Publishers
 Das, S. K. (2007), "Conflict and Peace in India's North-East: The Role of Civil Society", *Policy Studies*, 43, East-West Center, Washington
 Das, H. N. (2007), "Preparing North-East for Look East Policy", *Dialogue*, Jul-Sept., Vol. 9, No. 1
 Dong, Z. (2006), "India Looks East: Strategies and Impact", AUSAID Working Paper, September 2006, p. 19
 Hussain, W. (2004), "Interaction on the North-East", Observer Research Foundation, New Delhi, Nov. 18
 Miri, M. (2001), "North-East: A Point of View", *Dialogue*, October - December, Volume 3, No. 2
 Mukherjee, P. (2007), "Geography as Opportunity", Speech at Seminar on "Look East" Policy, June 16, Shillong
 Press statement by Pranab Mukherjee, Minister of External Affairs after the Meeting on Look East policy, 31-10-2007

Raha, M. K. (1998), "North-East India and Nehru", in M. K. Raha & A.K. Ghosh (eds.) *North-East India: The Human Interface*, New Delhi: Gyan Publishing
 Sikri, R. (2009), "Challenge and Strategy: Rethinking India's Foreign Policy", SAGE publishing, New Delhi
 Ramesh, J. (2004), *North-East India in a New Asia*, Inaugural Lecture in CENISEAS Forum, 'Towards a New Asia: Transnationalism and North-East India,' held in Guwahati, 10th and 11th September, 2004
 Ramesh, J. (2005), "North-East India in a New Asia", Gateway to the East: a symposium on North-East India and the Look East Policy, Seminar,#550 June 2005http://www.india-seminar.com/2005/550.htm
 Sushil, K. (2005), "Economic Opportunities or Continuing Stagnation", Gateway to the East: a symposium on North-East India and the Look East Policy, Seminar,#550 June 2005http://www.india-seminar.com/2005/550.htm
 Sandy, G. (1995), "India's Rise to Power in the Twentieth Century and Beyond", New York: St. Martin's Press, p. 299
 Sachdeva, G. (2000), "Economy of the North-East: Policy, Present Conditions and Future Possibilities", New Delhi: Konark Publishers
 Shukla Commission Report on Transforming the North-East-High Level Commission Report to the Prime Minister, March 7, 1997
 Singh, B.P. (1987), "The Problem of Change: A Study of North-East India", Delhi: Oxford University Press
 Datta, S. (2000), "Security of India's North-East: External Linkage", *Strategic Analysis*, Vol. XXIV, No.8, November
 Verghese, B.G. (2004), "India's North-East Resurgent: Ethnicity, Insurgency, Governance, Development", New Delhi: Konark Publishers, 1996 (2nd revised)

REGIONAL PLANNING AND THE ROLE OF TRADITIONAL INSTITUTIONS IN ECO-TOURISM: A STUDY OF THE SATTRAS OF ASSAM

Ankita Dutta

Ph.D Research Scholar

Center for Political Studies, School of Social Sciences
Jawaharlal Nehru University, New Delhi - 110067

ABSTRACT:

The hallmark of the Neo-Vaishnavite Movement led by Srimanta Sankardeva in the 15th century is reflected in a distinctively unique institution – the Sattra– which is intimately associated with the socio-cultural and religious life of the Assamese society. Its establishment came about with the idea of popularising the Neo-Vaishnavite creed among the masses. Keeping in mind the present-day threats to the environment, both natural and anthropogenic, it now becomes important to adopt an alternative model of sustainable economic development involving the local cultural heritage of a community. Based on inputs gathered from the field surveys undertaken to a few Sattras in Upper Assam as a part of my Ph.D thesis, this paper tries to explore the potential of these institutions recognised as ‘traditional’ for promoting the still nascent concept of eco-tourism. The study has tried to look into the underexplored role of traditional institutions in promoting a sunrise industry, i.e. tourism. It makes use of both primary and secondary sources in understanding the importance and role of the institution of the Sattra in Assamese socio-cultural life, its relationship with the environment and how it can be utilised in promoting eco-tourism.

Keywords: Tradition, Sattra, Planning and Tourism.

INTRODUCTION:

North-East India, comprising of the states of Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Sikkim, Nagaland and Tripura, presents a highly variable physical character and diverse population composition. Its strategic location combined with extreme physical conditions, prevalence of traditional sources of livelihood among the people, and ethno-religious diversity, have all attributed an element of uniqueness to this region in the country.

Being located in India's far east, it is bordered by a number of foreign countries, and hence occupies a significant position from the geo-political point of view.

Despite the fact that North-Eastern India is well endowed with a vast treasure-house of natural resources, it still remains one of the least industrially developed regions of the country. Whatever industries have been established in the region are mostly located in the state of Assam¹. They mainly range from agro-based industries, especially the tea industry, through the forest-based paper and plywood industries, to mineral-based petrochemical industries. Efforts are currently underway for ensuring the overall infrastructure and industrial development of the north-east through both public and private sector investments. Measures such as the Act East Policy pursued by the current dispensation at the Centre and strengthening of the DoNER (Development of North-Eastern Region) Ministry have the potential to significantly push forward the region's overall development along with the expansion of border trade with its neighbouring countries.

Each state in the North-East has a different set of location-specific concerns and grievances, which, however, often gets blurred in the scheme of things of policy-makers and government leaders. This has even led some to accuse the Indian state of having a myopic vision with regard to the North-East which seeks to camouflage real issues of dissent through short-term gains². As pointed out by Prof. Udayan Mishra, present-day Assam, made up primarily of the Brahmaputra and Barak Valleys, presents a very different picture when placed with the other neighbouring states of the region. Assam had a deep and wide-ranging cultural intercourse with the rest of the Indian subcontinent, centuries before the other hill regions even came to know of the so-called ‘mainstream’³. When most of the other regions were thriving on a subsistence economy, Assam was engaged in trade and commercial activities with neighbouring Bengal. This interaction with the outside world was in part responsible for the gradual process of state formation in Assam.

ROLE OF TRADITIONAL INSTITUTIONS IN REGIONAL PLANNING:

The recent trend of globalisation of Indian mega cities should be synchronised with the development of smaller towns and villages. The rich wealth of age-old traditions and cultures associated the latter can contribute to varied aspects of overall socio-economic and environmental well-being, if channelized in the right direction. For the very survival of humanity especially in today's context of human-induced environmental problems such as global warming, it is necessary to recognise the importance of traditional institutions in ensuring sustainable development. It is in this context that regional planning needs to be situated within a framework that incorporates the traditional knowledge systems of communities as has been transmitted through generations. This shall not only contribute to social integration, equality and diversity of a region but also provide a space for different cultures, ethnicities and lifestyles to co-exist in a spirit of harmony.

The meaning of ‘traditional’ and institutions which may varies across societies, cultures and communities. Several questions arise that seem to make the idea of ‘tradition’ itself quite ambivalent and which institutions, how and why may be classified as ‘traditional’. For instance,

institutions such as family, marriage or kinship, whose form and organisation vary across different cultures, may be viewed as traditional. Again, institutions such as khappanchayats in parts of Northern India, Resident Welfare Associations (RWAs), Self-Help Groups (SHGs), etc. many of which function informally, may be considered as traditional. Nevertheless, traditional institutions and the knowledge systems that have developed around them since the ages need to be taken note of in regional planning for ensuring development and long-term sustainability of a region and its people.

The existing literature on traditional institutions in North-East India seems to be primarily focussed on the issue of autonomy and the role of customary law among the tribal population of the region. Much less has been talked about the role that these institutions can play in sensitising the locales about the rich heritage left behind by their forefathers and its utilisation by the former in promoting sustainable economic development. Traditional institutions have kept alive the long traditions of community resource management. An entire community which has for long, identified itself with a particular institution is also regarded as the protectors of a certain way of life that has always prevailed centering around the institution. This is where the role of regional planning in fostering eco-tourism needs to be explored in detail in the context of one such traditional institution of the Assamese society – the *Sattra*.

RESEARCH METHODOLOGY:

Both primary and secondary sources have been employed for the purpose of the study:

- Among the primary sources, observation method and interview method have been largely made use of:
 - Observation method – various rituals and age-old traditions associated with a few prominent *Sattras* and *Namghars* have been observed in different places of Assam and minute details noted.
 - Interview method – in order to learn in detail certain intricate facts and traditions associated with the *Sattras*, in-depth interviews with the help of semi-structured questionnaires have been conducted with a former *Sattradhikar* (head of the *Sattra*), and *bhokots* and *gosains* (priests) of a few *Sattras* across Assam. Renowned writer, an expert on *Sankari* culture and former President of *Asom Sattra Mahasabha* Bhadrakrishna Goswami has also been interviewed as a part of this research work to know in detail about the *Sattra* since its inception till the present times.
 - Secondary sources in the form of various reference books have been consulted to study the subject matter. Also, annual publications of the *Axom Sattra Mahasabha* (a registered socio-cultural organisation and an umbrella organisation of the *Sattras* of Assam), newspaper reports, etc. are consulted as the references.
- The research objective of this paper is to study and understand the role of the *Sattras* from the viewpoint of ecology and nature and explore its hidden potentialities as a facilitator of tourism and problems associated with the same.

A BRIEF HISTORY OF THE EMERGENCE OF THE SATTRA:

The history of the Ahom rule in Assam begins sometime in the mid-13th century. At this time, people of the Tai Ahom tribe residing in the Prangbhan or Paran kingdom in eastern Burma entered through the mountain passes and successfully defeated the ruling tribes in the north-western corner of the state⁴. Keeping in view the then social conditions and needs of the people at large, the Ahoms took steps for the social and cultural rejuvenation of the society. It was at this time that the Vaishnava renaissance began in Assam in the mid-15th century under the leadership of Srimanta Sankardeva.

The Vaishnavite movement preached a simple religion which was open to all, devoid of the evils of the caste system, excessive religious ritualism and idol worship. The fundamental tenet of the Vaishnavite philosophy of Sankardeva was enlightenment of the human conscience through universal love. Its emphasis was on ethnic integration, social reforms, and spiritual uplift through a mode of religious conduct which was accessible to all⁵. The movement thus had a deep impact on the lower castes and classes of society, women and other deprived sections. It led to a process of regeneration and cultural resurgence, which thereby paved the way for the emergence of a unified and modern Assam first time in the pages of history⁶.

After an extensive pilgrimage throughout the country for around twelve years, Sankardeva returned home acquiring first-hand knowledge of the Vaishnavite theology, texts, mode of worship and management of institutions⁷. He soon shifted his residence from his birth place Alipukhuri in Nagaon district to a nearby village called Batadrava (Bardowa) where he started his religious movement with a new zeal. It was here at Bardowa that he established the first Vaishnava *math* known as *Sattra* (monastery) on the lines of the Buddhist *viharas*. In order to reform the religious beliefs and practices of the people of *Kamrupa*, Sankardeva made the *Bhagavata Purana* the main canon of his philosophy of Vaishnavism. It was first at Batadrava that he erected the *Namghar* (an offshoot or a miniature replica of the *Sattra*) as a village-hall for daily devotion and also to serve as a place for community meetings. The growing popularity of the institution of the *Sattra* in terms of religion, culture, and literature, gradually led to the emergence of the *Namghar* as the nerve-centre of all important village activities.

THE SATTRA AS AN INSTITUTION OF ECOLOGICAL IMPORTANCE:

The importance of conservation of nature has been imbued in the Indian culture and civilisation since the ancient times. With reference to Assam, stories abound in the Mahabharata, Puranas, *Srimadbhagavata*, etc. where the natural scenery of Assam is aptly described. The ancient rulers including the Ahoms appointed separate ministers and officials for looking after the forests and animals. Proper attention was also paid to the water bodies which were the abode of a large number of migratory birds that flocked here annually⁸. Apart from such political efforts, social efforts were also undertaken in the past society of Assam towards nature conservation. It was more so with the emergence of Vaishnavism under the leadership of Srimanta Sankardeva, that trees having religious, cultural and environmental significance came to be planted in the premises of the *Sattras*. Gratitude for nature being the core philosophy of Sankardeva's Vaishnavism, the value and usefulness of natural

vegetation now came to be emphasised through the institution of the *Sattra* so as to attract mass appeal.

The discourse on sustainable development has now attained widespread significance in the wake of various threats to the natural environment including pollution, deforestation, global warming and rising temperatures, etc. It is therefore our duty as responsible citizens to spread awareness about such menaces and problems and halt the spread of environmentally destructive activities. This environmental awareness can be enhanced to a great extent by utilising the tools of culture and tradition and institutions associated with the same. The *Sattras* in Assam are such institutions that have, since their emergence, maintained a very close relationship with nature and hence can be very effectively utilised not only for environmental conservation but also in promoting tourism.

POTENTIALITIES OF ECO-TOURISM THROUGH THE SATTRAS:

As a sunrise industry, tourism can play a key role in facilitating economic growth, employment generation and poverty alleviation in a region. In popular parlance, it is termed as a smokeless industry that helps to promote national integration and international understanding, besides infrastructure development and bringing in valuable foreign exchange earnings. However, tourism that is a result of haphazardly framed policies becomes a threat to the already fragile natural environment. Of late, the call for sustainable development has also raised concerns about the possibly adverse spill-over effects of the tourism industry on the environment. Here in comes the concept of eco-tourism, which is defined as a sub-category of sustainable tourism or a segment of the larger tourism market that deals with nature. Long-term conservation of the environment and sustaining the well-being of the local people are its twin objectives.

Broadly speaking, eco-tourism ensures that the level and impact of tourism and tourist-related activities are compatible with the maintenance and enhancement of ecological balance and biodiversity of a region. In socio-cultural terms, it is compatible with the social and cultural values of the local people of a region. This in turn promotes wider participation of the community in availing the benefits generated by tourism, both economic and cultural. India's North-East in itself is an abode of natural tourism blessed with a pleasant climate and breathtaking scenic beauty. Hence, tourism, especially eco-tourism, is quite a promising sector that can act as a catalyst in contributing to the overall development of this region.

In this context, the *Sattras* of Assam can help to inculcate the spirit of nature conservation, especially in the younger generation. A serene environment of greenery is maintained in these *Sattras* by the presence of certain indigenous trees of the region which not only have immense benefits for the surroundings, but are also attached with a religious fervour⁹. Examples include *Bakul* (*Mimosops elengi*), *Bael* (*Eagle Mermato*), *Agaru* or *Sachi* (*Aquilaria agallocha*), *Ashoka* (*Saraca Indica*), *Bot* (*Ficus benghalensis*), *Anhot* (*Ficus religiosa*), *Dimaru* (*Ficus roxburgii*), *Samindh* (*Acasia Siberiana*), *Tarua Kadam* (*Acasia farneciana*), *Kadam* (*anthocephalus Kadamba*), *Silikha* (*Terminalia citrina*), *Amlokhi* (*Emblic*; *Phyllanthus emblica*), *Bhomora* (*Terminalia belerica*), *Titasap* (*Michaelia champaka*), *Coconut*, *Banana*,

etc. All of these are endowed with one or the other medicinal value. However, the numbers of these trees are now sharply declining.

During the course of a field survey in Majuli undertaken as a part of my MPhil dissertation titled "Traditional Institutions in Modern India: A Study of the *Namghar* in Assam", it was revealed that several *Sattras* here generate revenue by giving a part of their land to the farmers for cultivation on the basis of crop share leased basis¹⁰. Hence, a part of the land remains unused. This can be utilised by the *Sattras* for cultivating different fruit and medicinal plants required for manufacturing food-items, toothpastes, cosmetics, beauty creams, pain-killers, AYUSH drugs, and so on. There is a trend now-a-days of more and more people opting for natural and herbal beauty products which are safe to the skin and free from harmful chemicals. Although the cultivation of plants seems exhaustive in the first place, it will ultimately yield immense returns for the *Sattras*. Indigenous plants of the region mentioned above, some on the verge of extinction, can be showcased to tourists through these *Sattras*.

A special mention here needs to be made of the *Sachi* tree, most often found in the premises of various *Sattras* of Assam. Assam has a very rich tradition of manufacturing a variety of indigenous eco-friendly ink, and papers from the bark of the *Sachi* tree. This entails a grand historic practice of writing religious scripts (*puthis*) including others on the bark of the *Sachi* tree. In ancient Assam, the production of scripts on the bark of the *Sachi* tree was an incredible legacy in almost all the *Sattras* and *Namghars*. Such scripts are popularly called *sachi paator puthi*. These are still valuably preserved in a few *Sattras* of Majuli. As revealed by Bhadrakrishna Goswami, "Upon request, a few *Sattradhikars* at Majuli even today can demonstrate the procedure of making a *Sachi* leaf and writing on it with the indigenous ink *hengul-haital*, which is made from *Silikha*, *Amlokhi*, *kechu-rokh* (extracts of earthworm), and *kehrāj* or *kehrāji* (*Eclipta alba*)¹¹." Such valuable and indigenous art of the region calls for careful preservation so that they can be effectively utilised for earning income.

Besides *Sachipaata*, *Sattras* in Assam earlier also made *tulapaata*, i.e. paper from cotton, and *bhojpatra* from bamboo leaves. These traditions are, however, now on a decline. Many *Sattras* in Assam specialise in a tradition of producing two different eco-friendly varieties of heritage dyes – *hengul* and *haital*. The former is a herbal dye, whereas the latter is made of lac or shellac crystals. Earlier, they were widely used in the illustrations of religious and other scripts, as well as in the depiction of screens used in the *Ankiya Nats* (one-act plays) of Srimanta Sankardeva. Moreover, earthworm extracts were used in writing secret information on paper by the rulers of Assam in the past¹². In this way, the institution of the *Sattra* is an immense repository of indigenous knowledge and skills of the uses of native plants and trees. It can therefore play a significant role not only in preserving indigenous plants, but also in promoting eco-tourism by attracting visitors from near and far.

A specific aspect of community life is the creation of a traditional knowledge system that evolves throughout the years depending upon cultural values. During a field-visit in Jorhat, in the Vaishnavite *Sattra* of *Borelengi* situated to the south of Jorhat town, it came to notice that an idol of Lord Krishna was kept under a tree in the courtyard, which was quite an unusual custom. Upon enquiry, one of the *gosains* residing in the *Sattra* informed that the idol refused

to be confined inside the *manikut* (sanctum-sanctorum) of the *Namghar* for some curious reason. Finally, the *Satradhikar* of the *Sattra* was let known through a dream of the Lord's wish to reside under a *Bokul* tree situated in the courtyard. Needless to say that the tree is revered as much as the deity and it is the divine sanction that accords this protection. Again, on the way to Saarigaon, in a village called Bahoma (about 6kms from Jorhat town), there is a small locality called Kathaniar Kuri. Its pride stems from the *Namghar* believed to have been established by one of the chief proselytes of the 16th century Vaishnava saint, Madhavdeva. At the entrance of the *Namghar* there is a huge *Bokul* tree, believed to have been planted by the proselyte Badula Ata. Although the tree bears no fruit (perhaps a symbolic reference to the proselyte's celibate status), it is said to be super naturally powerful. A local villager informed how people's wishes are fulfilled by lighting a *mati-saki* (earthen lamp) near its roots. It attracts pilgrims from near and far.

The basic philosophy behind the conservation of these groves/trees among the communities is maintaining community control over patches of land, termed as "social fencing" by ecologists. It is the collective community effort to keep it free from destruction, primarily by associating it with something sacred and dedicating it to a deity. Social scientists have opined that in the absence of written laws, religion played a vital role in protecting these vast patches of forest land in wilderness. The discourse elicited from these 'sacred' narratives attaches meaning to the cultural life of a people¹³. The aura and sacredness associated with these trees and forests can be very effectively utilised to promote tourism by engaging the locals. Besides providing employment and generating revenue, it will also contribute to the larger task of environmental protection. Thus, religion and traditional institutions like the *Sattra* can help achieve success in areas and among people where policy formulation and pedagogy sometimes fail to reach.

PROBLEMS WITH TOURISM DEVELOPMENT IN THE SATTRAS:

From the discussion above, we have seen that the *Sattras* are indeed endowed with an immense potential for generating employment and revenue by promoting tourism and especially eco-tourism in the areas where they are situated. However, this potentiality of the *Sattras* has so far remained under utilised by the state for varied reasons. As per data available in the website of the *Axom Sattra Mahasabha*, at present, there are around 1200 big and small *Sattras* in different parts of the state including Madhupur *Sattra*¹⁴. With proper planning and policy implementation, these traditional institutions can serve as hotspots of indigenous knowledge, biodiversity conservation and cultural awareness for both pilgrims and tourists alike. In order to realise these goals, the hindrances that have so far stood in the way of the *Sattras* transforming into institutions of revenue generation and tourist attraction need to be appropriately discussed so that timely solutions can be implemented with the right earnest.

Despite enjoying a rich cultural legacy, most of the *Sattras* across Assam are now beset by severe financial problems, which pose a major barrier in promoting tourism. The government has, from time to time, offered monetary support to deal with this crisis. However, as per sources of the *Axom Sattra Mahasabha*, a large portion of these grants are ultimately used for repair and construction works of the *Sattra* premises¹⁵. Undoubtedly, government grants and

monetary support will help these *Sattras* in recovering from their current dilapidated condition. But, the larger question is how to make these institutions financially self-sufficient so that they can sustainably adapt themselves to the rapidly changing socio-economic scenario of the state and the country as a whole. With the aim of transforming these institutions into potential tourist attractions, it is now time to organise their management and functioning based upon the modern principles of governance and management.

One of the biggest and most important sources of finance of these *Sattras* is public donation. With the recent emphasis of the Government of India on initiatives such as Digital India, cashless economy, etc. the *Sattras* also need to adapt themselves accordingly. In other words, to increase the flow of money from the common public in the state including the non-resident Assamese both within and outside India, the *Sattras* need to adopt the techno-savvy way. Donation of money would become much easier and hassle-free if the *Sattras* religiously maintain their own people-friendly websites, with details of their contact numbers, bank IFSC code number for online money transfer, etc. To name a few, *Sattras* such as Barpeta *Sattra*, Bardowa *Sattra*, etc. have beautifully created their own websites. It is important that they are regularly updated. Another way through which the *Sattras* can increase their cash flow and transform themselves into tourist destinations is by offering lifetime membership card to visitors on payment of a minimal registration fee. Under such a system, members can be contacted for contribution on festive occasions such as *Dol-Jatra*, birth and death anniversaries of the Vaishnava saints, etc.

As opined by Bhadrakrishna Goswami, for a well-knit integrated community, the website of the *Axom Sattra Mahasabha* should carefully maintain the records of all the *Sattras* in Assam along with their sub-links. This can be supplemented with attractive videos and photographs of the different *Sattras* and the annual festivals they celebrate, explaining the historical, religious and cultural significance of each¹⁶. It should also separately list out the details of contact numbers, names of the office bearers and bank account numbers of each *Sattra*. All these require adequate manpower and time; hence, a fine balance of the division of responsibilities between the *Sattras* and their disciples will definitely smoothen the exercise. As argued by Sri Sri Narayan Chandra Goswami of Samaguri *Sattra*, Majuli, "Intercommunication between the *Sattras* which is more important than government support is not taking place and this is the major stumbling block in realising their potential as major tourist hotspots¹⁷." Hence, frequent meetings and communications amongst the *Satradhikars* and disciples of different *Sattras* will go a long way in ushering a revolution of change in these hundreds of year old traditional institutions.

Incentives also need to be provided by the state such that the popularity of the *Sattras* spread far and wide and they are able to attract thousands and lakhs of visitors throughout the year. This will not only create income-generating avenues for the locals but also showcase the rich tradition and heritage of Assam to audience across the Globe. A few important measures in this direction need to be adopted by both the state and the management of the *Sattras* with the active participation of local bodies such as Panchayats and Gram Sabhas. Basic amenities such as food and lodging facilities are either absent in most of the *Sattras* or

even if present, they are in an utterly dismal state. Hence, it is very important to ensure that people who come to visit these *Sattras* either as tourists or pilgrims, are provided the minimum basic facilities of food and lodging free of cost. An entire brand of *Sattra* tourism specifically in Majuli can be developed centering around local Assamese hospitality, traditional music, and arts and crafts.

Through a well-designed approach of policy formulation and decentralised planning, every *Sattra* can develop its own information centre in its premises. A brochure and an annual souvenir detailing its various activities, festivals celebrated, etc. can be given to the visitors. Along with this, a copy of the *Gunamala* or *Naam-Ghosha* and Assamese traditional dishes like *til pitha*, *til laaru*, *tekeli pitha*, etc. can be distributed as dry *prasadam*. Local women's self-help groups under the National Rural Livelihood Mission (NRLM) may be engaged for this purpose. This will not only generate income but also enhance their self-esteem and decision-making ability. *Prasadam* restaurants can also be opened in and around the *Sattras*, which can distribute *maah-prasad* besides traditional delicacies like *doi-chira*, *hurum*, *aakhoi*, etc. *Maah-prasad* distributed on banana leaves in Assam is an environment-friendly food which is used to worship God. It is prepared from raw pulse, coconut and ginger. Various fruits like banana, papaya, guava, apple, oranges, etc. are also used as *prasadam*. In this way, the role of the *Sattras* will be redefined in promoting eco-tourism through participatory regional planning.

It is also possible to develop a healthy linkage between these *Sattras* and NGOs working in the field of preservation and restoration of traditional arts and crafts. Local bell-metal utensils, the traditional Assamese *gamocha* in various designs, and cane and bamboo artefacts of Assam which are eco-friendly products may be showcased through shops run by local youth under the patronage of the *Sattras*. Through such measures, outside visitors will be made aware of indigenous products of the state ranging from food to clothes and decorative items. This will also strengthen the claim of the Government of Assam for registration of products such as the *gamocha* under the Geographical Indications of Goods (Registration and Protection) Act, 1999 so as to preserve their purity and authenticity with respect to the place of origin. All these can play a pivotal role to give a new lease of life to the neglected *Sattras*. NGOs can also be roped in for establishing schools on those unused lands of the *Sattras* on the lines of *Visva-Bharati* in Shantiniketan. Here, subjects such as weaving, yoga, *maati-akhora* as taught in the *Sattras*, Sankari music and dance, besides the standard courses as prescribed by the Education Board can be imparted. This can be another way of generating revenue for the *Sattras* and also making the young generation aware of its rich cultural legacy.

CONCLUDING REMARKS:

The contemporary issues of social security, food security and economic sustainability are closely associated with traditional knowledge and skills. Traditional institutions and values teach us to live in harmony with nature and develop a culture which makes people proud of their heritage, thus ensuring sustainable development. The institution of the *Sattra* in Assam very aptly captures the essence of environmental sustainability and the relationship of man with nature. This is clearly manifested in its natural surroundings and the use of eco-friendly items

in its day-to-day rituals. As has been seen from various examples discussed above, it can play a role of utmost importance as a storehouse of traditional indigenous knowledge. This can go a long way in promoting eco-tourism and spreading awareness about the importance of conserving rare native plants from the vagaries of natural and anthropogenic pressures. The various obstacles related to tourism development in the *Sattras*, and how they can be overcome have also been discussed.

Of late, the burning issue of massive encroachment of *Sattra* lands by Muslim immigrants (of which, however, no official records exist) from Bangladesh has assumed a religious dimension and led to an outburst of anger and despair in the Assamese public discourse for quite sometime. Consequently, it has been seen that a number of *Sattradhikars* are aligining themselves close to various conservative Hindu organisations and their ideology. The solution to the problems facing the *Sattras* today lies in reforming their own weaknesses that have crept into their organisation over time. Taking recourse to a new form of conservatism such as Hindutva is definitely not the answer. It not only threatens to further limit their spheres of action but also questions their long-held legitimacy among the community of the followers of *Mahapurusiya Naam-Dharma* in Assam. Instead of engaging in mundane intellectual and theological discussions, it is now high time that the latent potential for tourism development in the *Sattras* is adequately harnessed for the overall development of the region and its economy.

REFERENCE:

1. B.K. Kar and M. Das, "Population Growth and Changing Demography in North-East India", in S. Deka (ed.), *Population, Development and Conflicts in North-East India*, EBH Publishers, Guwahati, 2012, pp. 54-74.
2. Udayan Misra, 1984, "The Assamese Movement and the Assamese National Question" in B.L. Abbi (ed.), *Northeast Region: Problems and Prospects of Development*, CPRID, Chandigarh.
3. Ibid, pp. 6-8.
4. Chandra Bhushan, *Assam: Its Heritage and Culture*, Gyan Books, Guwahati, 2005, pp. 24-27.
5. Abhijit Bhuyan, *Socio-Cultural and Political Role of the Namghar in Assam: A Comparative Study of the Namghars of Borbhogia Village and Bordowa Than/Sattra*, MaulanaAbulKalam Institute of Asian Studies, Kolkata, 2007, pp. 12-16.
6. The place of Assam has always remained shrouded in mystery and uncertainty in the pages of ancient history. During the medieval period, Assam was known as *Kamrup*. In the *Kalikapurana* and the *Yoginitantra*, the name of this state is exclusively cited as *Kamarupa*. The ancient kingdom of *Kamarupa* was slowly undergoing a process of disintegration since the beginning of the 13th century. Constant friction among various powers of the day led to severe political instability. The beliefs and cults of people belonging to different races and tribes were absorbed into the prevailing Hindu religion of the day, which formed the system of *Tantricism*. It was based on sensual pleasure and consisted of elaborate esoteric rituals, magical rites, human sacrifices, sorcery and spells. The economically backward classes and the socially downtrodden became their easy prey. At the other end were the followers of animistic tribal faiths, i.e. the indigenous tribal

- people. It was against this backdrop that the Vaishnavite movement emerged in Assam led by Srimanta Sankardeva.
7. For further details, see Birinchi Kumar Barua's, "Sankardeva: A Vaishnavite Saint of Assam" in Girikanta Goswami (ed.), *Sattra Jyoti*, Axom Sattra Mahasabha, 2010, p. 10.
 8. For further details, see Edward Gait's *A History of Assam*, New Book Stall, Guwahati, 2005, p. 40.
 9. Pramod Goswami, "Forestry and Wildlife Heritage of Assam" in Dilip K. Medhi ed., *Man and Environment in NE India*, Vol: III, Heritage Issue # 1, Guwahati, Eastern Book Publishers, 2008, pp. 83-99.
 10. Information collected through interaction with a *gosain* (priest) of the Dakshinpat *Sattra* in Majuli on 08.02.2017.
 11. As revealed from a personal communication with former President of the *Axom Sattra Mahasabha* Bhadrakrishna Goswami, October 2013, Guwahati.
 12. No. 7, op. cit., pp. 97-98.
 13. Alaka Sarmah "Role of Traditional Institutions in Governance: Experience from Karbi Anglong, Assam", in *Dialogue*, Vol. 13, No. 2, Oct-Dec 2011.
 14. www.axomsattramahasabha.org
 15. No. 14.
 16. No. 11.
 17. Interview with the *Sattradhikar* of Samaguri *Sattra*, Majuli.

AN EMPIRICAL STUDY ON THE STATUS OF CHILD HEALTH CARE IN NORTH EAST INDIA

Suraj Goswami

PG Student, Department of Statistics
Assam University, Silchar, Assam, India

Dibyojyoti Bhattacharjee

Professor, Department of Statistics
Assam University, Silchar, Assam, India

ABSTRACT:

Eight North-Eastern states of India present an intriguing trend in child mortality, care and health outcomes as revealed in the recently published final report of the National Family and Health Survey 4 (NFHS 4). Overall the northeast has an under five mortality rate (i.e. the number of children between the ages of 0-5 years dying per 1000 live births) lower than the Indian average. One of the factors that seems to be affecting the under-five mortality rate is the location of residence. It is higher in rural area than in urban area. This calls for rigorous analysis of child mortality figures in the north-eastern states and to identify regional variation in child health care. This work looks into a districts wise analysis of child health care of rural and overall area of north-eastern states based on fourth National Family Health Survey data.

INTRODUCTION:

The North-Eastern Region (NER) of India comprises eight states, Assam, Arunachal Pradesh, Manipur, Meghalaya, Mizoram, Nagaland, Sikkim and Tripura and has been described as the most diverse, complex and resourceful region of the country (Agarwal, 1997). The hilly terrains have naturally divided the population into different cultures, religions, languages and traditions. The geographical isolation also hinges on lack of infrastructural development, leaving a narrow corridor to connect the NER states with the rest of the country. (Agnihotri, 2004)

North-eastern states of India present an intriguing trend in child mortality, care and health outcomes as revealed in the recently published final report of the National Family and Health Survey 4 (NFHS 4). It was conducted across the country in 2015-2016 and gives details on a host of parameters ranging from mother and child health and mortality, access and use of healthcare services, etc. (Vivan, 2018)

Child nutrition has been one of the most important factor which helps in child development. It has been analysed that inadequate or inappropriate feeding practices, repeated episodes of acute infections, poor access to health care cause a substantial proportion of children to become moderate or severely malnourished by the age of 6-18 months. Therefore, it is clear that improving the child's nutrition can reduce infant mortality and child mortality. (Lalmeizo & Reddy, 2010)

Infant mortality rate is defined as the number of children between the ages of 0 – 12 months dying per 1000 live births. The under-five mortality rate is the number of children between the ages of 0 – 5 years dying per 1000 live births. Forms of Infant Mortality:

- i) **Perinatal Mortality:** late fetal death (22 weeks gestation to birth), or death of a newborn up to one week postpartum.
- ii) **Neonatal Mortality:** newborn death occurring within 28 days post partum.
- iii) **Post Neonatal Mortality:** death of children aged 29 days to 1 year.

As per the NFHS-4 data, overall the North-East India has an infant mortality rate and under-five mortality rate lower than the Indian average, with the exception of Assam. One factor that seems to be affecting the under-five mortality rate is the location of residence. It is higher in rural areas than the urban areas. Obviously this has to do with both poverty and availability of healthcare services. Another interesting feature is that the U-5 mortality rate decreases with an increase in the mother's years of schooling. As expected, the rate decreases with an increase in household wealth. Institutional deliveries indicate the access to neonatal as well as post natal health care. Except for Mizoram, Sikkim, and Tripura, share of institutional deliveries in other states was less than the Indian average. Assam also had a lower percentage of deliveries in a health facility, may explain the higher infant mortality as well as under-five mortality rate. While Arunachal Pradesh on the other hand had fewer institutional deliveries than Assam, and at the same time had a lower infant mortality rate as well as a lower under-five mortality rate. While Mizoram and Sikkim had a higher percentage of deliveries by a Skilled Healthcare Provider compared to the Indian average, no state had a percentage of children receiving postnatal care higher than the Indian average.

However, Manipur, Meghalaya, Mizoram and Sikkim had higher levels of antenatal care than the Indian average. The explanation for lower levels of postnatal care provided by healthcare providers may lie in the fact that traditional forms of neonatal care are still preferred over those provided by healthcare professionals. (Vivan, 2018).

The National Family Health Survey (NFHS) in India is large scale, multi-round survey conducted in a represented sample of household throughout India. The survey provide state and national information for India on fertility, infant and child mortality, the practice of family planning, maternal and child health, reproductive health, nutrition, anemia, utilization and quality of health and family planning services. The latest round of NFHS was complete in 2015-16 and the fact sheets provide national, state as well as district level data related to child and maternal health care for both rural and overall area. The current work attempts to utilize this data to classify the districts of north eastern region of India in terms of child health care facilities in the rural and overall areas. As per the report of National Family Health Survey

(NFHS-4) 2015-2016 following are the States wise condition of North-East region in infant mortality rate and vaccination of children.

ASSAM:

The infant mortality rate in Assam in NFHS-4 is estimated at 48 deaths before the age of one year per 1,000 live births, down from the NFHS-3 estimate of 66, the NFHS-2 estimate of 70, and the NFHS-1 estimate of 89.

Just less than half (47%) of children age 12-23 months received all basic vaccinations against six major childhood illnesses (tuberculosis, diphtheria, pertussis, tetanus, polio, and measles) at any time before the survey. However, most children are at least partially vaccinated; only 14 percent have not received any vaccinations at all. 82% of children have received a BCG vaccination. However, 56%-60% of children have received other basic vaccinations (56% have received at least the recommended three doses of polio vaccine, 67% have received the three recommended doses of DPT vaccine, and 71% have been vaccinated against measles). There is considerable dropout between the first and third doses of DPT vaccine (from 81% to 67%) and polio vaccine (from 83% to 56%).

BCG (from 62% to 82%), three doses of DPT (from 45% to 67%), and measles (from 37% to 71%) but coverage for three doses of polio vaccine declined from 59 percent to 56 percent. Overall, there was an increase in the coverage of all basic vaccinations (from 31% to 47%). In addition, three-quarters (75%) of children have received at least one dose of hepatitis B vaccine, but just over half (52%) of children have received all three recommended doses of hepatitis B vaccine.

Coverage with all basic vaccinations is higher in urban areas than in rural areas (71% vs. 44%) and is highest for children whose mothers have 12 or more years of schooling and for first births. There is not much difference in vaccination coverage by the sex of the child.

ARUNACHAL PRADESH:

The infant mortality rate in Arunachal Pradesh in NFHS-4 is estimated at 23 deaths before the age of one year per 1,000 live births, lower than the NFHS-3 estimate of 61, the NFHS-2 estimate of 63, and the NFHS-1 estimate of 40.

Less than two-fifths (38%) of children age 12-23 months received all basic vaccinations against six major childhood illnesses (tuberculosis, diphtheria, pertussis, tetanus, polio, and measles) at any time before the survey. However, 80 percent of children are at least partially vaccinated; 20 percent did not receive any vaccinations at all. Seventy-one percent of children have received a BCG vaccination. However, lower percentages have received other basic vaccinations (54% have received at least the recommended three doses of polio vaccine, 52% have received the three recommended doses of DPT vaccine, and 55% have been vaccinated against measles). There is considerable dropout between the first and third doses of DPT vaccine (from 68% to 52%) and polio vaccine (from 75% to 54%).

Between NFHS-3 and NFHS-4, there was an increase in vaccination coverage for three doses of DPT (from 39% to 52%) measles (38% to 55%), and BCG (from 58% to 71%), but

coverage for third dose of polio vaccine declined from 56% to 54%. Overall, there was an improvement in the coverage of all basic vaccinations (from 28% to 38%). In addition, 41% of children have received all three recommended doses of hepatitis B vaccine.

TRIPURA:

The infant mortality rate in Tripura in NFHS-4 is estimated at 27 deaths before the age of one year per 1,000 live births, down from the NFHS-3 estimate of 52, the NFHS-2 estimate of 44, and the NFHS-1 estimate of 76.

Only a little over half (55%) of children age 12-23 months received all basic vaccinations against six major childhood illnesses (tuberculosis, diphtheria, pertussis, tetanus, polio, and measles) at any time before the survey. However, most children are at least partially vaccinated; only 13 percent have not received any vaccinations at all. Eighty-two percent of children have received a BCG vaccination. However, only 7 in 10 have received other basic vaccinations (70% have received at least the recommended three doses of polio vaccine, 71% have received the three recommended doses of DPT vaccine, and 70% have been vaccinated against measles). There is considerable dropout between the first and third doses of DPT vaccine (from 80% to 71%) and polio vaccine (from 86% to 70%).

Between NFHS-3 and NFHS-4, there was a large increase in vaccination coverage for three doses of DPT (from 60% to 71%), and for measles (from 60% to 70%), and a smaller increase in three doses of polio vaccine (from 65% to 70%), while BCG vaccination coverage remained almost the same. Overall, there was a small increase in the coverage of all basic vaccinations (from 50% to 55%). In addition, almost two-thirds of children (65%) have received at least one dose of hepatitis B vaccine, but only just over half (54%) have received all three recommended doses of hepatitis B vaccine. Coverage with all basic vaccinations is higher in urban areas than in rural areas (64% versus 51%) and is higher for male children than for female children (61% versus 49%).

MANIPUR:

The infant mortality rate in Manipur in NFHS-4 is estimated at 22 deaths before the age of one year per 1,000 live births, down from the NFHS-3 estimate of 30, the NFHS-2 estimate of 37 and the NFHS-1 estimate of 42.

Less than two-thirds (66%) of children age 12-23 months received all basic vaccinations against six major childhood illnesses (tuberculosis, diphtheria, pertussis, tetanus, polio, and measles) at any time before the survey. However, most children are at least partially vaccinated; only 5 percent have not received any vaccinations at all. Ninety-one percent of children have received a BCG vaccination. However, only about three quarters have received other basic vaccinations (77% have received at least the recommended three doses of polio vaccine, 78% have received the three recommended doses of DPT vaccine, and 74% have been vaccinated against measles). There is considerable dropout between the first and third doses of DPT vaccine (from 90% to 78%) and polio vaccine (from 93% to 77%).

Between NFHS-3 and NFHS-4, there was a slight increase in vaccination coverage for

three doses of DPT (from 61% to 78%), large increase in coverage for measles (from 53% to 74%) and a increase for BCG (from 80% to 91%), but coverage for three doses of polio vaccine remained almost same 78% to 77%. In addition, more than four-fifth of children (85%) have received at least one dose of hepatitis B vaccine, just over two-third of children (70%) have received all three recommended doses of hepatitis B vaccine.

MIZORAM:

The infant mortality rate in Mizoram in NFHS-4 is estimated at 40 deaths before the age of one year per 1,000 live births, somewhat higher than the NFHS-3 estimate of 34 and the NFHS-2 estimate of 37.

More than half (51%) of children age 12-23 months received all basic vaccinations against six major childhood illnesses (tuberculosis, diphtheria, pertussis, tetanus, polio, and measles) at any time before the survey. However, most children are at least partially vaccinated; 22% have not received any vaccinations at all. 75% of children have received a BCG vaccination. However, only about three fifths have received other basic vaccinations (61% have been vaccinated against measles, and 62% each have received at least the recommended three doses of polio and DPT vaccines). There is considerable dropout between the first and third doses of DPT vaccine (from 76% to 62%) and polio vaccine (from 77% to 62%).

Between NFHS-3 and NFHS-4, there was a decline in vaccination coverage for three doses of DPT (from 67% to 62%), measles (70% to 61%), BCG (from 86% to 75%), and three doses of polio vaccine (64% to 62%). Overall, there was a small increase in the coverage of all basic vaccinations (from 47% to 51%). In addition, 72% of children have received at least one dose of hepatitis B vaccine, but only 57% have received all three recommended doses of hepatitis B vaccine.

NAGALAND:

The infant mortality rate in Nagaland in NFHS-4 is estimated at 30 deaths before the age of one year per 1,000 live births, down from 38 in NFHS-3. The under-5 mortality has also come down substantially to 37 from 65 per 1,000 live births since NFHS-3.

Only 36% of children age 12-23 months received all basic vaccinations against six major childhood illnesses (tuberculosis, diphtheria, pertussis, tetanus, polio, and measles) at any time before the survey. However, most children are at least partially vaccinated; 19% have not received any vaccinations at all. Sixty-eight percent of children have received a BCG vaccination. However, only half have received other basic vaccinations (53% have received at least the recommended three doses of polio vaccine, 52% have received the three recommended doses of DPT vaccine, and 50% have been vaccinated against measles). There is considerable dropout between the first and third doses of DPT vaccine (from 68% to 52%) and polio vaccine (from 77% to 53%).

Between NFHS-3 and NFHS-4, there was substantial increase in vaccination coverage for three doses of DPT (from 29% to 52%), measles coverage (from 27% to 50%), and BCG coverage (from 46% to 68%), but coverage for three doses of polio vaccine increased much

less, from 46% to 53%. Overall, there has been an increase in the coverage of all basic vaccinations (from 21% to 36%). In addition, over three-fifths of children (62%) have received at least the first dose of hepatitis B vaccine, but close to half of children (46%) have received all three recommended doses of hepatitis B vaccine.

MEGHALAYA:

The infant mortality rate in Meghalaya in NFHS-4 is estimated at 30 deaths before the age of one year per 1,000 live births, down from the NFHS-3 estimate of 45, the NFHS-2 estimate of 89, and the NFHS-1 estimate of 64.

Less than two-thirds (62%) of children age 12-23 months received all basic vaccinations against six major childhood illnesses (tuberculosis, diphtheria, pertussis, tetanus, polio, and measles) at any time before the survey. However, most children are at least partially vaccinated; 12% have not received any vaccinations at all. Eighty-six percent of children have received a BCG vaccination. However, slightly less than three-quarters have received other basic vaccinations (71% have received at least the recommended three doses of polio vaccine, 72% have been vaccinated against measles and 74% have received the three recommended doses of DPT vaccine). There is considerable dropout between the first and third doses of DPT vaccine (from 83% to 74%) and polio vaccine (from 86% to 71%).

Between NFHS-3 and NFHS-4, there was a large increase in vaccination coverage for three doses of DPT (from 47% to 74%), measles (from 44% to 72%), BCG (from 66% to 86%) and three doses of polio vaccine (from 57% to 71%). Overall, coverage of all basic vaccinations is almost twice as high as it was in NFHS-3 (increasing from 33% to 62%). In addition, more than three-quarters (77%) of children have received at least one dose of hepatitis B vaccine, but slightly less than two-thirds of children (63%) have received all three recommended doses of hepatitis B vaccine.

SIKKIM:

The infant mortality rate in Sikkim in NFHS-4 is estimated at 30 deaths before the age of one year per 1,000 live births, down from the NFHS-3 estimate of 34 and the NFHS-2 estimate of 44.

More than four-fifths (83%) of children age 12-23 months received all basic vaccinations against six major childhood illnesses (tuberculosis, diphtheria, pertussis, tetanus, polio, and measles) at any time before the survey. Almost all children are at least partially vaccinated; only 1% has not received any vaccinations at all.

Ninety-nine percent of children have received a BCG vaccination. However, only about nine in 10 children have received other basic vaccinations (88% have received at least the recommended three doses of polio vaccine, 93% have received the three recommended doses of DPT vaccine, and 93% have been vaccinated against measles). There is considerable dropout between the first and third doses of polio vaccine (from 99% to 88%) and DPT vaccine (from 99% to 93%).

Between NFHS-3 and NFHS-4, there was a large increase in vaccination coverage for

three doses of DPT (from 84% to 93%) and measles (83% to 93%), and a slight increase for BCG (from 96% to 99%) and three doses of polio (from 86% to 88%). Overall, there was a substantial increase in the coverage of all basic vaccinations (from 70% to 83%). In addition, 95% of children have received at least one dose of hepatitis B vaccine, but just over four-fifths of children (84%) have received all three recommended doses of hepatitis B vaccine.

REVIEW OF RELATED LITARATURE:

Globally, 9.2 million infants and children die each year before their fifth birthday; more than 60% of these deaths are seen as being avoidable with low-cost measures such as continuous breast-feeding, vaccinations and improved nutrition. Throughout the world, Infant Mortality Rate (IMR) fluctuates drastically, and according to Biotechnology and Health Sciences, education and life expectancy in the country is the leading indicator of IMR. Neonatal mortality constituted nearly 80% of the Infant deaths during 2001.

The Neonatal Mortality Rate (NNMR) has close connection with maternal factors as well as the quality of health care services while Post-Neonatal Mortality Rate is linked more closely with environmental factors that include diseases like diarrhoea and acute respiratory infections which are some of the major cause of child mortality in India. Over the last 41 years the IMR has declined to 85 points from 129 in 1971 to 42 in 2012. (James, 2014).

The major problem is assessing the Child Health status of India is prevailing due to lack of credible, timely and regular data on various health indicators. To understand the pace and magnitude of decline in Infant Mortality Rate (IMR), the trends of Infant Mortality Rate in different decades has been studied by James, 2014. He found that the post-neonatal deaths have declined faster resulting in faster decline in Infant Mortality Rate (IMR) whereas the neonatal deaths recorded only a modest reduction (Ravindra & Brinker, 1997) and studied the relationship between the level of socioeconomic development and infant and child mortality. The study applies correlation and multiple regression analysis to the NFHS data 1992-93. They suggested that higher levels of population literacy, education of women, urbanization, and child immunizations, and lower level of underweight children under four years lead to infant and child mortality decline. Economic inequalities in Infant Mortality have narrowed in the southern region, whereas they have widened in the western region and risen in the northern region. However, mixed trends in concentration indices were found in the different regions of India in the case of child mortality (Das, 1993). Many studies have been undertaken time to time with different approaches on Child Health.

Due to the recent NFHS, with the availability of current data on child health care status of India, the present condition of child health care in the different districts needs to be quantified. Unequal distribution of resources is always an issue in NER of India and is the driving force of the study. Guided by the available literature and considering the various health indicators affecting the child health care status as provided in NFHS-4, an attempt is made to combine the district-wise disparity parameters related to child health care into a single index. The value of the index shall act as a reflection of the existing child health care situation in the districts of NER of India.

less, from 46% to 53%. Overall, there has been an increase in the coverage of all basic vaccinations (from 21% to 36%). In addition, over three-fifths of children (62%) have received at least the first dose of hepatitis B vaccine, but close to half of children (46%) have received all three recommended doses of hepatitis B vaccine.

MEGHALAYA:

The infant mortality rate in Meghalaya in NFHS-4 is estimated at 30 deaths before the age of one year per 1,000 live births, down from the NFHS-3 estimate of 45, the NFHS-2 estimate of 89, and the NFHS-1 estimate of 64.

Less than two-thirds (62%) of children age 12-23 months received all basic vaccinations against six major childhood illnesses (tuberculosis, diphtheria, pertussis, tetanus, polio, and measles) at any time before the survey. However, most children are at least partially vaccinated; 12% have not received any vaccinations at all. Eighty-six percent of children have received a BCG vaccination. However, slightly less than three-quarters have received other basic vaccinations (71% have received at least the recommended three doses of polio vaccine, 72% have been vaccinated against measles and 74% have received the three recommended doses of DPT vaccine). There is considerable dropout between the first and third doses of DPT vaccine (from 83% to 74%) and polio vaccine (from 86% to 71%).

Between NFHS-3 and NFHS-4, there was a large increase in vaccination coverage for three doses of DPT (from 47% to 74%), measles (from 44% to 72%), BCG (from 66% to 86%) and three doses of polio vaccine (from 57% to 71%). Overall, coverage of all basic vaccinations is almost twice as high as it was in NFHS-3 (increasing from 33% to 62%). In addition, more than three-quarters (77%) of children have received at least one dose of hepatitis B vaccine, but slightly less than two-thirds of children (63%) have received all three recommended doses of hepatitis B vaccine.

SIKKIM:

The infant mortality rate in Sikkim in NFHS-4 is estimated at 30 deaths before the age of one year per 1,000 live births, down from the NFHS-3 estimate of 34 and the NFHS-2 estimate of 44.

More than four-fifths (83%) of children age 12-23 months received all basic vaccinations against six major childhood illnesses (tuberculosis, diphtheria, pertussis, tetanus, polio, and measles) at any time before the survey. Almost all children are at least partially vaccinated; only 1% has not received any vaccinations at all.

Ninety-nine percent of children have received a BCG vaccination. However, only about nine in 10 children have received other basic vaccinations (88% have received at least the recommended three doses of polio vaccine, 93% have received the three recommended doses of DPT vaccine, and 93% have been vaccinated against measles). There is considerable dropout between the first and third doses of polio vaccine (from 99% to 88%) and DPT vaccine (from 99% to 93%).

Between NFHS-3 and NFHS-4, there was a large increase in vaccination coverage for

three doses of DPT (from 84% to 93%) and measles (83% to 93%), and a slight increase for BCG (from 96% to 99%) and three doses of polio (from 86% to 88%). Overall, there was a substantial increase in the coverage of all basic vaccinations (from 70% to 83%). In addition, 95% of children have received at least one dose of hepatitis B vaccine, but just over four-fifths of children (84%) have received all three recommended doses of hepatitis B vaccine.

REVIEW OF RELATED LITARATURE:

Globally, 9.2 million infants and children die each year before their fifth birthday; more than 60% of these deaths are seen as being avoidable with low-cost measures such as continuous breast-feeding, vaccinations and improved nutrition. Throughout the world, Infant Mortality Rate (IMR) fluctuates drastically, and according to Biotechnology and Health Sciences, education and life expectancy in the country is the leading indicator of IMR. Neonatal mortality constituted nearly 80% of the Infant deaths during 2001.

The Neonatal Mortality Rate (NNMR) has close connection with maternal factors as well as the quality of health care services while Post-Neonatal Mortality Rate is linked more closely with environmental factors that include diseases like diarrhoea and acute respiratory infections which are some of the major cause of child mortality in India. Over the last 41 years the IMR has declined to 85 points from 129 in 1971 to 42 in 2012. (James, 2014).

The major problem is assessing the Child Health status of India is prevailing due to lack of credible, timely and regular data on various health indicators. To understand the pace and magnitude of decline in Infant Mortality Rate (IMR), the trends of Infant Mortality Rate in different decades has been studied by James, 2014. He found that the post-neonatal deaths have declined faster resulting in faster decline in Infant Mortality Rate (IMR) whereas the neonatal deaths recorded only a modest reduction (Ravindra & Brinker, 1997) and studied the relationship between the level of socioeconomic development and infant and child mortality. The study applies correlation and multiple regression analysis to the NFHS data 1992-93. They suggested that higher levels of population literacy, education of women, urbanization, and child immunizations, and lower level of underweight children under four years lead to infant and child mortality decline. Economic inequalities in Infant Mortality have narrowed in the southern region, whereas they have widened in the western region and risen in the northern region. However, mixed trends in concentration indices were found in the different regions of India in the case of child mortality (Das, 1993). Many studies have been undertaken time to time with different approaches on Child Health.

Due to the recent NFHS, with the availability of current data on child health care status of India, the present condition of child health care in the different districts needs to be quantified. Unequal distribution of resources is always an issue in NER of India and is the driving force of the study. Guided by the available literature and considering the various health indicators affecting the child health care status as provided in NFHS-4, an attempt is made to combine the district-wise disparity parameters related to child health care into a single index. The value of the index shall act as a reflection of the existing child health care situation in the districts of NER of India.

OBJECTIVE OF THE STUDY:

- To develop a weighted index of child health care to be called as the Composite index for all the parameters taken together and to categorize the districts as per their level of performance in child health care facilities.
- To rank the districts of North-East India based on child health care facilities available for rural population and overall population.

DATA AND METHODOLOGY:

Data Source:

The data used in this study are collected from the National Family Health Survey (NFHS-4) fact sheets [http://rchiips.org/NFHS/factsheet_NFHS-4.shtml] that was conducted under the stewardship of the Ministry of Health and Family Welfare, co-ordinated by the International Institute for Population Sciences, Mumbai and implemented by a group of survey organizations and population research centers following a rigorous selection procedure.

Child Health Care Parameters (Indicators):

From the data source mentioned above the following parameters are identified that can be used as a measure of child health care.

- C₁ - Children who received a health check after the birth from a doctor/nurse/other health personnel within 2 days of birth
- C₂ - Children age 12-23 months fully immunized (BCG , measles and 3 doses each of polio & DPT)
- C₃ - Children age 12-23 months who have received BCG
- C₄ - Children age 12-23 months who have received 3 doses of polio vaccine
- C₅ - Children age 12-23 months who have received 3 doses of DPT vaccine
- C₆ - Children age 12-23 months who have received measles vaccines
- C₇ - Children age 12-23 months who have received 3 doses of Hepatitis B vaccine
- C₈ - Children age 9-59 months who have received a vitamin A dose in last 6 months

All the parameters from C₁ to C₈ are having positive dimension i.e. higher the value better is the performance.

Composite Index (CI):

Notation of the composite index construction depends on clarification of variables and subscript below. Let x_{ijk} represent the percentage of immunization of the k^{th} parameters in the j^{th} district of the i^{th} state, where

- $i = 1, 2, \dots, 8$ for those aforementioned eight states in NER,
- $j = 1, 2, \dots, n_i$ for the number of districts in the i^{th} state is represented by n_i ,
- and $k = 1, 2, 3, 4, 5, 6, 7, 8$ for the number of parameters under consideration.

Let $\max(x_{..k})$ denote the percentage of immunization in a given district which has the best coverage of the k^{th} parameters ($k = 1, 2, 3, 4, 5, 6, 7, 8$) in entire NER and $\min(x_{..k})$ represents the percentage of immunization in the district that has the worst coverage of the k^{th} parameter ($k = 1, 2, 3, 4, 5, 6, 7, 8$) in the entire NER. The composite indicator (CIN) for the k^{th} parameter in the j^{th} district of the i^{th} state is given by,

$$CIN_{ijk} = \frac{x_{ijk} - \min(x_{..k})}{\max(x_{..k}) - \min(x_{..k})} \dots\dots (1)$$

The value of CIN_{ijk} varies from zero to one, where the value of 1 implies that the given district is having better condition in comparison to the district in the NER in the k^{th} parameters. The reverse is true for a value of 0. To construct composite index for the district comparison, one must recognize the fact that all the indicators are not equally important. Thus, a simple average of the eight indicators values should be avoided in the index construction. On the contrary, Morris and Liser (1977) advocated the use of weighted average when developing the Physical Quality of Life Index (PQLI). Another important contributor to this issue is Iyengar and Sudarshan (1982) who assumed that the weights vary inversely as the variation in the respective variable. Das and Nath (2007) also developed a weighted composite index for human deprivation in different river islands of Assam. Based on the current literature, the weighted index (composite index) for the j^{th} district of the i^{th} state is given by,

$$CI_{ij} = W_1 \times CIN_{ij1} + W_2 \times CIN_{ij2} + W_3 \times CIN_{ij3} + W_4 \times CIN_{ij4} + W_5 \times CIN_{ij5} + W_6 \times CIN_{ij6} + W_7 \times CIN_{ij7} + W_8 \times CIN_{ij8} \dots\dots(2)$$

where, W_k represents the weights associated with the k^{th} parameters ($k = 1, 2, 3, 4, 5, 6, 7, 8$). Iyengar and Sudarshan (1982) further linked the weight to variance of deprivation across the regions.

More precisely, they postulated that

$$W_k = \frac{C}{\sqrt{\text{Var}(CIN_{ijk})}} \dots\dots (3)$$

where, C is a normalizing constant that follow

$$C = \left[\sum_{k=1}^8 \frac{1}{\sqrt{\text{Var}(CIN_{ijk})}} \right]^{-1} \dots\dots (4)$$

The choice of the weights in this manner would ensure that large variation in any one of the indicators would not unduly dominate the contribution of the rest of the indicators and distort the inter-district comparisons (Iyengar & Sudarshan, 1982).

The value of the composite index can indicate the child health status in a district for all the eight parameters taken together. Again, based on Iyengar and Sudarshan's (1982) calibration, a score near 0 is an indication of very good level of child health care status. The value of CI's a value of 1 is an indication of very poor level of child health care status. The values of Composite Index for Rural and Overall population are computed. Here, CI_{ij} represent the values of composite index on child health care for the i^{th} states and j^{th} districts.

Such an index supports comparison amongst the districts of a state, and the result can

be aggregated across the districts for inter-state comparison. The variance of the weighted index scores of the different districts can be used as a measure of dispersion in basic child health facilities within that state. (Bhattacharjee & Wang, 2011)

Distribution of the Weighted Index:

The Kolmogorov-Smirnov (K-S) test statistic is used to test the distribution of the index of difference as the values are continuous in nature. This test is used to check if the random sample under consideration is drawn from a population with specified cumulative distribution function $F(x)$. Accordingly, the null hypothesis of the test is $H_0: S_n(x) = F(x)$, against the alternative hypothesis is $H_1: S_n(x) \neq F(x)$

Kolmogorov-Smirnov state that under null hypothesis the empirical distribution function $S_n(x)$ approaches the true distribution function defined by the null hypothesis i.e. $F(x)$. The test defined the test statistic as

$$D_n = \max |S_n(x) - F(x)| \dots(5)$$

So, under the null hypothesis one would expect that the value of D_n to be small, while a large value of D_n may be taken as an indicator that the actual distribution is not $F(x)$ i.e. a violation of the null hypothesis. Thus, one would reject H_0 , if and only if, the observed value of D_n for a given size of sample exceeds the critical value of D_n , for a given level of significance, α say. Let such a critical value be termed as $D_{\alpha n}$. If the number of observations are 35 or more, as the case here, the critical value at 5 per cent level of significance ($D_{0.05, \alpha n}$) is $(1.36/\sqrt{n})$. Thus, D_n value greater than $1.36/\sqrt{n}$ will indicate that the fitted distribution is significantly different from the theoretical distribution. The interval $[F(x) - D F(x) + D \alpha, n]$ provides the 100(1 - α)% confidence band for $F(x)$ which can be used as a visual tool for goodness of fit. After deciding about the probability distribution of CI , it is important to find three real numbers c, d and $e \in [0, 1]$. The values of a, b and c are used to decide about four linear intervals namely $[0, a], [a, b], [b, c]$ and $[c, 1]$ such that each interval has the same probability weight of 25 per cent i.e.,

$$P[0 \leq CI_{ij} \leq c] = 0.25 \dots(6)$$

$$P[0 \leq CI_{ij} \leq d] = 0.50 \dots(7)$$

$$P[0 \leq CI_{ij} \leq e] = 0.75 \dots(8)$$

Care: These intervals can be used as an indicator of the level of performance of Child Health

- 1) Very Poor, if $0 < CI_{ij} < c$
- 2) Poor, if $c < CI_{ij} < d$
- 3) Good, if $d < CI_{ij} < e$
- 4) Very Good, if $e < CI_{ij} < 1$

CALCULATIONS AND RESULTS:

Based on the data available from NFHS-4 the weights corresponding to the different parameters are computed using the equations (1) to (3) above. This is done separately based on rural and overall data.

Table 1: Weights for the different parameters participating in the composite index

	C ₁	C ₂	C ₃	C ₄	C ₅	C ₆	C ₇	C ₈
RURAL DATA	0.1047	0.1328	0.1268	0.1287	0.1287	0.1345	0.1306	0.1133
OVERALL DATA	0.1045	0.1298	0.1290	0.1246	0.1291	0.1372	0.1282	0.1176

On obtaining the weights, the composite indicator values of child health care of all the districts for rural and overall data are computed. The values of the composite index of the districts for rural and overall are presented in Appendix I and II. As indicated earlier lower the value of the composite index better is the performance of the districts.

After obtaining the weights, the composite index (CI) for all the districts are obtained using (2). The composite index for the most and least caring districts for each of the states can be seen in Table 2 & 3. The table also shows the averages and standard deviations of the CI of the districts for each of the states.

Table 2: The most and least care of child health by the districts of the different states of North-East India along with their average CI values (From rural population)

States	No. of Districts	District		Mean CI's of states	Standard Deviation		
		Least caring	Most caring				
Assam	26	Dhubri	0.219	Sivasagar	0.8296	0.5815	0.1449
Arunachal Pradesh	16	East Kameng	0.0071	Changlang	0.7021	0.3958	0.1691
Tripura	4	Dhalai	0.4537	West Tripura	0.6232	0.5362	0.0847
Manipur	9	Ukhrul	0.3630	Imphal West	0.7620	0.5814	0.1336
Mizoram	7	Lawngtlai	0.3137	Saiha	0.6561	0.4928	0.1227
Nagaland	11	Mon	0.1501	Mokokchung	0.5891	0.3543	0.1547
Meghalaya	7	East Garo Hills	0.3484	South Garo Hills	0.8074	0.6119	0.1464
Sikkim	4	West District	0.8283	South District	0.9434	0.8794	0.0557

Source: Computed by the authors based on CI values

It should be noted in Table 2 that among the states of NER, the maximum average performance in the child health facilities is located in Sikkim (0.8794) followed by Meghalaya (0.6119). The average value of the composite index in the districts of Nagaland is the least, which implies that the state has minimum performance in the child health facilities. The composite index varies most in Arunachal Pradesh as evident from its standard deviation,

followed by Nagaland. This implies more irregularity in the distribution of child health facilities in these two states. In the entire NER, East Kameng district of Arunachal Pradesh takes least care of child health and the most caring district is South district of Sikkim.

Table 3: The most and least care of child health by the districts of the different states of North-East India along with their average CI values (From overall population)

States	No. of Districts	District		Mean CI's of States	Standard Deviation		
		Least Caring	Most Caring				
Assam	27	Dhubri	Sivasagar	0.2063	0.8236	0.5822	0.1537
Arunachal Pradesh	16	East Kameng	Changlang	0.0215	0.7183	0.3866	0.1756
Tripura	4	Dhalai	West Tripura	0.4598	0.6326	0.5425	0.0750
Manipur	9	Ukhrul	Imphal West	0.3753	0.7854	0.5791	0.1393
Mizoram	8	Lawngtlai	Serchhip	0.3915	0.6266	0.5194	0.0790
Nagaland	11	Mon	Kohima	0.1180	0.5878	0.3422	0.1545
Meghalaya	7	East Garo Hills	South Garo Hills	0.3717	0.8093	0.6192	0.1382
Sikkim	4	East District	South District	0.8134	0.9380	0.8765	0.0627

It should be noted in Table 3 that among the states of NER, the maximum average performance in the child health facilities is located in Sikkim (0.8765) followed by Meghalaya (0.6192). The average value of the composite index in the districts of Nagaland is the least, which implies that the state has minimum performance in the child health facilities. The composite index varies most in Arunachal Pradesh as evident from its standard deviation, followed by Nagaland. This implies more irregularity in the distribution of child health facilities in these two states. In the entire NER, East Kameng district of Arunachal Pradesh takes least care of child health and the most caring district is South district of Sikkim. Since the values of CI lie between 0 and 1, one may select the two parameter beta distribution of type I as a probable distribution.

The beta distribution is generally a skewed distribution and its probability density function is given by,

$$f(x) = \frac{1}{\beta(a,b)} x^{a-1} (1-x)^{b-1}, \quad 0 < x < 1 \text{ and } a, b > 0$$

$$= 0, \text{ otherwise}$$

Here, $\beta(a,b) = \int_0^1 x^{a-1} (1-x)^{b-1} dx \dots(9)$

Based on the values of CI for all districts, the estimated values of a and b are obtained using the method of maximum likelihood (Johnson and Kotz, 1970). The estimated values are given by,

$$\hat{a} = m_1 \left[\frac{m_1(1-m_1)}{m_2} - 1 \right]$$

$$\hat{b} = (1-m_1) \left[\frac{m_1(1-m_1)}{m_2} - 1 \right]$$

Here, m_1 = mean of all CIs and m_2 = variance of all CIs

Based on the empirical data for this investigation,

(i) From the overall data we find the values of m_1 and m_2 as $m_1=0.53626$ & $m_2=0.03534$

and the estimated model parameter are $\hat{a} = 3.2373$ and $\hat{b} = 2.7995$

Also, The K-S test is used to test if the CI values fit to the beta distribution specified by the parameters already estimated from the overall data. The value of the statistic,

$D_n = \max |S_n(x) - F(x)| = 0.0909$ and the critical value of D_n at 5% level of significance is 0.1078. Hence D_n is insignificant at 5 per cent level.

Based on (6), (7) & (8) we compute the value of a, b & c respectively

$$P[0 = CI_{ij} = c] = 0.25$$

$$\Rightarrow \int_0^c \frac{1}{\beta(3.2373, 2.7995)} x^{2.2373} (1-x)^{1.7995} dx = 0.25$$

$$\Rightarrow c = 0.398657$$

$$\Rightarrow \int_0^d \frac{1}{\beta(3.2373, 2.7995)} x^{2.2373} (1-x)^{1.7995} dx = 0.50$$

$$\Rightarrow d = 0.540511$$

$$P[0 = CI_{ij} = d] = 0.50$$

$$\Rightarrow \int_0^e \frac{1}{\beta(3.2373, 2.7995)} x^{2.2373} (1-x)^{1.7995} dx = 0.75$$

$$\Rightarrow e = 0.677951$$

The values of c, d and e thus obtained are needed to classify the CI's values into the following four level of performance in Child Health Care.

Table 4: Levels of performance of child health care classified by the values of CI from the overall data

Level of performance	Values of CI's
Very Poor	Less than 0.398657
Poor	Between 0.398657 and 0.540511
Good	Between 0.540511 and 0.677951
Very Good	0.677951 or Higher

Through a comparison between the values of CI's and the classification criteria in Table 4, the different districts of the region can be categorized into the different levels of child health care.

Table 5: Districts of North Eastern Region of India classified by different level of performance in Child Health Care from overall data

State	Level of Performance	District
Arunachal Pradesh	Very Poor	Tawang, West Kameng, East Kameng, Upper Subansiri, West Siang, Lower Subansiri, KurungKumey, Lower Dibang Valley
	Poor	Papumpare, East Siang, Upper Siang, Tirap, Dibang Valley, Anjaw
	Good	Lohit
	Very Good	Changlang
Assam	Very Poor	Berpeta, Dhubri, KarbiAnglong
	Poor	Bongaigaon, Chirang, Darrang, Hailakandi, Kamrup, Kokrajhar, Nagaon
	Good	Cachar, Dhemaji, DimaHaso, Goalpara, Karimganj, Lakhimpur, Morigaon, Nalbari, Sontipur, Udalguri
	Very Good	Baska, Dibrugarh, Golaghat, Jorhat, Kamrup Metropolitan, Sivasagar, Tinsukia
Manipur	Very Poor	Ukhrul
	Poor	Chandel, Churachandpur, Tamenglong
	Good	Senapati, Thoubal
Meghalaya	Very Good	Bishnupur, Imphal East, Imphal West
	Very Poor	East Garo Hills
	Poor	
Mizoram	Good	Jainta Hills, Ribhoi, West Garo Hills
	Very Good	East Khasi Hills, South Garo Hills, West Khasi Hills
	Very Poor	Lawngtlai
	Poor	Mamit, Kolasib, Champhai, Lunglei
	Good	Aizwal, Serchhip, Saiha
	Very Good	

Nagaland	Very Poor	Mon, Zunheboto, Wokha, Dimapur, Longleng, Kiphire, Phek
	Poor	Tuensang, Peren
	Good	Mokokchung, Kohima
	Very Good	
Sikkim	Very Poor	
	Poor	
	Good	
	Very Good	North District, West District, South District, East District
Tripura	Very Poor	
	Poor	Dhalai, North Tripura
	Good	South Tripura, West Tripura
	Very Good	

Source: Computed by the authors based on CI values

Hence, the results show wide variation in district level child health system performance. From the table 5, it is clearly seen that out of 86 districts in NER, 18 districts have very good condition in respect to child health care. So, these districts are taking excellent care of child and also providing good services. And 21 districts have very poor condition with respect to child health care. Thus, these districts lack to provide significant services. The probable reason for low or poor basic facilities might be either due to topographical hurdles in the district or due to unequal distribution of facilities within the state. The reasons of unequal distribution of basic facilities arise due to lack of poor implementation of government policies.

ii) From the rural data, we find the values of m_1 and m_2 as $m_1 = 0.5363$ & $m_2 = 0.0343$, and the estimated model parameter are $\hat{a} = 3.3507$ and $\hat{b} = 2.8970$. Also, The K-S test is used to test if the CI values fit to the beta distribution specified by the parameters already estimated from the rural data. The value of the statistic,

$$D_n = \max |S_n(x) - F(x)| = 0.07503$$

And the critical value of D_n at 5% level of significance is 0.14838. Hence D_n is insignificant at 5 per cent level. Based on (6), (7) and (8) we compute the value of c, d and e respectively,

$$P[0 = CI_{ij} = c] = 0.25.$$

$$\Rightarrow \int_0^c \frac{1}{\beta(3.3507, 2.8970)} x^{2.3507} (1-x)^{1.8970} dx = 0.25$$

$$\Rightarrow c = 0.401105$$

$$\Rightarrow \int_0^d \frac{1}{\beta(3.3507, 2.8970)} x^{2.3507} (1-x)^{1.8970} dx = 0.50$$

$\Rightarrow d = 0.540414$

$P[0 = CI_{ij} = d] = 0.50$

$\Rightarrow \int_0^e \frac{1}{\beta(3.3507, 2.8970)} x^{2.3507} (1-x)^{1.8970} dx = 0.75$

$\Rightarrow e = 0.67548$

$P[0 = CI_{ij} = e] = 0.75$

The values of c, d and e thus obtained are needed to classify the CI's values into the following four levels of Child Health Care.

Table: 6 Levels of performance of child health care classified by the CI's from rural population

Levels of Performance	Values of CI's
Very poor	Less than 0.401105
Poor	Between 0.401105 and 0.540414
Good	Between 0.540414 and 0.67548
Very good	0.67548 or higher

Through a comparison between the values of CI's and the classification criteria in Table 6, the different districts of the region can be categorized into the different levels of child health care.

Table 7: Districts of North Eastern Region of India classified by different level of performance in Child Health Care from rural data

State	Levels of Performance	District
Arunachal Pradesh	Very poor	Tawang, West Kameng, East Kameng, Papumapre, Upper Subansiri, Lower Subansiri, KurungKumey
	Poor	West Siang, Upper Siang, Tirap, Dibang Valley, Lower Dibang Valley, Anjaw
	Good	East Siang, Lohit
Assam	Very good	Changlang
	Very poor	Berpeta, Dhubri, KarbiAnglong
	Poor	Bongaigaon, Chirang, Darrang, Hailakandi, Kamrup, Kokrajhar, Nagaon
	Good	Cachar, DimaHaso, Goalapara, Karimganj, Lakhimpur, Morigaon, Nalbari, Sonitpur
	Very good	Baska, Dhemaji, Dibrugarh, Golaghat, Jorhat, Sivasagar, Tinsukia, Udalguri

Manipur	Very poor	Ukhrul
	Poor	Chandel, Churachandpur, Tamenglong
	Good	Senapati, Thoubal
	Very good	Bishupur, Imphal East, Imphal West
Meghalay a	Very poor	East Garo Hills
	Poor	West Garo Hills
	Good	Jaintia Hills, Ribhoi, West Khasi Hills
	Very good	East Khasi Hills, South Garo Hills
Mizoram	Very poor	Lawngtlai
	Poor	Mamit, Kolasib, Champhai, Lunglei
	Good	Serchhip, Saiha
	Very good	
Nagaland	Very poor	Mon, Zunheboto, Wokha, Dimapur, Lonleng, Kiphire, Phek
	Poor	Tuensang, Peren
	Good	Mokokchung, Kohima
	Very good	
Sikkim	Very poor	
	Poor	
	Good	
	Very good	North District, West District, South District, East District
Tripura	Very poor	
	Poor	Dhalai, North Tripura
	Good	South Tripura, west Tripura
	Very good	

Source: Computed by the authors based on CI values

Hence, the results show wide variation in district level child health system performance. From the table 7, it is clearly seen that out of 84 districts in NER, 18 districts have very good condition in respect to child health care. So, these districts are taking excellent care of child and also providing good services. And 20 districts have very poor condition with respect to child health care. Thus, these districts lack to provide significant services. The probable reason for low or poor basic facilities might be either due to topographical hurdles in the district or due to unequal distribution of facilities within the state. The reasons of unequal distribution of basic facilities arise due to lack of poor implementation of government policies in North-East India.

Ranking of selected districts of North-East region of India:

After computing the values of composite index for both rural and urban data, we ranked the districts within the states by using Microsoft Excel.

TABLE 8: Ranking of districts in Assam

OVERALL DATA		RURAL DATA	
DISTRICT	RANKING	DISTRICT	RANKING
Sivasagar	1	Sivasagar	1
Dibrugarh	2	Golaghat	2
Golaghat	3	Dibrugarh	3
Kamrup Metropolitan	4	Jorhat	4
Jorhat	5	Tinsukia	5
Tinsukia	6	Baska	6
Baska	7	Udalguri	7
Dhemaji	8	Dhemaji	8
Dimahaso	9	Lakhimpur	9
Udalguri	10	Dimahaso	10
Lakhimpur	11	Karimganj	11
Karimganj	12	Nalbari	12
Nalbari	13	Cachar	13
Cachar	14	Sonitpur	14
Morigaon	15	Goalpara	15
Goalpara	16	Morigaon	16
Sonitpur	17	Bongaigaon	17
Bongaigaon	18	Darrang	18
Kokrajhar	19	Hailakandi	19
Hailakandi	20	Kokrajhar	20
Darrang	21	Chirang	21
Chirang	22	Nagaon	22
Nagaon	23	Kamrup	23
Kamrup	24	Berpeta	24
Berpeta	25	KarbiAnglong	25
KarbiAnglong	26	Dhubri	26
Dhubri	27	-	-

TABLE 9: Ranking of districts in Tripura

OVERALL DATA		RURAL DATA	
DISTRICT	RANKING	DISTRICT	RANKING
West Tripura	1	West Tripura	1
South Tripura	2	South Tripura	2
North Tripura	3	North Tripura	3
Dhalai	4	Dhalai	4

TABLE 10: Ranking of districts in Manipur

OVERALL DATA		RURAL DATA	
DISTRICT	RANKING	DISTRICT	RANKING
Imphal West	1	Imphal West	1
Bishnupur	2	Imphal East	2
Imphal East	3	Bishnupur	3
Thoubal	4	Thoubal	4
Senapati	5	Senapati	5
Churachandpur	6	Chandel	6
Chandel	7	Churachandpur	7
Tamenglong	8	Tamenglong	8
Ukhrul	9	Ukhrul	9

TABLE 11: Ranking of districts in Mizoram

OVERALL DATA		RURAL DATA	
DISTRICT	RANKING	DISTRICT	RANKING
Serchhip	1	Saiha	1
Aizawal	2	Serchhip	2
Saiha	3	Champhai	3
Champhai	4	Lunglei	4
Lunglei	5	Kolasib	5
Kolasib	6	Mamit	6
Mamit	7	Lawngtlai	7
Lawngtlai	8	-	-

TABLE 12: Ranking of districts in Nagaland

OVERALL DATA		RURAL DATA	
DISTRICT	RANKING	DISTRICT	RANKING
Kohima	1	Mokokchung	1
Mokokchung	2	Kohima	2
Peren	3	Peren	3
Tuensang	4	Tuensang	4
Phek	5	Dimapur	5
Dimapur	6	Phek	6
Wokha	7	Kiphire	7
Kiphire	8	Zunheboto	8
Zunheboto	9	Wokha	9
Longleng	10	Longleng	10
Mon	11	Mon	11

TABLE 13: Ranking of districts in Meghalaya

OVERALL DATA		RURAL DATA	
DISTRICT	RANKING	DISTRICT	RANKING
South Garo Hills	1	South Garo Hills	1
West Khasi Hills	2	East Khasi Hills	2
East Khasi Hills	3	West Khasi Hills	3
Jaintia Hills	4	Jaintia Hills	4
Ribhoi	5	Ribhoi	5
West Garo Hills	6	West Garo Hills	6
East Garo Hills	7	East Garo Hills	7

TABLE 14 : Ranking of districts in Sikkim

OVERALL DATA		RURAL DATA	
DISTRICT	RANKING	DISTRICT	RANKING
South District	1	South District	1
North District	2	North District	2
West District	3	West District	3
East District	4	East District	4

TABLE 15: Ranking of districts in Arunachal Pradesh

OVERALL DATA		RURAL DATA	
DISTRICT	RANKING	DISTRICT	RANKING
Changlang	1	Changlang	1
Lohit	2	East Siang	2
East Siang	3	Lohit	3
Upper Siang	4	Dibang Valley	4
Dibang Valley	5	Upper Siang	5
Tirap	6	West Siang	6
Papumpare	7	Lower Dibang Valley	7
Anjaw	8	Anjaw	8
Lower dibang valley	9	Tirap	9
West Siang	10	Lower Subansiri	10
Lower Subansiri	11	Papumpare	11
West Kameng	12	West Kameng	12
Tawang	13	Tawang	13
Upper Subansiri	14	Upper Subansiri	14
KurungKumey	15	KurungKumey	15
East Kameng	16	East Kameng	16

DISCUSSION AND CONCLUSION:

This analysis provides a quantitative assessment of child health across districts of northeast region of India and also provides a statistical intra assessment of relativity high and low performing areas with respect to geographically proximal areas. As per the study we have taken the different child health parameters which are reasons for better child health and positive index, i.e. more be the value of the parameter, the condition of the child health care taken is better in the particular geographical area. Hence after entering the data in MS Excel, we performing computed the different level of child health care and categorized the districts with respect to our finding.

Conclusion from the overall population:

Among 16 districts of Arunachal Pradesh, 8 districts namely, Tawang, West Kameng, East Kameng, Upper Subansiri, West Siang, Lower Subansiri, KurungKumey and Lower Dibang Valley have taken very poor level of performance in child health care. Hence these districts have more irregularity in distribution of child health facilities. And 6 districts namely, Papumpare, East Siang, Upper Siang, Tirap, Dibang Valley and Anjaw are poor condition of child care whereas the district Lohit takes comparatively good care of child health. Changlang district is leading among all the districts of Arunachal Pradesh with respect to child health care and have very good performance. East Kameng district is having least CI values; hence it is the least caring district in Arunachal Pradesh.

Assam has maximum number of districts. Among 27 districts, 7 districts namely, Baska, Dibrugarh, Golaghat, Jorhat, Kamrup Metropolitan, Sivasagar, Tinsukia are having very good level of performance in child health care. And 10 districts namely, Cachar, Dhemaji, DimaHaso, Goalpara, Karimganj, Lakhimpur, Morigaon, Nalbari, Sontipur, Udalguri are taking good care of child health care in Assam. Hence these districts are progressing for child health good. Whereas 7 districts namely, Bongaigaon, Chirang, Darrang, Hailakandi, Kamrup, Kokrajhar, Nagaon have poor performance in child health care. Berpeta, Dhubri, KarbiAnglong are taking least care of child health care and their performance is very poor. Overall in Assam we can see there is unequal in distribution of child health facilities.

In Manipur from 9 districts, 3 districts namely, Bishnupur, Imphal East and Imphal West are having very good performance in care of child health. Senapati and Thoubal districts are progressing well towards the good care of child health and their performance is good. Whereas 3 districts namely Chandel, Churachandpur and Tamenglong have poor performance in child health care. and Ukhrul district has the lowest performance in distribution of child health facilities.

Among 7 districts in Meghalaya 3 districts namely, East Khasi Hills, South Garo Hills, West Khasi Hills have very good performance in child health care. Hence these districts have better condition in child health facilities. Jainta Hills, Ribhoi, West Garo Hills districts have good performance in child health care whereas, East Garo Hills is the least caring districts of Meghalaya.

In Mizoram, Lawngtlai district is the most least caring district with respect to child health care among 8 districts. And 4 districts namely, Mamit, Kolasib, Champhai, Lunglei are having poor performance in child health care. Aizwal, Serchhip and Saiha are having better performance than other districts in Mizoram.

Among 11 districts of Nagaland, Mokokchung and Kohima have good performance in child health care. And Tuensang, Peren have poor performance whereas, 7 districts namely, Mon, Zunheboto, Wokha, Dimapur, Longleng, Kiphire and Phek have very poor condition in distribution of child health facilities.

Sikkim is one of the best states of North-East India in terms of child health care. All the districts of Sikkim namely, North District, West District, South District have very good performance in child health care. Hence these districts have better condition in child health facilities.

In Tripura among 4 districts two districts namely, South Tripura and West Tripura have good performance and other two districts namely, Dhalai, North Tripura have poor performance in child health care.

Conclusion from the rural population:

Among 16 districts of Arunachal Pradesh, 7 districts namely, Tawang, West Kameng, East Kameng, Upper Subansiri, Lower Subansiri, Kurung Kumey and Papumpare have taken very poor level of performance in child health care. Hence these districts have more irregularity in distribution of child health facilities. And 6 districts namely, Upper Siang, Tirap, Lower Dibang Valley, West Siang, Dibang Valley and Anjaw are poor condition of child care whereas, the

districts East Siang and Lohit takes comparatively good care of child health. Changlang district is leading among all the districts of Arunachal Pradesh with respect to child health care and have very good performance. East Kameng district is having least CI values. Hence it is the least caring district in Arunachal Pradesh.

Assam has maximum number of districts. Among 26 districts, eight districts namely, Baska, Dibrugarh, Golaghat, Jorhat, Dhemaji, Sivasagar, Tinsukia, Udalguri are having very good level of performance in child health care. And 8 districts namely, Cachar, DimaHaso, Goalpara, Karimganj, Lakhimpur, Morigaon, Nalbari, Sontipur are taking good care of child health care in Assam. Hence these districts are progressing for child health good. Whereas 7 districts namely, Bongaigaon, Chirang, Darrang, Hailakandi, Kamrup, Kokrajhar, Nagaon have poor performance in child health care. Berpeta, Dhubri, Karbi Anglong are taking least care of child health care and their performance is very poor. Overall in Assam we can see there is unequal in distribution of child health facilities.

In Manipur from 9 districts, 3 districts namely, Bishnupur, Imphal East and Imphal West are having very good performance in care of child health. Senapati and Thoubal districts are progressing well towards the good care of child health and their performance is good. Whereas 3 districts namely Chandel, Churachandpur and Tamenglong have poor performance in child health care. Ukhrul district have the lowest performance in distribution of child health facilities.

Among 7 districts in Meghalaya two districts namely, East Khasi Hills, South Garo Hills have very good performance in child health care. Hence these districts have better condition in child health facilities. Jainta Hills, Ribhoi and West Khasi Hills districts have good performance in child health care. West Garo Hills have poor performance in child health care whereas; East Garo Hills is the least caring districts of Meghalaya.

In Mizoram, Lawngtlai district is the most least caring district with respect to child health care among 7 district which have rural areas. And 4 districts namely, Mamit, Kolasib, Champhai and Lunglei are having poor performance in child health care. Serchhip and Saiha are having better performance than other districts in Mizoram.

Among 11 districts of Nagaland, Mokokchung and Kohima have good performance in child health care. And Tuensang and Peren have poor performance. 7 districts namely Mon, Zunheboto, Wokha, Dimapur, Longleng, Kiphire and Phek have very poor condition in distribution of child health facilities.

Sikkim is one of the best states of North-East India in terms of child health care from rural population. All the districts of Sikkim namely, North District, West District, South District and East District have very good performance in child health care. Hence these districts have better condition in child health facilities.

In Tripura among 4 districts two districts namely, South Tripura and West Tripura have good performance and other two districts namely, Dhalai and North Tripura have poor performance in child health care.

Discussion:

The main objective for child health care provision is not necessarily to make available increased number of doctors, nurses, health facilities and other paramedical staff, but rather

these resources are the means towards an end. The final outcome is the remission of diseases which will lead to better health outcomes and improved health status. If India has to achieve objective of growth with equity and social justice then health care needs should be strengthened in such way so as to ensure accessibility, efficiency and equity in health system. Thus, the study has been carried out to examine the child health status in northeast region of India so that in future the government could take better planning according to the past performance of the districts. And provide sufficient policy, medicines and proper education to the people living on lower child health status area. So that they could be more concerned about child health and the immunisation of child would be perform in better way.

To increase the awareness level about the different child health care schemes provided by central and state government, frequent awareness programme has to be organized in the region where status of child health care condition is much poor. For organising awareness programmes trained people should be taken incharge. Doctors too can take part to provide awareness of child health. Also, ASHA can play most important role in awareness of child health. ASHA's are the village health worker who should take initiative steps to bring more awareness among the masses. She can play a very vital role in communicating between the masses and public health system. The different forms of print, electronic and social media may play a very pro-active role for increasing the awareness level about different health facilities provided by the government among the beneficiaries. It may be conclude that the co-operation from govt. as well as the people in general will certainly lead to the better awareness in these areas. The key for the successful implementation of these schemes, programmed of mass awareness are necessary.

For future research, the model developed in this study can be used to conduct comparative study based on the parameters of maternal health, literacy, population and household profile, etc. Some other basic parameters that are related to child health may also be included in the study like weight of the child, etc and the weighted composite index be calculated afresh. Also Shannon's Entropy method can be used for assigning weights to the parameter under study and TOPSIS method can be used here for developing the composite index for ranking the states of India. In addition to this, further studies can be conducted for developing composite index based on other models such as WPM (weighted product model) and AHP (Analytical hierarchy process) model.

References:

Agarwal, A. K. (1997), "Agricultural systems and behaviour in North-Eastern states", In M. C. Roy, *Trends in Agrarian Structure in the Hills of North-East India*, Commonwealth Publishers, New Delhi

Agnihotri, V. K. (2004), "Socio-economic profile of Rural India: North-East India", Lal Bahadur Shastri National Academy of Administration, Mussoorie

Das, U. (1993, Dec 31), Retrieved from <http://hdl.handle.net/10603/68328>

Iyenger, N. S. & Sudarshan, P. (1982), "A Method of Classifying Regions from Multivariate Data", *Economic and Political Weekly*, 2048-2052

James, K. S. (2014), "Recent shifts in Infant Mortality in India-An Exploration", *Economic and Political weekly*, XLIX (3), 14-17

Lalneizo, D. & Reddy, S. (2010), "Health Status of Children in North Eastern States of India", *Indian Anthropological*, 40, 37-52

Ravindra, G. A. & Brinker, G. D. (1997), "Determinants of Infant and Child Mortality in India", *International Review of Modern Sociology*, 27 (2), 1-22

Vivan, E. (2018, JANUARY 17), "Children's Health in North-East States", Retrieved from NEWS CLICK: <https://newsclick.in/childrens-health-northeast-states>

Rajula, H. K. (2014), "Demand and supply of maternal and child health care services", Unpublished Ph. D Dissertation, Department of Economics, Kannur University, India

Mosley, H. W., Lincoln, C. & Chen (1984), "An analytical framework for the study of child survival in developing countries", *Population and Developmental Review*, 10, pp. 25-45

Ram, F. & Shekhar, C. (2006), "Ranking and Mapping of Districts based on Socio-economic and Demographic Indicators", International Institute of Population Sciences, Mumbai

International Institute of Population Sciences (IIPS) (2000), "National Family Health Survey (NFHS-2)"

Kavitha, N. & Audinarayan, N. (1997), "Utilization and determinates of selected maternal and child health care services in rural areas of Tamil Nadu", *Health and Population: Perspectives and Issues*, 20(3), pp. 112-125

Swain, A. K. P. C. & Mohanty, B. (2010), "Socio-demographic disparities in Odisha- maternal and child health and welfare perspectives", *Demography India*, 39(1), pp. 129-139

Bhatt, S. C. (2004), *The Encyclopedic District Gazetteers of India: North-East Zone, Vol. 11*, Gayan Publishing House, New Delhi

Morris, M. D. and Liser, P. B. (1977), *The PQLI: Measuring progress in meeting human needs*, Overseas Development Council, Communique on Development Issues

OECD (2008), *Handbook on Constructing Composite Indicators, Methodology and User Guide*, Paris: Organization for Economic Co-operation and Development

Das, K. K. and Nath, D. C. (2007), "Quantification of deprivation among minorities in char areas of Assam", *Proceedings of the Seventh National Seminar on Social Statistics: Dimensions of Human Deprivation*, Guwahati, pp. 41-47. (Organized by Ministry of Statistics and Programme Implementation, Govt. of India).

Appendix I: Values of the Indicators, the Composite Indices (CI) and the Ranks of all the Districts of North Eastern Region of India from overall data.

State	District	C ₁	C ₂	C ₃	C ₄	C ₅	C ₆	C ₇	C ₈	C.I	Rank
Assam	Baska	34.1	59.1	91.6	64.8	82.6	81.3	60.2	54.2	0.6949	16
Assam	Berpeta	9.9	34.1	67.4	45.6	54.7	66.0	40.8	41.1	0.3883	68
Assam	Bongaigaon	14.2	42.4	84.7	45.5	70.6	79.9	42.1	51.4	0.5130	44
Assam	Cachar	26.3	45.4	82.2	57.7	71.9	68.7	60.5	56.9	0.5878	32
Assam	Chirang	12.6	40.4	77.7	49.3	60.1	68.5	46.7	48.8	0.4665	55
Assam	Darrang	11.3	40.6	81.2	49.5	63.3	61.9	51.3	47.4	0.4705	54
Assam	Dhemaji	33.7	47.0	96.4	61.7	80.7	79.6	68.2	43.9	0.6716	19
Assam	Dhubri	7.0	20.1	62.8	33.7	30.7	38.5	25.1	32.7	0.2063	82
Assam	Dibrugarh	30.5	71.1	100.0	78.3	82.1	92.6	71.5	65.3	0.7987	7
Assam	DimaHaso	24.2	59.8	91.4	69.2	78.0	86.3	61.1	41.9	0.6625	20
Assam	Goalpara	29.3	43.7	83.0	53.1	64.4	71.9	51.2	56.9	0.5643	38
Assam	Golaghat	38.0	67.9	90.9	73.6	83.7	91.0	77.4	66.0	0.7961	8
Assam	Hailakandi	21.2	39.2	68.3	49.8	59.5	59.5	45.4	70.4	0.4822	52
Assam	Jorhat	38.7	64.8	92.2	70.1	84.0	91.4	69.3	52.6	0.7579	11
Assam	Kamrup Metropolitan	25.9	72.8	93.7	78.4	85.5	91.5	64.1	63.0	0.7649	10
Assam	Kamrup	26.0	35.7	72.2	46.4	56.3	57.4	41.8	56.7	0.4565	58
Assam	KarbiAnglong	11.2	23.6	68.5	38.4	46.6	53.1	28.2	37.0	0.3039	75
Assam	Karimganj	15.9	53.9	80.5	65.7	72.1	66.1	60.7	67.6	0.5972	27
Assam	Kokrajhar	22.4	42.1	82.1	48.9	67.7	66.2	47.9	32.8	0.4895	51
Assam	Lakhimpur	29.6	54.0	89.3	57.9	80.1	78.7	58.5	48.1	0.6379	23
Assam	Morigaon	32.5	44.4	92.2	49.1	67.5	79.6	47.5	40.4	0.5727	35
Assam	Nagaon	15.5	43.1	80.0	52.7	55.1	68.1	41.1	42.7	0.4625	56
Assam	Nalbari	12.2	48.8	89.4	55.5	83.0	79.7	59.0	48.1	0.5878	30
Assam	Sivasagar	40.4	73.0	100	78.7	84.4	88.6	78.3	56.9	0.8236	4
Assam	Sonitpur	25.7	45.3	82.6	51.1	65.9	70.6	53.3	59.0	0.5595	40
Assam	Tinsukia	32.6	64.0	89.4	73.5	83.8	89.8	64.0	61.9	0.7436	12
Assam	Udalguri	27.6	52.8	90.6	59.1	79.6	82.0	58.0	61.3	0.6590	21
Tripura	Dhalai	7.5	44.3	62.1	59.3	69.8	62.4	44.7	56.8	0.4598	57
Tripura	North Tripura	5.9	53.8	79.8	65.4	66.4	63.6	50.6	46.0	0.5080	46
Tripura	South Tripura	7.1	54.7	80.7	72.7	74.1	72.1	39.9	68.2	0.5697	36
Tripura	West Tripura	10.3	56.7	86.0	73.4	72.2	72.7	63.4	70.6	0.6326	24
Manipur	Bishnupur	15.0	77.2	96.1	84.9	87.3	82.3	79.2	31.6	0.7264	13
Manipur	Chandel	7.4	50.6	86.2	63.3	68.2	58.1	60.7	14.7	0.4805	53
Manipur	Churachandpur	15.7	52.2	84.1	60.1	68.4	65.1	52.9	20.4	0.5018	49
Manipur	Imphal East	13.2	72.7	95.9	87.2	80.7	81.0	74.9	31.9	0.6997	15
Manipur	Imphal West	8.8	82.8	97.2	90.9	93.7	87.9	81.3	52.2	0.7854	9

Manipur	Senapati	7.1	58.7	90.7	71.0	71.8	69.3	69.3	19.1	0.5603	39
Manipur	Tamenglong	6.1	44.0	82.0	63.4	59.7	56.4	57.5	24.9	0.4521	59
Manipur	Thoubal	10.5	65.4	90.8	74.1	77.4	74.3	72.8	34.4	0.6305	25
Manipur	Ukhrul	8.1	42.4	78.6	53.9	54.2	50.3	45.1	14.1	0.3753	71
Mizoram	Mamit	11.7	40.4	64.2	55.0	54.4	57.2	47.6	58.8	0.4353	62
Mizoram	Kolasib	9.6	51.5	64.6	61.3	60.7	56.4	57.4	72.2	0.5034	48
Mizoram	Aizawal	14.7	55.3	82.8	66.3	65.0	60.4	60.2	75.5	0.5920	29
Mizoram	Champhai	8.6	48.3	72.3	56.2	59.0	64.2	56.9	76.2	0.5175	43
Mizoram	Serchhip	12.5	60.9	81.4	69.1	71.3	73.9	61.8	71.7	0.6266	26
Mizoram	Lunglei	10.7	46.4	69.2	61.1	60.9	66.4	56.4	65.2	0.5127	45
Mizoram	Lawngtlai	2.6	42.2	70.7	53.4	53.4	48.9	49.3	44.7	0.3915	67
Mizoram	Saiha	7.5	55.0	78.6	65.3	68.2	74.3	57.6	68.4	0.5760	34
Nagaland	Mon	0.3	19.9	48.7	29.0	30.6	31.1	29.8	13.6	0.1180	84
Nagaland	Mokokchung	1.6	51.9	77.1	64.1	77.8	75.8	66.8	58.3	0.5687	37

Source: Computed by the authors based on raw data collected from NFHS IV
*These values are improved residual values which are computed using regression

Appendix II: Values of the Indicators, the Composite Indices (CI) and the Ranks of all the Districts of North Eastern Region of India from rural data

State	District	C ₁	C ₂	C ₃	C ₄	C ₅	C ₆	C ₇	C ₈	C.I	Rank
Assam	Baska	33.7	59.3	91.4	65.1	83.3	81.9	60.4	54.7	0.7087	13
Assam	Berpeta	9.7	32.7	66.0	44.7	52.8	64.5	38.2	40.3	0.3996	65
Assam	Bongaigaon	14.0	39.7	83.0	43.2	69.1	79.4	41.1	51.9	0.5175	41
Assam	Cachar	25.4	41.9	81.0	55.0	70.1	66.7	57.9	56.2	0.5803	33
Assam	Chirang	11.3	40.1	77.7	49.4	60.7	68.1	46.7	47.5	0.4848	50
Assam	Darrang	11.6	40.8	82.6	48.6	63.5	63.6	50.6	47.8	0.4980	46
Assam	Dhemaji	34.2	49.1	96.1	63.4	79.3	79.5	68.9	44.5	0.6899	17
Assam	Dhubri	7.5	16.6	60.6	31.0	27.8	36.1	22.0	31.3	0.2190	79
Assam	Dibrugarh	28.5	68.5	100	77.3	79.6	93.2	66.6	67.6	0.7853	8
Assam	Dimahaso	22.0	55.1	88.3	68.0	69.9	81.2	54.5	40.6	0.6224	26
Assam	Goalpara	27.9	40.6	83.7	50.9	63.3	71.5	48.8	56.0	0.5659	36
Assam	Golaghat	37.1	68.6	91.9	74.8	84.1	92.0	79.0	64.6	0.8072	7
Assam	Hailakandi	20.1	39.8	67.9	48.7	57.8	58.9	43.1	70.3	0.4952	48
Assam	Jorhat	39.4	61.5	89.7	65.6	81.5	91.6	65.0	51.9	0.7393	10
Assam	Kamrup	27.7	37.1	72.2	44.0	54.8	58.4	39.1	56.2	0.4797	53
Assam	Kamrup	27.7	37.1	72.2	44.0	54.8	58.4	39.1	56.2	0.4797	53
Assam	KarbiAnglong	11.0	23.5	68.4	39.6	48.5	51.5	28.5	36.8	0.3394	71
Assam	Karimganj	16.3	52.2	80.5	64.8	71.5	65.2	59.4	67.0	0.6055	27
Assam	Kokrajhar	20.0	40.5	81.6	47.5	66.8	65.3	46.5	31.6	0.4940	49
Assam	Lakhimpur	30.8	53.8	90.5	58.0	81.5	80.0	58.6	47.0	0.6601	21
Assam	Morigaon	31.6	39.9	91.4	45.0	65.4	78.7	43.3	38.2	0.5595	38
Assam	Nagaon	16.8	42.6	78.5	52.9	55.5	65.7	40.4	41.0	0.4803	51
Assam	Nalbari	12.2	45.2	88.4	52.6	82.9	79.3	56.4	48.1	0.5857	31

Assam	Sivasagar	40.9	73.0	100	79.2	85.4	87.7	78.8	56.1	0.8296	4
Assam	Sonitpur	25.2	43.6	82.1	49.6	64.9	69.8	53.2	58.3	0.5677	35
Assam	Tinsukia	32.9	53.9	85.9	64.8	80.3	88.3	64.0	63.2	0.7103	11
Assam	Udalguri	29.2	55.9	90.0	62.6	80.5	83.2	61.4	62.4	0.6952	16
Tripura	Dhalai	7.3	39.7	60.3	54.9	67.1	60.6	42.2	55.7	0.4537	58
Tripura	North Tripura	7.0	47.0	75.6	58.6	62.1	58.7	43.1	44.5	0.4743	54
Tripura	South Tripura	7.7	59.1	82.2	72.0	73.7	76.3	34.1	68.6	0.5938	29
Tripura	West Tripura	11.3	52.8	83.6	72.9	71.0	69.4	60.0	69.2	0.6232	25
Manipur	Bishnupur	11.9	75.3	96.0	84.1	83.8	80.4	70.9	27.9	0.6954	15
Manipur	Chandel	8.1	55.9	86.0	65.9	71.3	62.9	66.7	14.9	0.5369	40
Manipur	Churachandpur	14.0	52.1	83.7	59.1	67.5	65.3	52.8	19.7	0.5140	42
Manipur	Imphal East	12.0	72.8	96.1	88.1	84.1	79.5	75.6	31.0	0.7096	12
Manipur	Imphal West	7.0	79.1	96.2	88.9	92.1	83.9	73.6	58.9	0.7620	9
Manipur	Senapati	6.4	57.4	90.4	70.0	70.8	68.2	68.2	18.2	0.5644	37
Manipur	Tamenglong	4.5	39.6	80.1	61.1	55.2	51.6	54.2	22.8	0.4354	60
Manipur	Thoubal	4.5	69.2	90.8	76.4	79.6	77.8	76.8	34.4	0.6519	23
Mizoram	Ukhul	5.8	40.7	78.6	49.2	49.6	48.3	38.8	10.5	0.3630	68
Mizoram	Mamit	10.7	34.6	61.5	50.5	49.9	54.6	44.7	56.4	0.4194	62
Mizoram	Kolasib	3.4	44.0	66.8	56.3	56.5	48.5	51.1	59.8	0.4496	59
Mizoram	Champhai	8.3	46.5	66.9	51.4	54.9	61.2	52.6	74.3	0.4967	47
Mizoram	Serchhip	12.1	63.7	79.0	71.0	72.5	74.6	64.1	70.1	0.6467	24
Mizoram	Lunglei	7.9	41.3	61.9	55.9	57.5	58.7	52.2	61.1	0.4677	55
Mizoram	Lawngtlai	9.2	33.7	63.5	41.9	42.0	42.0	36.8	37.7	0.3137	73
Nagaland	Saiha	0.0	59.3	83.0	68.5	77.7	76.7	65.0	75.7	0.6561	22
Nagaland	Mon	1.4	18.1	45.0	27.4	30.8	31.4	29.9	13.0	0.1501	83
Nagaland	Mokokchung	1.4	51.1	74.4	66.0	80.3	77.8	66.9	59.3	0.5891	30
Nagaland	Zunheboto	3.2	22.7	68.1	35.2	36.6	43.8	29.4	19.4	0.2531	77
Nagaland	Wokha	3.5	17.6	52.4	39.6	36.9	33.1	27.8	19.5	0.2105	80
Nagaland	Dimapur	1.5	33.7	59.6	56.3	51.9	45.2	41.0	34.0	0.3584	69
Nagaland	Tuensang	0.0	47.6	75.9	56.6	62.3	59.3	23.6	0.4592	56	
Nagaland	Longleng	0.0	10.9	52.8	45.7	30.1	35.5	26.3	12.5	0.1854	81
Nagaland	Kiphire	0.0	33.9	59.5	54.9	39.6	45.7	34.9	16.5	0.2960	76

Source: Computed by the authors based on raw data collected from NFHS IV
 *These values are improved residual values which are computed using regression.

INDIA'S TRADE WITH SOUTH ASIA AND SOUTH EAST ASIA: IT'S POTENTIAL IN THE DEVELOPMENT OF NORTH-EAST REGION OF INDIA

Arifa Tabassum
 Research Scholar
 Gauhati University

ABSTRACT:

India made inadequate efforts to promote closer relations with the governments of the Southeast Asia till the 1990's starting from the Second World War. However in the year 1991, with the replacement of India's protectionist economic policies with a more liberal one have led to opening of higher levels of trade and determination to increase regional markets. During the same year the Look East policy was also launched by the Narasimha Rao Government and it emerged as an important foreign policy of India to promote and strengthen economic relations with the nations of Southeast Asia. North-East India acts as a corridor to most of South Asia and South East Asia. Thus, this paper is an attempt to study the trade relation between India and South Asian and Southeast Asian countries and the importance of Look East Policy in building North-East region of India as a gateway to the Southeast Asian countries.

Keywords: Trade, India, Southeast Asia, South Asia, Look East policy and North-East India.

INTRODUCTION:

India and the rest of East Asia were relatively isolated from one another in economic terms since the end of Second World War till the 1990's. India too had made inadequate efforts to promote closer relations with the governments of Southeast Asia. The reason behind was that the western countries were more developed and thus made better trade partners to India than the countries which lied in India's neighborhood. Another reason behind was Bangladesh's denial to provide with transport facilities through its territory and the exclusion of physical access to Southeast Asia by Myanmar's isolationist policies. But in the year 1991 India faced an economic crisis and there was a fall of the Soviet Union which was previously India's one of the most valued economic partner. This led India to reevaluate its economic and foreign policy which led to two major changes in India's position towards its neighboring countries. India changed its protectionist economic policies with liberal policies and opened its economy to higher levels of trade and it also made an endeavor to expand its regional markets.

The Narasimha Rao government launched the Look East policy in the year 1991 which emerged as an important foreign policy initiative of India. The policies launched were to develop and strengthen economic relations with the Southeast Asian nations. There were considerable changes in the political and economic scenario in the world since the early 1990's due to which India made adequate efforts to focus on wide and strong relationship with the ASEAN (Association of South East Asian Nations). India geographically lies in the South Asian region and therefore enjoys direct physical access with other South Asian countries. India connects regions between South Asia and Southeast Asia. India's North-Eastern region due to its location advantage serves as a bridge between the two sub-regions of South Asia and Southeast Asia. Both the regions of South Asia and Southeast Asia have become centre of significant positive changes due to economic growth and development of the regions. Therefore the opportunities that are being provided by the Look East Policy can be harnessed by developing physical connectivity with Southeast Asia.

The present study focuses on India's Trade relationship with South Asian region consisting of Afghanistan TIS, Bangladesh PR, Bhutan, Maldives, Nepal, Pakistan IR, Sri Lanka DSR and ASEAN (Association of South East Nations) consisting of Brunei, Cambodia, Indonesia, Lao PDRP, Malaysia, Myanmar, Philippines, Singapore, Thailand, and Vietnam Soc Rep.

REVIEW OF RELATED LITERATURE:

Choudhary (2013) has found that it was India's growing profile that had attracted countries of South-East Asia to promote closer engagement at regional and multilateral level. The expansion of the realization that both India and the Southeast Asian regions are complementary to each other rather than competitive has increased the trade and other economic engagements between them. The bilateral trade between India and Southeast Asian region has increased by more than 90% from US\$ 23 billion in the year 2005 to US\$ 44 in the year 2009-10.

Maheswara Rao (2015) observed that India's trade with South Asian region is highly insignificant and trade between India and the region needs to be boosted and the growth momentum needs to be accelerated between India and the South Asian region. Since all the South Asian Countries are geographically adjoining the cost of transportation also can be minimized to great extent and may lead to better trade creation.

Saxena (2016) studied that it was during the time period 2009-10 to 2013-14, India's export to SAARC countries grew at an annual growth rate of 20.18% and imports grew at a rate of 10.52%. The items traded between India and South Asian region are agricultural goods, electronic items, dairy products, metals and textiles.

OBJECTIVES:

1. To study India's trade relationship with South Asian countries and ASEAN (Association of South East Nations)
2. To study the role of Look East Policy in the Development of North-Eastern Region.

DATA AND METHODOLOGY:

The study is based on Secondary data collected from various organizations and agencies. The present study makes use of data from the Ministry of Commerce and Industry, Government of India. Relevant websites and published sources like journals, government published reports, newspapers, etc. have been used for the study. The present study analyzes India's trade with ASEAN and South Asia from the year 1996-97 to 2016-17.

RESULTS AND DISCUSSION:

An overview of India's trade with the world over the past decade

The introduction of new economic policy in the year 1991 has led to impressive growth in India's both exports and imports. The relevant data are shown in table 1 below. India's total exports have grown from US\$ 33,469.95 million in 1996-97 to US\$ 275,851.17 million in the year 2016-2017. In other words, there has been approximately eightfold increase in the volume of exports during the 20 years period. During the period under study the imports grew at a higher rate than exports. As shown in table India's imports from world grew up from US\$ 39132.41 million in the year 1996-97 to US\$ 384,355.56 million in the year 2016-17. In other words there has been approximately ninefold increase in the volume of imports during the 20 years period. It can be seen from the table that India's overall trade balance during the period of study is negative and rising throughout the period.

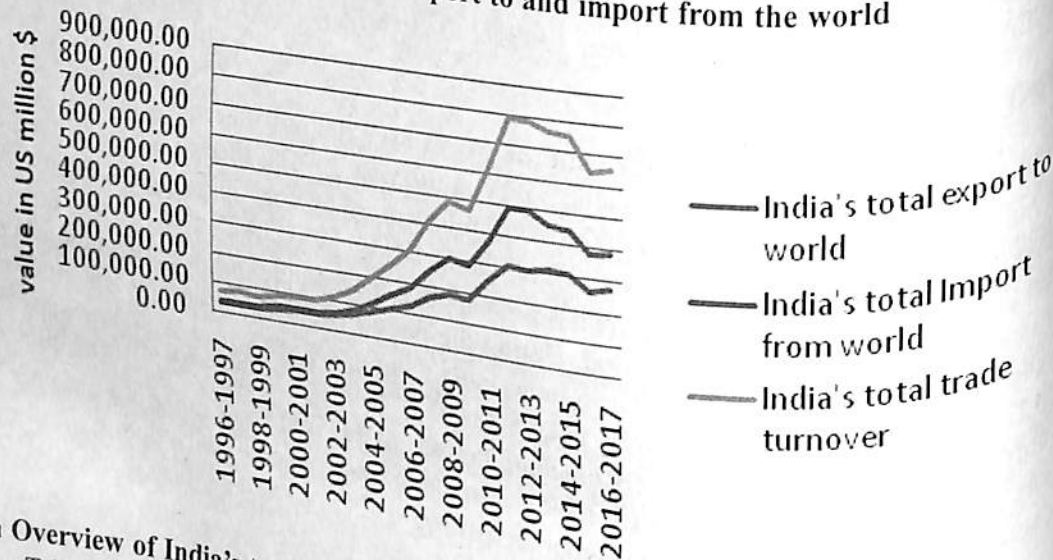
Table 1: India's Exports to and Imports from World and Balance of Trade (Value in US million \$)

YEAR	India's total export to world	India's total Import from world	India's total Trade turnover	Balance of trade
1996-1997	33,469.95	39132.41	72,602.36	-5,662.46
1997-1998	34,784.98	41484.49	76,269.47	-6,699.51
1998-1999	33,218.72	42388.71	75,607.43	-9,169.99
1999-2000	36,822.49	49738.06	86,560.55	-12,915.57
2000-2001	44,560.29	50536.45	95,096.74	-5,976.16
2001-2002	43,826.72	51413.28	95,240.00	-7,586.56
2002-2003	52,719.43	51412.14	114,131.57	-8,692.71
2003-2004	63,842.55	61412.14	141,991.66	-14,306.56
2004-2005	83,535.94	78149.11	195,053.37	-27,981.49
2005-2006	103,090.53	111517.43	252,256.26	-46,075.20
2006-2007	126,414.05	149165.73	312,149.29	-59,321.19
2007-2008	163,132.18	185735.24	414,786.19	-88,521.83
2008-2009	185,295.36	251654.01	488,991.67	-118,400.95
2009-2010	178,751.43	303696.31	467,124.31	-109,621.45
2010-2011	249,815.55	288372.88	619,584.68	-119,953.58
2011-2012	249,815.55	369769.13	795,283.41	-183,355.57
2012-2013	305,963.92	489319.49	791,137.23	-190,336.07
2013-2014	300,400.58	490736.65	791,137.23	-135,794.49
2014-2015	314,405.30	450199.79	764,605.09	-137,694.93
2015-2016	310,338.48	448033.41	758,371.89	-118,716.50
2016-2017	262,290.13	381006.63	643,296.76	-108,504.39
2016-2017	275,851.17	384,355.56	660,206.73	-108,504.39

Source: Ministry of Commerce and Industry, Department of Commerce, GoI

The data in Table: 1 is shown with the help of a graph (Figure: 1) and it is seen that there is substantial increase in India's total imports and total exports, thereby showing an increase in India's total trade turnover.

Figure 1 : India's total export to and import from the world



An Overview of India's trade with South Asia:

Table: 2 below shows India's trade with South Asia. It can be seen from the table that India's export to South Asia increased from US\$ 1724.39 million in the year 1996-97 to US\$ 19,222.14 million in the year 2016-2017. The imports also grew from US\$ 242.31 million to US\$ 2813.4 million in the year 2016-2017. However, it is interesting that during the period of study the exports grew at a faster rate than the imports. Table: 2 is represented with the help of a graph (Figure: 2).

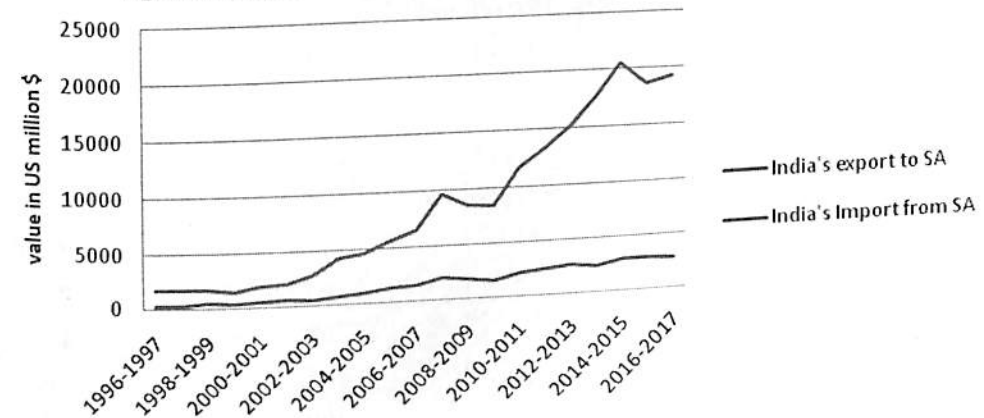
Table: 2 India's trade with South Asia (value in US million \$)

YEAR	India's export to South Asia	India's Import from South Asia	Total trade Turnover with South Asia	India's total trade turnover	%share of India's total trade turnover with South Asia
1996-1997	1724.39	242.31	1966.7	72,602.36	2.71
1997-1998	1632.2	245	1877.2	76,269.47	2.46
1998-1999	1692.02	493.7	2185.72	75,607.43	2.89
1999-2000	1427.83	418.7	1846.53	86,560.55	2.13
2000-2001	1954.41	492.49	2446.9	95,096.74	2.57
2001-2002	2050.38	589.03	2639.41	95,240.00	2.77

2002-2003	2784.9	530.43	3315.33	114,131.57	2.90
2003-2004	4293.52	709.31	5002.83	141,991.66	3.52
2004-2005	4606.14	997.19	5603.33	195,053.37	2.87
2005-2006	5547.65	1413.31	6960.96	252,256.26	2.76
2006-2007	6473.81	1507.45	7981.26	312,149.29	2.56
2007-2008	9637.76	2117.35	11755.11	414,786.19	2.83
2008-2009	8567.12	1817.89	10385.01	488,991.67	2.12
2009-2010	8390.69	1657.34	10048.03	467,124.31	2.15
2010-2011	11,656.59	2173.37	13829.96	619,584.68	2.23
2011-2012	13,296.47	2524.74	15821.21	795,283.41	1.99
2012-2013	15,110.70	2679.95	17790.65	791,137.23	2.25
2013-2014	17,503.84	2472.98	19976.82	764,605.09	2.61
2014-2015	20,480.20	2930.85	23411.05	758,371.89	3.09
2015-2016	18,620.28	2975.01	21595.29	643,296.76	3.36
2016-2017	19,222.14	2813.4	22035.54	660,206.73	3.34

Source: Ministry of Commerce and Industry, Department of Commerce, GoI; author's calculation.

Figure: 2 India's Trade with South Asia (value in US million \$)



An Overview of India's trade with ASEAN:

Table: 3 below shows India's trade with ASEAN. It can be seen from the table that India's export to ASEAN increased from US\$ 2,902.45 million in the year 1996-97 to US\$ 30961.62 million in the year 2016-2017. The imports also grew from US\$ 2934 million to US\$ 40617.31 million in the year 2016-2017. However, it is interesting that during the period of study the import grew at a faster rate than the export. Table: 3 below is represented with the help of a graph (Figure: 3).

Table 3: India's trade with ASEAN (value in US million \$)

Year	India's Export to ASEAN	India's Import from ASEAN	Total Trade Turnover with ASEAN	India's total trade turnover	% share of India's total tradeturnover with ASEAN
1996-1997	2,902.45	2934	5,836.45	72,602.36	8.03
1997-1998	2,464.78	3396.44	5,861.22	76,269.47	7.68
1998-1999	1,629.98	4317.38	5,947.36	75,607.43	7.86
1999-2000	2237.5	4629.16	6,866.66	86,560.55	7.93
2000-2001	2913.78	4147.48	7,061.26	95,096.74	7.42
2001-2002	3457.01	4387.22	7,844.23	95,240.00	8.23
2002-2003	4618.54	5150.17	9,768.71	114,131.57	8.55
2003-2004	5821.71	7433.11	13,254.82	141,991.66	9.33
2004-2005	8425.89	9114.66	17,540.55	195,053.37	8.99
2005-2006	10411.3	10883.67	21,294.97	252,256.26	8.44
2006-2007	12607.43	18108.48	30,715.91	312,149.29	9.84
2007-2008	16423.52	22674.81	39,098.33	414,786.19	9.42
2008-2009	19140.63	25797.96	45,343.59	488,991.67	9.27
2009-2010	18113.71	30607.96	43,911.67	467,124.31	9.40
2010-2011	25627.89	42158.84	78,903.19	619,584.68	9.07
2011-2012	36744.35	42866.36	75,874.57	795,283.41	9.92
2012-2013	33008.21	41,278.09	74,411.64	791,137.23	9.59
2013-2014	33133.55	44714.77	76,527.35	764,605.09	9.73
2014-2015	31812.58	39909.6	65,064.10	758,371.89	10.09
2015-2016	25154.5	40617.31	71,578.93	643,296.76	10.11
2016-2017	30961.62		660,206.73		10.84

Source: Ministry of Commerce and Industry, Department of Commerce, GoI; author's calculation.

Figure: 3 India's Trade with ASEAN (value in US million \$)

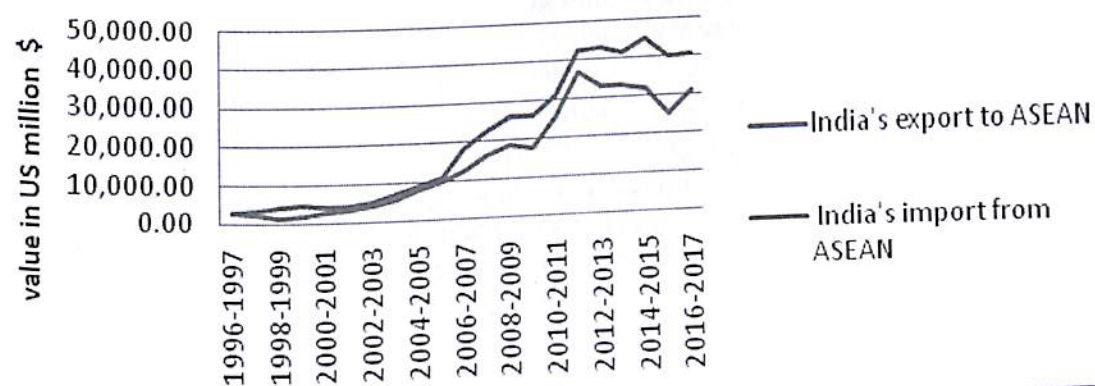
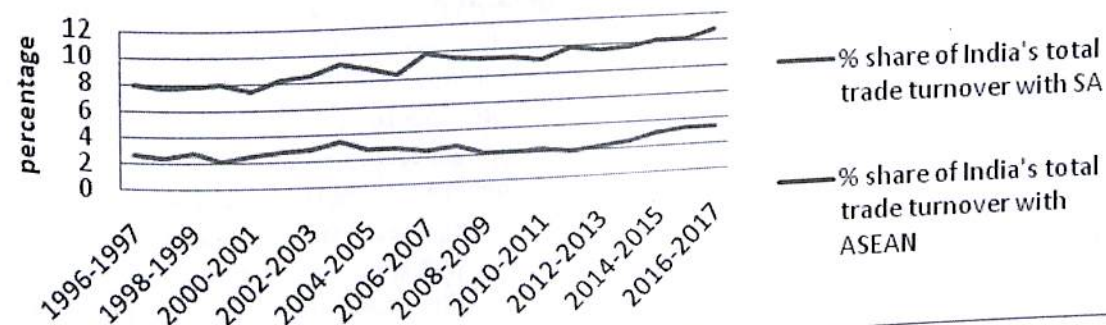


Figure: 4 below shows the percentage share of India's total trade turnover with South Asia and ASEAN. It is clear from the graph that the percentage share of India's total trade turnover with ASEAN is higher than that of South Asia.

Figure: 4 Percentage share of India's Total Trade Turnover with South Asia and ASEAN



Role of Look East Policy in the development of North-Eastern Region:

In order to enhance the relevance of the Look East Policy for the North-East region, India has been giving greater importance on the connectivity of the region by developing the infrastructure for modes of connectivity such as land routes, railways, air connectivity, waterways, telecommunication linkages and energy infrastructure development both in the field of hydroelectric and hydrocarbon. Gradual integration of the North-Eastern region of India through cross-border market access, this region can become the bridge between the Indian economy and what is arguably the fastest growing and most dynamic region in the world that is South East Asia. Moreover, the strategic, political and economic importance of North-East for India's Look East Policy cannot be overemphasized.

The look east policy turned into Act East policy in November, 2014. It was formally expressed by Prime Minister Narendra Modi at the 12th ASEAN India Summit and 9th East Asia Summit held in Nay Pyi Taw, Myanmar. The Act East Policy has revived the cross-border trade. It has been observed by FICCI (2017) that over the last several years' cross-border trade between the North-East India and its bordering countries has increased by more than 50 per cent. However, it is interesting to note that the North-East region of India registers a trade deficit with Bangladesh and trade surplus with China which happens to be opposite from the declining over the years owing to increased trade volume with the other neighboring countries. The North-East India shares favorable trade routes, with all other bordering countries, apart from Nepal and more than 96 per cent of its cross-border trade is happening through Land Custom Stations (LCSs). In a paper, CUTS (Consumer Unity & Trust Society) 2017, had identified a number of products, such as fresh and processed fruits, other horticultural items, local herbs and herbal products, jute products, essential oil, minerals like coal and limestone, raw cotton, floricultural items, handloom and handicrafts, tea, coffee, rice, raw and processed rubber, handmade paper as possible tradable products between the North-East India and neighboring countries. With appropriate policies and infrastructure in place, there is huge potential of intensification of regional value chains by reaching out to its immediate neighbors and other countries in India's extended neighborhood such as those in the South East Asia.

Role of India in connecting its North-East region with South Asia and Southeast Asia:

The rich resource endowment and the location advantage of the North-East region of India give it an opportunity to develop itself as a centre for dealing with India's Eastern Neighbors. The region is unique in terms of growth opportunities it provides by interconnecting the region with India's neighbors in the South and South East Asia. Through Land Custom Stations (LCS) notified under Section 7 of the Customs Act, 1962, India had agreements to trade overland between its North-East region and five neighboring countries, namely, Bangladesh, Bhutan, China, Myanmar and Nepal. The cross-border trade via LCSs on Bangladesh and Bhutan Border is governed by FTA (Free Trade Agreement) on SAFTA; on the other hand the cross-border trade with China and Myanmar is governed by BTA (Border Trade Agreement). The potential for road connectivity between South Asia and Southeast Asia is huge however the connectivity would be complete if the road networks are linked with maritime routes to ensure movement of cargo, trade and transportation. In the case of establishing railway networks yet initiatives have been taken in the recent times to ensure connectivity network in this region. The Indian Railways intends to connect all North-East states capitals by March 2020. It has also intended to link the 120 km Lumbding-Silchar broad gauge line (which was commissioned in March 2015 as a connecting link between Barak Valley in South Assam with Tripura, Manipur and Mizoram for goods movement) with Agartala, Tripura. Another significant planning is that of 15.6 km railway line between Agartala and Akhaura in Bangladesh which would connect West Bengal with Tripura and it will also provide cross border linkages with Tripura and entire Badarpur- Lumbding- Guwahati- Siliguri route. The

Indian Railways is also surveying a possible route in order to establish a cross border link with Myanmar. It intends a route from Sairang to Hmawngbuchhuah on Mizoram's southern tip, bordering Myanmar's Rakhine state, Hmawngbuchhuah neighbours Zochachhuah. The railway line under discussion will link up with the yet to be completed Kaladan Multi-Modal Transit Transport Project. Airport links are underdeveloped in the North-East Region of India due to geographical and security issues which hinder the infrastructure development in the region. However, most of the cities in this region are now connected by the air links. As witnessed by FICCI (2017) there are certain positive developments which have been undertaken in the recent times. It has been observed that apart from major Pan-Asian projects like Asian Highway I and II, the Trans-Asian Railway and the BBIN (Bangladesh, Bhutan, India, Nepal) Corridor, a number of regional initiatives like the Trans-Arunachal Highway, rail connectivity to state capitals and expansion of airports have also been taken up.

The North eastern region connects India through land routes with Myanmar or Southeast Asia. Another possible way of connecting North-East India with Calcutta is through Bangladesh. This will reduce the road distance and thereby enhance greater connectivity and enhanced trade movement. Thereby it can be assumed that if Bangladesh is used as connecting link between mainland India and north-east region than the entire sub-region would gain enormously. Thus, land border connectivity to the South Asia and South East Asia is directly linked with India's North-Eastern States which shares common borders with Myanmar and Bangladesh. The four North-Eastern states (Mizoram, Assam, Meghalaya, and Tripura) share their border with Bangladesh of which except Mizoram, NER-Bangladesh trade flows mainly through Assam, Meghalaya and Tripura. On the other hand, trade between NER-Myanmar mainly flows through Moreh in Manipur.

FINDINGS:

1. India's total exports have grown from US\$ 33,469.95 million in 1996-97 to US\$ 275,851.17 million in the year 2016-2017. India's imports from world grew up from US\$ 39132.41 million in the year 1996-97 to US\$ 384,355.56 million in the year 2016-17. Therefore the exports increased by eightfold and the imports increased by ninefold during the study period.
2. India's export to South Asia increased from US\$ 1724.39 million in the year 1996-97 to US\$ 19,222.14 million in the year 2016-2017. The imports also grew from US\$ 242.31 million to US\$ 2813.4 million in the year 2016-2017. India's Exports grew at a faster rate than the imports from South Asia.
3. India's export to ASEAN increased from US\$ 2,902.45 million in the year 1996-97 to US\$ 30961.62 million in the year 2016-2017. The imports also grew from US\$ 2934 million to US\$ 40617.31 million in the year 2016-2017. India's imports grew at a faster rate than exports to ASEAN
4. The percentage share of India's total trade turnover with ASEAN is higher than that of South Asia.
5. India's exports grew at a faster rate than the imports with South Asia. However, on the other hand India's imports grew faster than export with ASEAN.

CONCLUSION:

Although the North-East region of India is a connecting link between South and Southeast Asia yet this link is seemed to be critical due to clear stress imposed by security issues and economic stagnation and poor infrastructure. Though India's Look East Policy has made progress but it has only bypassed the North-Eastern region. However, the Act East policy plans to revive it and plans and proposals are in place to build connectivity networks through India and its North-East region. Implementation of the plans however remains an issue.

REFERENCE:

Banerjee, P, S Hazarika, M Hussain and R Sammadar (1999), "Indo-Bangladesh Cross-Border Migration and Trade", *Economic and Political Weekly*, Vol. 34, No. 36, pp. 2549-2551

Banerjee, C. (Feb 26, 2017), From Look East to Act East. *The Hindu*, Retrieved from <https://www.thehindubusinessline.com>

Chand, M (2014), "India's Enhanced Look East Policy Takes Wings", Ministry of External Affairs, GoI, Retrieved from: <http://www.mea.gov.in>

Choudhary, S (2013), "India and ASEAN Trade: An Overview", *International Journal of Social Science & Interdisciplinary Research*, Vol 2, No. 2, pp 75-86

Datta, S (2017), "India- the Bridge Linking South and South East Asia", Observer Research Foundation, Retrieved from: <http://www.orfonline.org/research/india-the-bridge-linking-south-and-southeast-asia/>

Government of India (2011), "Look East Policy and the North Eastern States", Ministry of Development of North Eastern Region

"Harnessing the Potential for Cross Border Trade between North-East India and its neighboring countries", *Discussion Paper*, CUTS & FICCI, 2017

Maheswararao, K (2015), "Growth of India's trade with individual SAARC Countries", *International Journal of Academic Research*, Vol.2, No. 2(1), pp. 102-110

Ministry of Commerce and Industry, Department of Commerce, Government of India, Retrieved from: <http://commerce.nic.in/eidb/default.asp>

Mohan, C.R. (2015), "From Looking East to Acting East", Ministry of External Affairs, GoI, Retrieved from: <http://www.mea.gov.in/in-focus/article>

Rao, K.M. (2015), "India's Trade with SAARC Countries", *International Journal of Multidisciplinary Advanced Research Trends*, Vol 2, No 4, pp. 129-137 Retrieved from: <http://mea.gov.in/aseanindia/20-years.htm>

Saxena, S. (2016), "India Trade with SAARC Countries", *International Journal of Research in Humanities, Arts and Literature*, Vol 4, No.12, pp. 73-84

Subramanian, N. (July 11, 2016), "Connectivity through Myanmar Crucial for India's Look East Policy and Ties with ASEAN", *The Hindu*, Retrieved from <http://www.thehindu.com>.

INTRA-REGIONAL DISPARITY IN PROVIDING AGRICULTURAL CREDIT BY COMMERCIAL BANKS: A STUDY OF NORTH-EAST INDIA

Chayanika Sarma
Assistant Professor
Dept. of Commerce, Pandu College, Guwahati-12

ABSTRACT:

Agricultural sector plays a crucial role in Indian economy. It provides employment to a large segment of Indian population and around one-quarter of India's national income originates from this sector. Hence, to prosper economically, the agricultural sector has to be developed to its fullest potential. Adoption of modern technology, use of quality inputs etc are of immense significance in this regard. However, in the absence of adequate and timely supply of credit, it would be very difficult to reap the benefits of modernized agriculture. The commercial banks can be instrumental in the process of providing institutional credit to agriculture. However, it has been argued that commercial banks in India have not been able to extend agricultural credit as anticipated. It is also argued that there exists regional disparity in extension of credit by commercial banks in India. The scenario inside North Eastern region of India may not be an exception in this respect. Against this backdrop, the present study has made an attempt to determine existence of intra-regional disparity in extension of agricultural credit by commercial banks in North Eastern region of India. The study reveals that intra-regional disparity has been widening with time.

Keywords: Agriculture, Credit, Commercial Banks and Disparity

INTRODUCTION:

Agricultural sector plays a crucial role in Indian economy. It provides employment to a large segment of Indian population and around one-quarter of India's national income originates from this sector. Moreover, it supplies raw materials to different agro based industries such as sugar, Jute, cotton, textile, etc. The Indian population is growing fast, resulting in rising demand for food. To meet the demand of ever increasing population, the agricultural production must increase considerably.

Hence, to prosper economically as well as socially, the agricultural sector has to be developed to its fullest potential. Adoption of modern technology, use of quality inputs, etc are of immense significance in this regard. However, in the absence of adequate and timely supply of credit, it would be very difficult to reap the benefits of modernized agriculture. The commercial banks can be instrumental in the process of providing institutional credit to agriculture through mobilization of savings. During beginning of post-independence period, the agricultural sector was unable to receive its due share of institutional credit. The commercial banks used to provide credit only to big industrial houses and the agricultural sector was neglected by the banks. Consequently, the high cost bearing informal sector continued to be the prime source of agricultural credit. However, with the introduction of economic planning in early 1950s, the agricultural sector succeeded in acquiring attention. Increased emphasis on high agricultural production raised the demand for agricultural credit. Hence, as a matter of national policy, the commercial banks were directed to provide agricultural credit for the first time in late 60's. Since then, commercial banks have been making effort to extend credit to agricultural sector. The role of commercial banks in providing agricultural credit assumed considerable significance in the post nationalization period (July, 1969 onwards). The commercial banks were asked to prioritize granting credit to agriculture. However, it has been argued that commercial banks in India have not been able to extend agricultural credit as anticipated. It is also argued that there exists regional disparity in extension of credit by commercial banks in India. The scenario inside North Eastern region of India may not be an exception in this respect.

The North Eastern region of India consisting states such as Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland, Sikkim and Tripura is considered as economically less developed region. Notably, the economy of the region mainly depends on agriculture. Hence, the development of agriculture can uplift the economic condition of the people of the region to a great extent through enhanced income and increased purchasing power. The role of commercial banks is crucial in this regard. By providing the required funds, the banks can help the farmers to increase agricultural productivity, thereby enhancing their income. However, economic development of the region in true sense requires equitable distribution of agricultural credit across the region.

Against this backdrop, the present study aims to determine existence of intra-regional disparity in extension of agricultural credit by commercial banks in North Eastern region (NE region) of India. Further, the study also attempts to know the status of grant of agricultural credit in NE region as against all India level statistics.

REVIEW OF RELATED LITERATURE:

A number of studies have been carried out in India and outside India. A few reviewed literatures are highlighted below:
 Betubiza and Leatham (1995) applied tobit econometric procedure to examine the effect of selected demand and supply factors on non-real estate agricultural lending by commercial banks in Texas. Results showed that the banks had reduced their agricultural loan portfolios due to increased use of interest sensitive deposits in post deregulation period.

Sharan, Peter and Paul (2000) evaluated how changes in commercial banking structure influenced credit availability and also assessed the effects of bank characteristics on loan amount and rate. The study further evaluated credit term differences among borrower types. As per results of the study, loan amounts were not significantly influenced by the bank characteristics whereas bank characteristics affected the loan rates. Some differentiation could be observed in credit terms among the demographic groups.

Sahu and Rajasekhar (2005) in their study tried to observe the impact of banking sector reform on the flow of credit to the agricultural sector during the period 1981 to 2000. For the purpose, the period was divided into two sub periods viz 1981 to 1991 (pre-reform period) and 1992 to 2000 (reform period). It was observed that the share of credit to agriculture in total net bank credit had significantly declined, especially after the introduction of banking sector reform. The study further showed that an increasing lending rate reduces the credit disbursement to agriculture by scheduled commercial banks. Credit flow to agriculture was positive with associated with investment in government securities whereas its relationship was positive with the incidence of rural bank branches.

Kumar, Singh and Sinha (2010) examined the performance of institutional credit flow to agricultural sector in India and also identified the determinants of increased use of institutional credit at the farm household level in India. The study revealed that the institutional credit to agriculture has increased substantially during last four decades and that commercial banks have emerged as a major source of institutional credit in recent years. The quantum of institutional credit, accessed by the farming households is affected by socio-demographic factors such as education, family size, caste, gender, occupation of households, etc.

Obilor (2013) examined the impact of Agricultural Credit Guarantee Scheme Fund, agricultural product prices, government fund allocation and commercial bank's credit on agricultural productivity in Nigeria. It was revealed that Agricultural Credit Guarantee Scheme Fund and government fund allocation to agriculture produced have a significant positive effect on agricultural productivity while other variables i.e. agricultural product prices and commercial bank's credit to agricultural sector produced have negative effect on agricultural production.

The objective of the study carried out by Seena (2015) was to describe the management of agricultural credit in India and also to observe the impact of various banking sector reforms on agriculture. A review of performance of agricultural credit in India reveals that though the flow of institutional credit has increased over the years, there are several gaps in the system like inadequate provision of credit to small and marginal farmers, limited deposit mobilization and heavy dependence on borrowed funds. Banking sector reforms have affected the Indian agricultural sector.

Selvaraj and Balajikumar (2015) tried to find out the extent of capital investment in agriculture made by sample farmers of Tamil Nadu and to know the factors that influenced the capital investment in agriculture. The number of farmers and the level of capital investment were found to be more in case of those who had medium level of investment, followed by the farmers who had reported a low level of investment. Educational qualification and size of family are the factors influencing the level of capital investment in agriculture.

Selvaraj and Palajikumar (2015) highlighted the agricultural credit extended by the

commercial banks in Tamil Nadu and analysed the repayment performance of the borrowers. It was inferred that the recovery performance was better in the study area which in turn induced the effective functioning of the lead bank in the study area. Solanki (2016) made an attempt to examine the trend of agricultural finance provided by the selected bank i.e. Central Bank of India and also to know about the fulfillment of RBI target by the bank. It was observed that the bank's credit to agricultural sector is increasing. However, the sample bank failed to reach the target fixed by RBI during the study period (i.e. 2008-09 to 2014-15).

Udoka, Mbat and Duke (2016) examined the effect of commercial bank's credit on agricultural output in Nigeria. The ordinary least square regression technique was employed in the study. The results showed that the agricultural production had positive relationships with agricultural credit guarantee scheme fund, commercial bank's credit and government expenditure on agriculture. However, a negative relationship could be observed between interest rate and agricultural production.

GAP IN THE EXISTING LITERATURE:

It is apparent from the foregoing discussion that studies have been conducted concerning the role of commercial banks on agricultural sector in India as well as outside India. However, there is no study which has examined the existence of regional disparity in providing agricultural credit by commercial banks in North-East India. The balanced development of agricultural sector across the region requires equal attention of commercial banks. Moreover, the economy of North Eastern region of India is primarily agrarian. The economic development of the region greatly depends on the growth of agricultural sector. Hence, in the present study, an attempt has been made to examine existence of intra-regional disparity in extension of agricultural credit by commercial banks in North Eastern region of India.

OBJECTIVES:

The objectives set for the present study are:

- To compare the state of deployment of agricultural credit by commercial banks in NE region with all India average
- To observe the status of the eight states of NE region in respect of extension of agricultural credit by commercial banks
- To determine existence of intra-regional disparity in providing agricultural credit by commercial banks in NE region

METHODOLOGY:

Sources of data:

As the study aims at determining the existence of disparity in extension of bank credit to agricultural sector, secondary source of information are required for analysis purpose. Hence, the secondary data required for analysis have been acquired and compiled from various issues of RBI (Reserve Bank of India) annual publications such as

- Basic Statistical Returns of Scheduled Commercial Banks of India,

- Statistical Tables relating to Banks in India
- Other contemporary published work.

Periodicity:

The study period for this work is from **March 2006 to March 2016**, spanning 10 years of duration. However, for analysis purpose, data have been collected at an interval of two years, i.e., March 2006, March 2008, March 2010, March 2012, March 2014 and March 2016 respectively.

Tools of Analysis:

In the present work, an effort has been made to study the existence of disparity in providing agricultural credit. Therefore, to measure disparity, the acquired data have been analyzed by applying analytical tools viz. i) **annual compounded growth rate**, ii) **co-efficient of variation** and iii) **ratio**.

Parameters:

The parameters utilized for determining disparity are mentioned below:

- Gross Agricultural Credit
- Agriculture Credit to Total Credit Ratio
- Agricultural Credit to Deposit Ratio

ANALYSIS OF THE STUDY:

In order to arrive at the stipulated objectives, the acquired data have been analysed and interpreted (parameter-wise) as follows:

Gross Agricultural Credit:

The study of gross agricultural credit reflects the volume of credit extended by commercial banks to agriculture. Therefore, this parameter has been considered to determine disparity in providing agricultural credit by commercial banks. Table-1 displays the amount of gross agricultural credit extended by commercial banks in NE region and India. Table: 2 shows state-wise data of gross agricultural credit.

Table: 1 Gross Agricultural Credit in NE region and India as on 31st March (Rs in crores)

Year	NE region	All India
2006	1082 (0.56)	191973 (100)
2008	2497 (0.81)	308087 (100)
2010	3141 (0.68)	463323 (100)
2012	5839 (1.0)	583343 (100)
2014	7572 (0.85)	891447 (100)
2016	11098 (0.95)	1173098 (100)
ACGR (2006-16)	26.21%	19.84%

Source: Statistical Tables relating to Banks of India, RBI Publication
 Note: Figures in bracket indicates percentage share of NE region in gross agricultural credit of India

It can be observed from Table:1 that the amount of gross agricultural credit granted in NE region gradually increased from only Rs 1,082 crores in March, 2006 to Rs 11,098 crores in March, 2016, registering an ACGR of 26.21%, whereas the ACGR was 19.84% at all India level. Thus, the growth rate of agricultural credit registered in NE region was higher than national average during 2006-16, which is certainly a positive indication for prospect of agricultural sector in the region. However, an observation of percentage share of NE region in gross agricultural credit of India reveals a different picture. During the entire study period (2006-16), the share of NE region could not exceed one percent (1%), indicating low volume of extension of bank credit to agriculture in the region. Hence, it can be concluded that although the growth rate registered in NE region was higher than the national level growth rate, yet the situation is not very encouraging as the gross amount of agricultural credit extension in the region is quite low as compared to gross credit advanced to the sector at all India level.

Table: 2 State-wise Distribution of Gross Agricultural Credit as on 31st March (Rs in crores)

States	Year						ACGR (2006-16)
	2006	2008	2010	2012	2014	2016	
Arunachal Pradesh	22 (2.03)	28 (1.12)	104 (3.31)	131 (2.24)	175 (2.31)	167 (1.50)	22.50%
Assam	732 (67.65)	1514 (60.63)	2108 (67.11)	4028 (68.98)	5373 (70.96)	8259 (74.42)	27.42%
Manipur	44 (4.07)	112 (4.49)	189 (6.02)	368 (6.30)	388 (5.12)	382 (3.44)	24.13%
Meghalaya	85 (7.86)	128 (5.13)	166 (5.28)	280 (4.80)	389 (5.14)	461 (4.15)	18.42%
Mizoram	22 (2.03)	293 (11.73)	135 (4.30)	137 (2.35)	143 (1.89)	142 (1.28)	20.50%
Nagaland	44 (4.07)	148 (5.93)	124 (3.95)	332 (5.69)	285 (3.76)	301 (2.71)	21.20%
Sikkim	16 (1.48)	61 (2.44)	55 (1.75)	96 (1.64)	122 (1.61)	166 (1.50)	26.36%
Tripura	117 (10.81)	213 (8.53)	260 (8.28)	466 (7.98)	697 (9.20)	1218 (10.97)	26.36%
CV	180.13%	157.86%	177.21%	183.49%	190%	201.78%	
NER	1082 (100)	2497 (100)	3141 (100)	5839 (100)	7572 (100)	11098 (100)	26.21%

Source: Statistical Tables relating to Banks of India, RBI Publication
 Note: Figures in bracket indicates percentage share of NE states in gross agricultural credit of NE region

An observation of state-wise distribution of agricultural credit by commercial banks in Table: 2 reveals an important fact that Assam acquired the lions share in gross agricultural credit of NE Region. It can be perceived that the state held more than 60% share in gross

agricultural credit of NE region during the entire study period. Moreover, the state witnessed a rising trend whereas other NE states experienced declining trend except Sikkim and Tripura. The share of Assam in gross agricultural credit of NE region was as high as 67.65% in March 2006, which further went up to 74.42% in March 2016. A perusal of ACGR visible in the table also reflects that Assam registered the highest growth rate (i.e. 27.42%) in respect of extension of gross agricultural credit by commercial banks. Sikkim and Tripura performed next after Assam as the states jointly registered second highest growth rate (i.e. 26.36%). Moreover, the two NE states along with Assam enjoyed rising trend in their share in gross agricultural credit of NE region. At the other extreme, Meghalaya performed poor, recording the lowest ACGR (i.e. 18.42%). Moreover, the state of Meghalaya witnessed considerable decrease in its share from 7.86% in March 2006 to only 4.15% in March 2016. Thus, it can be concluded that the effort of commercial banks in providing gross agricultural credit was best in Assam, whereas it was poorest in Meghalaya during 2006-16.

The study of CV in Table: 2 reflects high degree of intra-regional disparity in respect of grant of gross agricultural credit in NE region. In fact, the disparity amongst the states of NE region has broadened with the passage of time. It can be observed that the CV recorded in March 2006 was as high as 180.13%, which declined to some extent in March 2008 (i.e. 157.86%). However, there was gradual increase from March 2010 onwards. This observation induces to conclude that there is inequitable distribution of volume of credit to agriculture by commercial banks inside NE region.

Agricultural Credit to Total Credit Ratio:

The agricultural credit to total credit ratio reflects the portion of total bank credit made available to agriculture. In other words, this ratio indicates the weightage assigned to agriculture by commercial banks in granting credit. Thus, the parameter can be fruitfully applied for the purpose of analysis. Table-3 displays the agricultural credit to total credit ratio in NE region and India. Table-4 presents the ratio for the NE states.

Table: 3 Agricultural Credit to Total Credit Ratio in NE region and India as on 31st March (in %)

Year	NE region	All India
2006	7.97	12.65
2008	12.17	12.87
2010	11.01	13.85
2012	15.33	12.14
2014	15.57	14.23
2016	16.91	15.59
ACGR (2006-16)	7.81	2.11

Source: 1) Statistical Tables relating to Banks of India, RBI Publication (Agricultural Credit)
 2) Basic Statistical Returns, RBI publication (Total Credit)

Table: 4 State-wise Agricultural Credit to Total Credit Ratio as on 31st March (in %)

States	Year						ACGR (2006-16)
	2006	2008	2010	2012	2014	2016	
Arunachal Pradesh	5.96	3.43	9.15	9.53	9.81	6.59	1.00
Assam	8.35	11.6	11.48	16.03	16.94	19.12	8.64
Manipur	7.17	12.96	16.65	28.86	22.76	15.4	7.94
Meghalaya	6.87	8.74	8.48	9.81	9.79	10.25	4.08
Mizoram	4.47	34.96	11.34	10.48	8.51	5.99	2.97
Nagaland	10.02	17.07	9.77	21.24	14.05	11.41	1.00
Sikkim	2.72	6.19	4.71	7.25	8.94	9.32	13.10
Tripura	10.86	13.12	11.33	14.28	15.93	19.94	6.26
CV	38.52	71.60	32.62	49.45	37.66	43.71	
NER	7.97	12.17	11.01	15.33	15.57	16.91	7.81

Source: 1) Statistical Tables relating to Banks of India, RBI Publication (Agricultural Credit)
2) Basic Statistical Returns, RBI publication (Total Credit)

A study of Table: 3 reveals that in March 2006, the agricultural credit to total credit ratio in NE region was lower than India. It was 7.97% in NE region as against 12.65% at all India level. Nevertheless, the scenario reversed at the end of study period. The ratio recorded in NE region (i.e. 16.91%) became higher than the national average (i.e. 15.59%) in March, 2016. A view at ACGRs in Table: 3 also discloses an impressive fact. The above analysis implies that 7.81%, while same was only 2.11% at national level. The above analysis implies that commercial banks operating in NE region are gradually paying attention on agricultural sector by increasing the share of agricultural credit in total credit extended.

Table: 4 exposes that the share of agricultural credit in total credit rose up in all NE states. However, the rise in respect of the ratio was noticeable in Sikkim as the ratio rose up from only 2.72% in March, 2006 to 9.32% in March, 2016. Consequently, the highest growth rate was observed in Sikkim. The state registered a praise worthy ACGR (i.e. 13.10%), whereas the NE average was only 7.81%. In contrast, Arunachal Pradesh and Nagaland jointly registered the lowest ACGR (i.e. 1%). In short, the effort of commercial banks in providing agricultural credit in relation to total credit was best in Sikkim whereas Arunachal Pradesh and Nagaland experienced lowest status in respect of grant of agricultural credit against total advances. The intra-regional disparity in respect of agricultural credit to total credit ratio has broadened during 2006-16. It can be viewed from Table: 4 that the percentage of CV went up from 38.52% in March, 2006 to 43.71% in March, 2016. However, degree of intra-regional disparity was highest in March, 2008 (i.e. 71.60%).

Agricultural Credit to Deposit Ratio:

Agricultural Credit to Deposit ratio reflects the level of extension of credit to agricultural sector in proportion to aggregate deposit mobilized. Higher the ratio, the greater is the utilization of deposit mobilized towards agriculture. Table: 5 presents agricultural credit to deposit ratio for NE region and India whereas Table: 6 depicts the ratio in respect of NE states.

A perusal of Table: 5 reveals that the status of NE region is not encouraging, when the share of agricultural credit in total deposit mobilized in the region is looked into. It can be perceived from the table that in all relevant years of the study period, the ratios of NE region continued to be lower than all India level ratios which indicate towards better utilization of deposit for agricultural purpose at national level. However, one positive aspect for NE region is the higher growth rate registered by the region. The ACGR of NE region and India was 7.40% and 2.91% respectively. Although the growth rate in NE region looks reasonably good, yet, the amount of deposit utilized for agricultural sector is quite low in the region. There is enough scope of extension of agricultural credit by commercial banks, considering the deposit mobilized in the region.

Table: 5 Agricultural Credit to Deposit Ratio in NE region and India as on 31st March (in %)

Year	NE region	All India
2006	3.15	9.17
2008	4.79	9.54
2010	3.83	10.07
2012	5.26	9.6
2014	5.31	11.1
2016	6.43	12.22
ACGR (2006-16)	7.40	2.91

Source: 1) Statistical Tables relating to Banks of India, RBI Publication (Agricultural Credit)
2) Basic Statistical Returns, RBI publication (Deposit)

Table: 6 State-wise Agricultural Credit to Deposit Ratio as on 31st March (in %)

States	Year						ACGR (2006-16)
	2006	2008	2010	2012	2014	2016	
Arunachal Pradesh	1.49	1	2.34	2.28	2.28	1.91	2.51
Assam	3.51	4.78	4.25	6.05	6.32	8.07	8.68
Manipur	3.62	6.12	6.84	9.04	7.55	6.33	5.75
Meghalaya	2.7	2.66	2.12	2.53	2.64	2.54	-0.61
Mizoram	2.3	19.55	5.5	4.08	3.13	2.4	0.43
Nagaland	2.24	5.67	2.92	5.78	4.32	3.89	7.81
Sikkim	1.23	2.94	1.75	2.39	2.34	2.61	7.44
Tripura	3.43	4.44	3.4	4.48	5.13	7.03	7.4
CV	35.75	97.89	48.95	50.91	46.88	55.81	
NER	3.15	4.79	3.83	5.26	5.31	6.43	7.4

Source: 1) Statistical Tables relating to Banks of India, RBI Publication (Agricultural Credit)
2) Basic Statistical Returns, RBI publication (Deposit)

A glance at agricultural credit to deposit ratio of NE states in Table: 6 reveals that it is Assam which was in most favorable position. It can be perceived that the ACGR of Assam was highest (i.e. 8.68%), followed by Sikkim (7.81%) and Tripura (7.44%). At the other extreme, the growth of agricultural credit in proportion to aggregate deposit mobilized was poorest in Meghalaya. In fact, the ACGR recorded in the state was negative (i.e. -0.61%) with regard to the ratio. In brief, Assam topped whereas Meghalaya bottomed the list in respect of agricultural credit to deposit ratio.

As far as intra-regional disparity is concerned, it is perusable from Table: 6 that there was increasing intra-regional disparity in case of this indicator too. The CV in March 2006 was 35.75%, which rose up to 55.81% in March, 2016. Thus, it can be inferred that the grant of credit to agriculture in proportion to deposit is not equitable amongst the NE states.

FINDINGS OF THE STUDY:

The present study examined the status of extension of agricultural credit by commercial banks in NE region and India. Moreover, the existence of intra-regional disparity in NE region was verified with the help of a few selected parameters. The critical examination of these parameters has drawn out some noticeable findings which are stated below:

Gross Agricultural Credit:

- The growth rate of gross agricultural credit in NE region was higher than the growth rate registered at national level. However, the percentage share of NE region in gross agricultural credit of India could not exceed one percent, indicating low volume of extension of bank credit to agriculture in the region in comparison to total volume of agricultural extension all over India.
- Assam acquired the lions share in gross agricultural credit of NE Region. Moreover, Assam registered the highest growth rate. Sikkim and Tripura performed next after Assam. At the other extreme, the effort of commercial banks in providing gross agricultural credit was poorest in Meghalaya.
- High degree of intra-regional disparity exists in respect of grant of gross agricultural credit in NE region. In fact, the disparity has broadened with the passage of time.

Agricultural Credit to Total Credit Ratio:

- The growth rate of NE region was higher than the national level growth rate in respect of agricultural credit to total credit ratio.
- The effort of commercial banks in providing agricultural credit in relation to total credit was best in Sikkim, whereas Arunachal Pradesh and Nagaland experienced poor status in respect of grant of agricultural credit against total advances.
- The intra-regional disparity in respect of agricultural credit to total credit ratio has broadened during 2006-16.

Agricultural Credit to Deposit Ratio:

- The agricultural credit to deposit ratio of NE region continued to be lower than all India level ratio during the whole study period, which indicate towards better utilization of deposit for agricultural purpose at national level. However, NE region recorded higher growth rate than India.
- Agricultural credit to deposit ratio was most favorable in Assam. At the other extreme, the growth of agricultural credit in proportion to aggregate deposit mobilized was poorest in Meghalaya.
- There was increasing intra-regional disparity in NE region in respect of agricultural credit to deposit ratio.

CONCLUSION:

The development of agricultural sector is crucial for lifting the economic condition of people as majority of the Indian population earn their livelihood from agricultural activities. The commercial banks can contribute in this regard by funding different agricultural operations. The present study reveals that the share of NE region in gross agricultural credit of India is not insignificant, which implies that the volume of bank credit extended to agriculture is not adequate in the region in comparison to national statistics. Yet, a positive fact observed was the higher growth rate registered by the region than India. Moreover, the share of agriculture in total credit extended in the region has been gradually increasing over the years. Hence, it can be concluded that commercial banks operating in NE region are gradually paying attention on agricultural sector. However, the amount of deposit utilized for agricultural credit is quite low in the region. This fact indicates towards enough scope of extension of agricultural credit by commercial banks, considering the deposit mobilization in the region.

The state-wise analysis of grant of agricultural credit by commercial banks in NE region highlights the fact that commercial banks operating in NE region paid more attention in providing agricultural credit to Assam. Sikkim and Tripura followed Assam in this regard. In contrast, agricultural sector of Meghalaya could attract the least attention of commercial banks. Thus, the agricultural sector of the state (Meghalaya) requires special attention in providing banks. The study also reveals that intra-regional disparity exists in NE region in providing agricultural credit by commercial banks. In fact, the disparity has been widening with time. This is a matter of concern which requires attention from the end of policy makers, to promote balanced growth of agricultural credit in NE region.

REFERENCE:

- Arjun K.M. (2013), "Indian Agriculture-Status, Importance and Role in Indian Economy", *International Journal of Agriculture and Food Science Technology*, 4(4), 343-346, [https://www.ripublication.com/ijafst_spl/ijafstv4n4spl_11.pdf; accessed on 18th February, 2018]
- Betubiza E.N. and Leatham D.J. (July 1995), "Factors Affecting Commercial Bank Lending to Agriculture", *J. Agr and Applied Econ.*, 27(1), 112-126, [https://www.emeraldinsight.com/doi/abs/10.1108/00214670080001108; accessed on 8th May, 2018]
- Kumar A., Singh K.M. and Sinha S. (July-December, 2010), "Institutional Credit to Agricultural

Sector in India: Status, Performance and Determinants", *Agricultural Economics Research Review*, Vol-23, 253-264

Obilor S.I. (January, 2013), "The Impact of Commercial Bank's Credit to Agriculture on Agricultural Development in Nigeria: An Econometric Analysis", *International Journal of Business, Humanities and Technology*, 3(1), 85-94, [https://www.emeraldinsight.com/doi/abs/10.1108/00214670080001108; accessed on 8th May, 2018]

Sahu G.B. and Rajasekhar D. (December 31st, 2005-January 6th, 2006), "Banking Sector Reform and Credit Flow to Indian Agriculture", *Economic and Political Weekly*, 40 (53), 5550-5559

Seena P.C. (2015), "Management of Agricultural Credit and the Impact of Indian Banking Sector Reform on Agriculture", *International Review of Research in Emerging Markets and the Global Economy (IRREM), An Online International Research Journal*, 1(3), 378-391, [http://globalbizresearch.org/files/6003_irrem_seena-p-147836.pdf; accessed on 2nd May, 2018]

Selvaraj N. and Palajikumar P. (2015), "The Role of Commercial Banks in Providing Agricultural Credit (Factors Responsible for Overdue Position)- A Study with reference to Tamil Nadu in India", *International Journal of Accounting Research*, 3 (1), [https://www.omicsonline.org/open-access/role-of-commercial-banks-in-providing-agricultural-credit-factors-responsible-for-overdue-position-a-study-ijar.1000116.php?aid=40853; accessed on 9th February, 2018]

Selvaraj N. and Balajikumar P. (2015), "The Role of Commercial Banks in Providing Agricultural Credit in Tamil Nadu (Extent and Factors Influencing Investment)-India: A View", *Business and Economics Journal*, 6(3), [https://www.omicsonline.org/open-access/the-role-of-commercial-banks-in-providing-agricultural-credit-in-tamil-nadu-extent-and-factors-influencing-investment-india-a-view-2151-6219-1000158.php?aid=54650; accessed on 2nd May, 2018]

Seth T., "Importance of Agriculture in Indian Economy" available at www.economicdiscussion.net.mht, accessed on 18th February, 2018

Sharon K.B., Peter J.B. and Paul N.E. (2000), "Effects of Commercial Bank's Structure and Other Characteristics on Agricultural Lending", *Agricultural Finance Review*, 60(1), 17-31, [https://www.emeraldinsight.com/doi/abs/10.1108/00214670080001108; accessed on 8th May, 2018]

Solanki R. (April, 2016), "A Study of Agricultural Finance by Commercial Banks in India: A Case Study of Central Bank of India", *Abhinav National Monthly Referred Journal of Research in Commerce and Management*, 5(4), 1-7 [file:///C:/Documents%20and%20Settings/SUMU/My%20Documents/Downloads/1008-2585-1-PB.pdf; accessed on 8th May, 2018]

Udoka C.O., Mbat D.O. and Duke S.B. (2016), "The Effect of Commercial bank's Credit on Agricultural Production in Nigeria", *Journal of Finance and Accounting*, 4(1), 1-10, [http://pubs.sciepub.com/jfa/4/1/1/index.html; accessed on 2nd May, 2018]

Abbreviations:

- i) ACGR Annual Compounded Growth Rate
- ii) CV Co-efficient of Variation
- iii) NE region North Eastern Region
- iv) RBI Reserve Bank of India

PROSPECTS OF ECOTOURISM DEVELOPMENT IN NAGAON, ASSAM

Dewajit Bora

Assistant Professor

Department of Geography, Samaguri College, Samaguri

ABSTRACT:

Bounded by rivers, lakes, hills, swamps-marshes, forests and grasslands; the district of Nagaon is situated in the midst of Assam to the south of the river mighty Brahmaputra. Gifted with many remarkable natural features, the district of Nagaon is in a much advantageous position regarding the development of eco-tourism to attract tourists from different parts of the country and abroad. By finding out the most beautiful spots of the nature, both Government and NGOs should come forward to learn, study and to carry out environment friendly activities in the areas which will undoubtedly enhance the social and economic development of the God gifted people. It will also create awareness among the people for conservation of the God gifted natural resources as well as the biodiversity of the area. The paper will try to look into the problems and prospects of development of eco-tourism in the district of Nagaon.

Keywords: Conservation, Eco-tourism, Natural Spots and Planning.

INTRODUCTION:

The natural beauty and remarkable phenomena of the world always attract people. People visit such places for different purposes. Gradually the concept of tourism for economic and cultural development grew on. Tourism developed with a view to study, conserve and enjoy the natural elements of a particular ecosystem is called Ecotourism. It involves visiting fragile, pristine and relatively undisturbed natural areas. It is the responsible travel to natural areas to conserve the biodiversity, habitat and well-being of the local people. The main purpose of ecotourism is to educate the travellers, enhance conservation and making economic profit to the local people. It also aims at respect for different cultures and universal brotherhood.

Ecotourism is both socially and culturally responsible, at the same time it is environmentally sustainable. Flora, fauna, cultural heritage and geographical sites are its prime attention. In addition to evaluating environmental and cultural factors, ecotourism promoted recycling energy efficiency, water conservation and creation of economic opportunities for local communities.

In short ecotourism can be categorized as tourism programme that "Nature based ecologically sustainable where education and interpretation is a major constituent and where local people are benefited".

The International Ecotourism Society defines Ecotourism as "responsible travel to natural areas that conserves the environment and improves the well-being of local people."

OBJECTIVES

The objectives of the study are as follows:

- i) Point out the natural spots of attraction at Nagaon Assam.
- ii) Put forward an action plan for development of the spots as Eco-tourism centre.

METHODOLOGY:

The study included both primary and secondary data. Primary data have been collected from field visit and secondary data have been collected from books, journals, articles of different authors and internet browsing.

HISTORICAL BACKGROUND:

Ecotourism is a comparatively new concept and coined word compounded from "Eco" and "Tourism". According to Oxford English Dictionary, Eco-tour was first recorded in 1973 and "Ecotourism" probably after eco-tour in 1982.

Since 1980, eco-tourism has been considered a critical endeavor by environmentalists, so that future generations may experience destinations relatively untouched by human intervention. Clauz-Dieter (Nick) Hetzer, an academic and adventurer from Forum International in Berkeley, CA, supposedly coined ecotourism in 1956 and ran the first eco-tour in the Yucatan during the early 1970s.

The Government of India published the eco-tourism guidelines and principles in 1998 which need to be followed by planner, tour operators, visitors and other agencies. "Thennala Ecotourism Project" was the first planned ecotourism project in India, in the state of Kerala launched on July 1, 1998.

Purpose & Benefits of Ecotourism:

- The purpose and benefits of ecotourism may be-
- To educate the traveller
- To provide funds for ecological conservation
- To directly benefit the economic development of local community
- To foster respect for different cultures and environmental setting
- To minimize the negative aspects of conventional tourism on environment
- Key to sustainable economic and ecological development

Ecotourism promotes economic growth while conserving the environment of an area by preserving the ecosystem and biodiversity. It promotes a spirit of community participation, environmental awareness and social sensitivity. Here people are encouraged to going back to the natural products in every aspects of life.

Geographical Setting of Nagaon District:

The Nagaon district is situated in central Assam towards southern bank of the river Brahmaputra. The district is influenced by the sub-tropical monsoon climate with hot, humid, rainy summer and short dry winter. The soil and climate of the district supports plenty of evergreen to semi-evergreen forest with large tracts of flood plain grasslands. The major distributaries of the district are Kolong, Kopili, Borpani, Sonai, Diju, Missa and Nonoi. These rivers and distributaries created many ox-bow-lakes, swamps, marshes, pits & bogs in the district, which supports a splendid ecosystem along with the forests and grasslands. The southern frontier of the district is marked by the hilly tracts of Kothiatoli, Kondoli, Bamuni, Sagunbahi, Salana, Chapanala, Borjuri and a part of Burha Pahar to the east.

Proposed Ecotourism Sites:

Nagaon district is very rich from the geographical and bio-diversity point of view. The hilly tracts, riverine flood plains and lakes & swamps (locally known as "bill, pitoni, jolah and duba") are the most promising area for the growth of ecotourism in the district. Some of the notable sites are-

1. Laokhowa Wildlife Sanctuary:

The sanctuary is located on the riverine flood plain of the mighty Brahmaputra on the southern bank and located at a distance of 25 km from the district head quarter. It covers an area of 70.13² km with many wetlands, dense forest and tall grasses within it. The sanctuary is the homeland to many rare species of animals, plants, birds, butterfly, reptiles, fish, amphibians, etc. Once the sanctuary was the habitat of one horn rhinoceros though not present now. Other rare species are Royal Bengal Tiger, Civet Cat, Leopard, Hog Deer and Wild Water Buffalo. More than 200 varieties of birds are found in Laokhowa WLS among which Bengal Florican (*Ulmora*) and Greater Adjutant Stork (*Bortokola*) are the endangered species. Moreover, the sanctuary provides habitat to 39 species of fishes, 9 species of amphibians and 14 species of reptiles including King Cobra.

Ecotourism in Laokhowa WLS is yet to be developed in proper sense. The Laokhowa WLS along with Burhachapori WLS falls under the "Laokhowa-Burhachapori Ecosystem" and provides a promising area of ecotourism. The sanctuary is degraded due to excessive human intervention. Planning of ecotourism may prevent it.

2. Champawati Water Fall:

Champawati waterfall, locally known as "Champawati Kunda", is located in the Chapanala hill. The waterfall is considered as a sacred place where pilgrims from all over the Assam and abroad visited just after the day of *Saraswati Puja* and take holly-bath (*Punya Snan*) in the waterfall (*Kunda*). "Champawati Kunda Mela" (Mass gathering for holy purpose) is also organized by the local people. The *mela* continues for three days. This beautiful and serene fall is one of the most amazing tourist attractions of the district. It is situated in the dense forest of the Chapanala hill at a height of about 200 meters.

The Champawati waterfall forms three deep depressions in its course. It is created by the

erosional forces of falling water on the rocks bed which also known as "Plunge Pool" in geography. This "Plunge Pool" is locally known as "Kunda" (rock cut depression). These three depressions are known as "Upper Plunge Pool" (*Upur Kunda*), "Middle Plunge Pool" (*Maj Kunda*) and "Lower Plunge Pool" (*Tal Kunda*). The waterfall is very beautiful inside the majestic green forest cover and provides a lot of physiographic information. The journey to the fall is undoubtedly an adventure with great romance. The best time to visit the fall is December, January, February and March. The waterfall finally forms a splendid spring flowing through the rock surface making a sweet sound of its own. The hill is very rich in many species of valuable trees, creepers, orchids and other medicinal plants which is yet to be studied scientifically. King Cobra is a rare species of reptile found in this hill.

3. *Banduli Khurung-Tangapani* and *Rangbang*:

Baduli Khurung also known as *Baduli Kurung* is a rock cave situated in the Kandali Hill. *Baduli Khurung* is a mysterious cave and famous for its various species of bats. The natural sight of the area is very attractive and only 20km from the district head-quarter. Enter into the cave is a challenging adventure and is very risky though the bats do not harm anyone. There are thousands of bats inside the cave with a small spring that is flowing completely under the rock crevices of Kandali hill.

According to a local legend, there was a woman kingdom inside the cave, where male is not allowed to enter. One day a "Rishi" (Saint) entered the cave in disgust of woman. But he was detected and punished by the cave dwellers. As a result the *Rishi* gave them curse to be kept inside the cave forever in the form of bats hanging on the wall.

Local people arrange a "Mela" for three days just on the day after the "Sivraatri Pujja". People enter the cave for these three days only after paying homage to *Lord Siva*.

The species of bats (*Mammalia: Chiroptera*) found inside the cave is not studied properly. Scientific study should be done for the conservation of these bats.

Tangapani : "Tangapani" is a small waterfall situated in the Kothiatoli hill and 25 km away from the district headquarter and only 8 km from the *Baduli Khurung*.

Rangbang : Rangbang is a beautiful village of Kothiatoli Block. This green and serene village is famous for its "Hoolock Gibbon" (Locally known as *Holow Bandar*), the only ape species found in Assam. The tail less monkey is very attractive and this should be preserved by making effective study plan through ecotourism.

Rangbang is the only area of Nagaon district where *Hoolock Gibbons* were available in recent past. But due to excessive human intervention in the forest of the area, the "Habitat" of the Gibbons is threatened.

4. *Hatimura-Trishuldhari* and *Joysagar Doloni*:

Hatimura hill and *Trishuldhari* hills are located on the south bank of mighty *Brahmaputra*. Both the hills are very rich in biodiversity and included as the extended part of *Kaziranga National Park*. The hill is situated at a distance of 58 km east from the district head-quarter near *Jakhalabandha Town*.

These hills are famous for Leopard, Wild Buffalo, Deer, Indian Civet Cat (*Johama*),

Elephant, various species of birds including "White-winged-wood Duck" (Locally known as "Deo-Hanh") which is an endangered species and "Indian Rock Python" (*Ajogar*).

Some families of "Gangatic Dolphin" (Locally known as *Sihu*) are frequently visible in the *Trishuldhari* area of the *Brahmaputra*. *Trishuldhari* hill is also famous for "Kamakhya Temple" and "Trishuldhari Temple". Similarly *Hatimura* is famous for "Hatimura Temple" of Goddess *Durga*. Both the temples, *Hatimura* and *Kamakhya*, represents the glorious architecture of medieval Assam.

The beauty of the area is serene and pristine. It has much scope for making well planned river cruise to attract the tourists. Migratory birds are another attraction of the area.

Joysagar Doloni (Wetland): *Joysagar Doloni* is a wetland and is situated only 10 km from *Hatimura-Trishuldhari*. This wetland is famous for various migratory and endemic birds. It is also the breeding ground of many endemic fish-faunas. Local people arrange "Joysagar Doloni Pokhi Utshav" to watch the migratory birds.

5. *Samaguri Bill-Haribhanga Bill* and *Dighali Bill*:

These three wetlands are famous for local variety of fishes, both endemic and migratory birds and reptiles. *Samaguri Bill*, also famous as *Pokhitirtho*, is a beautiful ox-bow-lake created by the river *Kolong* and situated at a distance of 22 km east from the district head quarter. The "U" shaped lake is very attractive with its thousands of migratory birds.

Dighali Bill is situated at a distance of 13 km from *Samaguri bill* and famous for numerous local varieties of fish and migratory birds as well as the endemic species. This wetland is also the abandoned part of river *Kolong*.

Haribhanga bill is formed in the long past due to tectonic depression. This large wetland also supports many local varieties of fishes, migratory and endemic birds along with reptiles. *Haribhanga* is also situated at a distance of 12 km from *Samaguri Pokhitirtho* towards North-East.

There is enough scope of bird watching and boating in these three wetlands. Planned study may undertake for the conservation of local variety of fishes, birds and reptiles which is possible only through development of ecotourism.

Planning and Developmental Constraints:

Development of ecotourism needs proper planning in which all the major stakeholders should be involved which is experienced at the most initial stage in the district as well as in Assam. The major stakeholders of ecotourism are-

- i. The public sector
- ii. The tourism industry
- iii. Voluntary sector organizations (NGOs)
- iv. The host community (local people)
- v. The media
- vi. The tourist

Eco-tourism in Assam seems to be failed due to the following reasons:

- i. Marked gap between planning aspects and practical action of implementation
- ii. Local people are not participating in sustainable tourism
- iii. Most of the Government officials have no devotion for making the plan a successful one
- iv. Misuse of funds provided by Government and other sources
- v. Poaching and illegal interference on the natural resources
- vi. Poverty and illiteracy
- vii. Lack of sufficient and effective awareness program
- viii. Poor network and transport system
- ix. Insufficient infrastructure
- x. Less involvement of media for adequate publicity

CONCLUSION:

God has gifted Nagaon (Assam) a bounty of natural resources and beautiful landscape which supports a wide variety of "Biodiversity (Flora & Fauna). These glorious varieties of flora and fauna along with the beautiful green promising landscape are gradually degraded due to the increasing human intervention. As the human population of the district has been increasing in an unbalanced and flourishing way, the population of the district will try to clear the forest lands and wetlands to turn them as cultivable lands for their survival. Hence proper planning is the ultimate necessity to conserve the natural resources of the area and to meet the livelihoods of the increasing population.

REFERENCE:

Bora, D. and Sharma, P., (2017), "Human Intervention and Consequences in the Wetlands of Laokhowa Wildlife Sanctuary (LWLS), Nagaon, Assam, India", *Best: IJHAMS Journals*, Vol. 5, Issue. 8, New Delhi-110002

Bhagabati, A. K., Bora, A. K. and Kar, B. K. (2010), "Geography of Assam", Rajesh Publication.

Hegde, S. K., (2012), "Problem and Prospects of Eco-tourism in India" *International Journal of Innovative Research in Science, Engineering and Technology*, ISSN Online: 2319- 8753

Sangeetha, R., (2018), "Scope of Tourism: Indian Perspectives", *International Journal of Innovative Research in Science, Engineering and Technology*, ISSN Online: 2319- 8753

<http://www.tourmyindia.com>> blog

<http://www.tourism.gov.in>> eco-tourism

<https://www.en.m.wikipedia.org>> wiki>ecotourism

<https://incredibleindia.org>> travel> ecotourism

<https://www.tourism-of-india.com>> assam

A PEEP INTO THE TOURISM INDUSTRY IN ASSAM: TRENDS AND POTENTIALITIES

Neha Tiwari

Department of M.Com, Gauhati Commerce College

Muhammad Shahbaz

Department of M.Com, Gauhati Commerce College

ABSTRACT:

Tourism is the world's largest industry and it represents the fastest growing segment of the market. It is considered as an important industry in 21st century with vast scope for employment generation and income. Several countries have transformed themselves through tourism and created a global presence in the tourism industry. Tourism in Assam is essentially nature based. Natural parks and sanctuaries, rivers, lakes, gardens, wildlife are the principal components of tourist attraction. The growing tourist demand is already exerting pressure on natural and other resources. Unless, attention is paid now for developing tourism in ecologically sustainable manner and maintaining environmental integrity, it may cause irreparable damage. This paper makes an attempt to study the current status of the tourism industry in Assam. This paper also helps to explore the potentiality of tourism industry in Assam as well as to highlight different barriers restricting the development of the tourism in Assam.

Keywords: Tourism Industry, Economic Contribution, Tourist Inflow and Assam.

INTRODUCTION:

Tourism is the fastest growing industry in the world. Tourism is not only a growth engine but also an employment generator that has the capacity to create large scale employment both direct and indirect, for diverse sections in society. Assam is the second largest state among the seven sister states of North-Eastern Region of India. With a geographical area of about 78,438 sq. kms, Assam accounts for one-third of the area of the North-Eastern region and 2.4 percent of the area of the country. The State has varied land forms, diverse flora and fauna and unique cultural traditions. Tourism in Assam is based on wildlife, natural beauty, unique flora & fauna, holy shrines, tea gardens, turbulent rivers, vibrant and colourful cultural festivals. Tourism in Assam is essentially nature based. Natural parks and sanctuaries, rivers, lakes, gardens, wildlife are the principal components of tourist attraction. Assam, as a destination, corresponds to a world

of contrast and excitement with each place of the State having something amazing to offer. Some people call it a magic land while others call it a green paradise. The State of Assam is one of the most beautiful and attractive region of India. There is hardly any other state as Assam has greater variety and colours in its natural scenery and in the cultural treasures of the people that inhabit it. Assam is blessed with an abundance of scenic grandeur. A wealth of rarest and near extinct species of wildlife, verdant forests, sombre hills, green plains and mighty water ways are her main attractions. The species of wild life like the one horned Asiatic Rhino, the Golden Langur, the Pigmy Hog, the White winged wood duck, have made Assam their home. The perfect fusion of heritage, tradition, faiths and beliefs of numerous races has made Assam the home of the most colourful festivals and fairs, delightful, compelling and indeed mesmerizing. Thus, so long hidden behind red tape, Assam's beauty is a fact that defines imagination.

ROLE OF TOURISM IN THE ECONOMIC DEVELOPMENT OF ASSAM:

Tourism can play a very significant role for leveraging scarce foreign exchange earnings for not only the developing countries of the third world but for many developed countries of the world. It offers employment to millions of both semi skilled and unskilled people. As such its role in the development of Assam because of tourism potential cannot be ruled out. The benefits that accrue to Assam in the area where tourist visit and therefore gives tremendous thrust rise in the per capita income in the State with relevant to natural beauty and bounty. If tourism is developed through careful planning, it is sure to bring revolutionary transformation in the whole economy. Tourism is job oriented and provides more employment opportunities in comparison to normal manufacturing industries in Assam without disturbing the environment. Several types of business such as hotels, restaurants, tour operators, handicrafts, transporters, travel agents, etc, can get benefit from it. Other allied businesses such as cab drivers, photographers, adventure sports organizers and food and beverage suppliers can also have profitable earnings. Employment in tourism sector is very much important for Assam as it is basically an agrarian economy where industries have not much developed.

Tourism gives an impetus to State income. International, national as well as domestic tourists contribute a significant share as it constitutes a demand for goods and services that would otherwise not be produced before such as demand for accommodation, modern airports, hotels, lodges, etc. This would not only contribute to the revenue of the government but shall also encourage investment. Tourism contributes around 5.5% of Assam's GDP. It provides approximately 10.5 per cent of the total employment in the state. Assam has immense tourism potentials, which are to be explored as commercial resources.

REVIEW OF LITERATURE:

Kalita, K. & Gogoi, M. (2015) reveals that the Department of Tourism, Government of Assam is yet to fail to address the tourism as an important industry for the socio-economic development of Assam. As a result, the inflows of very limited tourists have been seen in Assam in the recent past decades.

Das, D. (2013) stated that tourism has a great potentiality for generating income and employment opportunities in NE India. But even then, no perceptible change has been seen in this sector of the economy due to some problems.

Das, R. (2017) stated that Assam could be real gateway not only North-Eastern states but also other Asian countries like Myanmar, Bangladesh, Bhutan, and Nepal. The 'Look East' policy initiatives of the Government of India would be helpful for marketing Assam Tourism in South Asian and South East Asian markets.

OBJECTIVE:

- The specific objectives of the study are:
1. To study the current status of tourism in Assam
 2. To study the potentialities of tourism in Assam
 3. To study the barriers restricting the development of the tourism industry in Assam

RESEARCH METHODOLOGY:

In order to achieve the objectives of the study, the descriptive method has been used. The present study is based on secondary data. The secondary data has been collected from various sources like journals, reports, publications, etc. To analyse the data, different tables and charts have been used.

DISCUSSION AND RESULT:

Table 1: Domestic and Foreign tourist arrival in India and Assam during 2015

	Domestic	Foreign	Total
Tourist arrival in India	1431973794	23326163	1455299957
Tourist arrival in Assam	5491845	24720	5516565
Percentage share of Assam	0.38%	0.11%	0.38%

Source: Indian Tourism Statistics 2015, Ministry of Tourism

The above table provides the number and percentage share of Assam in domestic and foreign tourist visit in India during 2015. The number of domestic and foreign tourist arrival in Assam in 2015 was 5.49 million and 0.024 million and the percentage share being 0.38% and 0.11% respectively. Assam was ranked in 22 in domestic tourist arrival while 26 in foreign tourist arrival in India (out of 36 states and UTs).

Table: 2 Percentage shares of North-East states of domestic and foreign tourist visits during, 2015

States	Domestics	Foreign	Total	Domestics (%)	Foreign (%)	Total (%)
Assam	5491845	24720	5516565	69.16	20.84	68.45
Meghalaya	751165	8027	759192	9.47	6.77	9.42
Sikkim	705023	38479	743502	8.88	32.43	9.23
Tripura	363172	34886	398058	4.57	29.40	4.94
Arunachal Pradesh	352067	5705	357772	4.43	4.81	4.43
Manipur	146169	3260	149429	1.84	2.75	1.85
Mizoram	66605	798	67403	0.84	0.67	0.84
Nagaland	64616	2769	67385	0.81	2.33	0.84
NER Total	7940662	118644	8059306	100	100	100

Source: Computed using data from Indian Tourism Statistics, 2015, Ministry of Tourism

An attempt was made to examine the share of Assam in total tourist inflow in the North Eastern region. The table showed that the share of Assam in tourist inflow in the region is the highest. In 2015, the North Eastern region received 80,59,306 tourists out of which 79,40,662 were domestic tourists and 1,18,644 were foreign tourists. Assam occupies first rank in the North-East region in terms of its share in domestic tourist (69.16%) as well as total tourist inflow in region (68.45%). But in case of foreign tourist inflow, Sikkim accounts for highest share while Assam stood at third position.

Table: 3 Domestic and foreign tourist arrivals to Assam from 2011-12 to 2015-16

Financial Year	No. of Tourist		Annual Growth Rate	
	Domestic	Foreign	Domestic	Foreign
2011-12	4408336	16660	-	-
2012-13	4544666	17708	3.09%	6.29%
2013-14	4444393	19086	-2.21%	7.78%
2014-15	4863826	20005	9.44%	4.82%
2015-16	5642950	26320	16.02%	31.57%

Source: Economic Survey, Assam, 2016-17

There has been an increase in domestic tourists to the state, though there was a negative growth in the financial year 2013-14. The foreign tourist visits to the state too have been increasing over the years. During the year 2015-16, the visits by foreign tourists have registered a growth of 31.57% over the financial year 2014-15, as compared to the growth rate of 4.82% in 2014-15. Although Assam has been progressing in tourism, yet it was not there in the list of the top ten states of India in respect of domestic as well as foreign tourists.

Figure 1: Domestic and foreign tourist arrivals to Assam, 2011-12 to 2015-16



Source: Table 3

Table 4: Number of tourist visited National Parks in Assam

Year	Kaziranga National Park		Manas National Park		Orang National Park		Dibru-Saikhowa National Park		Nameri National Park	
	Indian	Foreign	Indian	Foreign	Indian	Foreign	Indian	Foreign	Indian	Foreign
011-12	117308	7521	19705	237	2678	159	3970	42	5601	457
012-13	93747	7418	15890	218	1847	70	2656	19	4370	528
013-14	119289	6922	20527	211	2329	16	4230	54	5866	806
014-15	123360	7994	9786	475	1946	45	4249	27	8448	1035
015-16	162799	11417	40559	614	3502	20	2695	27	10384	702

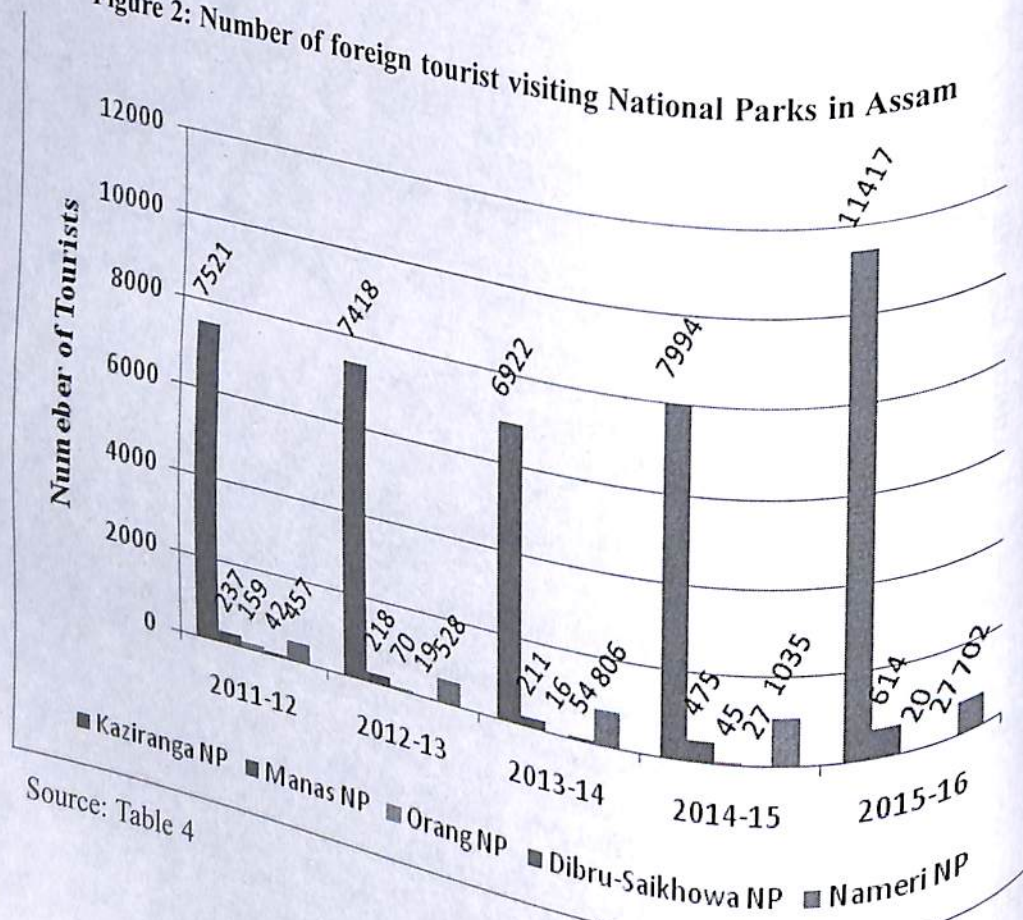
Source: The Principal Chief Conservator of Forest (Wildlife), Assam and Directorate of Tourism, Assam

The above table shows that during the year 2015-16, the number of visit by foreign tourist

increased only in Kaziranga and Manas National Park. A growth of 42.82 percent was noticed in Kaziranga National Park compared to number of visit in 2014-15 followed by Manas National Park (29.26 percent). The number of domestic tourists in Dibru-Saikhowa National Park decreased and foreign tourist also did not increase.

Data analysis of the number of tourists visiting five National Parks in Assam between 2011-12 and 2015-16 has shown that there is a huge gap in the number of tourists, both domestic and foreign, visiting Kaziranga National Park and four other National Parks of the state. Kaziranga alone attracts 74.86% of visitors to these five national parks.

Figure 2: Number of foreign tourist visiting National Parks in Assam



Source: Table 4

Table 5: Revenue collection from Tourists in National Parks in Assam

	Revenue (in Lakh)		
	2013-14	2014-15	2015-16
Kaziranga National Park	268.66	294.59	419.77
Manas National Park	30.93	33.48	73.69
Orang National Park	2.43	2.31	4.04
Dibru-Saikhowa National Park	2.09	2.10	0.16
Nameri National Park	11.26	14.13	9.25

Source: Statistical Handbook of Assam 2016, Directorate of Economics and Statistics

The year wise data of revenue generation of Kaziranga National Park and other four National Parks also shows difference. Kaziranga National Park alone generated revenue of Rs. 9.83 Crore between 2013-14 and 2015-16 while the revenue of other four National parks stood at Rs. 1.86 Crore only.

PROSPECTS OF TOURISM IN ASSAM:

The tourist destinations of Assam have considerable potentials in its historic, cultural and natural resources to draw significant numbers of domestic and international leisure/holiday tourists. The prospects of tourist destinations in Assam can be discussed in the following categories:

1. Adventure tourism:

Assam, the gateway to the northeast has plenty to offer to tourists. Assam is a paradise not only for nature lovers but also for adventure enthusiasts, sport freaks, trekkers etc. One of the world's largest rivers, the Brahmaputra, and many other turbulent rivers of Assam offer immense opportunities for adventure tourism. Tourists can enjoy many exciting water sports like diving, swimming and rafting as well as the adventurous sport of angling and fishing. Its hills and valleys offer great facilities for trekking. The preferred locations for trekking in Assam are places like North Cachar hills, Karbi Hills, etc. Trekking can also be done on route to these places and also at rock hill in Morigaon district known as 'Elephant rocks'. It is also ideal for rock climbing.

India is fast growing as a major aero sports destination and North-East India has the potential to become one of the best sporting destinations. Though, the entire North-Eastern part is still to be discovered, it has abundant source for adventure sports. A totally new sport, Para-sailing, has been introduced by Assam Tourist Development Corporation to attract domestic and foreign tourists. The ideal place for Para-sailing near Guwahati is North Guwahati. The Haflong is another place for gliding, para-gliding and trekking.

2. River tourism:

The State of Assam has an extensive river network. The mighty river Brahmaputra provides immense opportunities for river tourism. The rivers like Brahmaputra, Manas, Jia Bhoroli and Kapili offer great scope for boating and boat races here. Jia Bhoroli is a famous

angling destination since the British time. "Assam Bhoroli Anglers Association" regularly organise annual Angling competition in the month of November every year in collaboration with the State Forest Department of Assam. The adventure enthusiasts seeking a bit of thrill can also participate in the festive boat races that take place at Barpeta, Guwahati, Hajo and Sualkuchi and equal the legendary boat races of Kerala.

3. Rural tourism:

Rural tourism is vital for sustainable rural development. In Assam, most of the villages are endowed with beautiful natural landscape, forest, hills, rivers, historical monuments, ancient temples, shrines, flora and fauna, etc. Rural tourism can provide opportunity for mutual sharing of culture. It can provide incentives to preserve some of the old customs and traditions. 'Aamaar Aalohi' - Rural Homestay Scheme is framed by the Tourism Department, Govt. of Assam, with the objectives of giving a new dimension and thrust to the Rural Homestay Facilities in the State of Assam and creation of self-employment opportunities for educated youths in rural and semi-urban areas of tourism potential and importance.

4. Spiritual tourism:

When it comes to spiritual tourism, Assam is such a place that crosses everyone's mind owing to its several pilgrimage destinations. Some of the religious places include Kamakhya temple, Umananda temple, Mahabhairab temple, Satra, Poa Mecca, Hajo and so on. Some of the religious sites have become pilgrim centres in Assam. Besides, Ambubachi Mela is one of the biggest congregations of eastern India. It is the most important festival of the Kamakhya temple and is celebrated in the month of June every year. Every year lakhs of pilgrims, starting from Sadhus to householders, from all over India, come to Guwahati to observe this festival. The Assam Government is planning to transform Ambubachi Mela, an annual congregation at Kamakhya Temple, to one of the major religious tourism attractions. Assam can boast its religious tourism by providing adequate facilities in the religious places for tourists.

5. Tea tourism:

Assam Tea, which has a rich history of satisfying its world admirers with its unique taste and flavour, has a rich heritage too which can equally satisfy the tourist community whether domestic or international. Tea tourism provides the opportunity to avail all information and experience related to tea. There are several hundred tea gardens in Assam, but the provisions of tea tourism packages have been made available at the large and colonial era estates only. The Banyan Grove at Gatoonga Tea Estate, adjacent to Jorhat is a prime example. Located in a beautiful place in Assam's Balipara, not far from Tezpur, Wild Mahseer is among the prime tea tourism destinations of the state. Other popular tea tourism destinations in Assam include Thengal Manor and Kaziranga Golf Resort at Jorhat, Mancotta Chang Bungalow in Dibrugarh and Wathai Heritage Bungalow in Tinsukia. Tea tourism though relatively new in concept has tremendous potentiality. Coordination with the management of the tea gardens can help in promoting tea tourism in Assam.

6. Golf Tourism:

A striking feature of tea gardens in Assam is the availability of golf courses. No other States

in the country offer as many as 20 golf courses within a compact area as Assam does. The up-gradation of these golf courses with state of the art facilities will attract golf loving tourists.

7. Medical Tourism:

Assam is coming up as a favourable hub for medical tourism for neighbouring countries. The rapidly growing healthcare sector in State capital Guwahati has gradually started to attract international patients from far-off countries. With many super-speciality hospitals in Government as well as private sector, Guwahati is fast becoming a preferred destination for both domestic and foreign patients. Assam has the potential to lure medical tourists to the state. In order to achieve this, improvement of infrastructure of hospitals and other complementary structures, as well as technologies and skills are required.

PROBLEM OF TOURISM IN ASSAM:

Although tourism has enormous potentialities in Assam, there are certain barriers which are restricting its growth. Some of these are:

1. Insurgency:

The problem of insurgency is creating obstacle in the development of tourism industry in Assam. Tourists often feel insecure to visit those areas which are not safe. Moreover recently, for the first time in nearly three decades, the government has declared the entire state of Assam as 'disturbed' area for six months beyond August, 2017 keeping in view the law and order situation and activities of insurgent groups in the state. It may create negative impact in the minds of tourists.

2. Transport and Communication:

Assam is the gateway to the other states of the North-Eastern states of the country. As such the transport and communication sector has to play an important role for speedy economic development of the region. But due to its geographical isolation, transport has been a bottleneck in the process of economic progress of the state. The conditions of National Highways are not good. Although the government has been giving maximum attention to improve road building in north eastern India and Assam in particular, but the pace of four-lane highway building project in Assam is suffering delays. Moreover, most of the places of tourist attraction are not by the side of highways and the roads to these tourist places are not in good condition.

3. Absence of Trained Tourist Guide:

A tour guide is a person who guides the visitors in the language of their choice. Guide helps travellers to understand the culture of the region and the way of life its inhabitants. But, Assam does not have sufficient trained guides at important tourist destinations which is one of the major drawbacks of tourism industry in Assam.

4. Marketing:

Poor state of publicity is another reason for slow growth of tourism in Assam. Though the State has varied land forms, diverse flora and fauna and unique cultural traditions, it has not able to give publicity in the national and international arena. However, now Tourism department of Assam is all set to promote the state's tourism worldwide. The Assam Tourism has come-up with the new brand entity "Awesome Assam" to promote the Assam Tourism outside Assam.

RECOMMENDATIONS:

1. News about North-East barely finds place in the mainstream newspapers and TV channels operating in metro cities. Moreover, most of the news that gets published in mainstream media of India tends to be negative and about insurgency and violence. This trend of negative publicity needs to be corrected; otherwise it will project Assam as a dangerous area for tourists.
2. A vigorous social media campaigning through Facebook, Twitter, YouTube, blogs should be launched to attract young generation tourists as tourists read blogs, social media posts and comments to finalise a holiday destination.
3. A wide range of long-term awareness and publicity should be carried out in national and international level. The organisation of carnivals and festivals in different themes and seasons can also enhance the tourism in Assam. Both domestic and foreign tourists are also eager to come in contact with various socio-cultural aspects of Assam such as "Bihu". Such themes backed by songs and dances by the tribal community will definitely enthrall the tourists.
4. The government should promote the state as the gateway to the ASEAN countries. Keeping in view the Act East Policy, the Government should act to connect the state of Assam with South-East Asian countries via Myanmar and Thailand to Singapore, Laos, Cambodia and Vietnam.
5. Another feature of the foreign travellers is their inclination towards adventure sports like rafting, rock climbing, gliding and high altitude diving. Nature has gifted the infrastructure for all these activities to Assam and it is only a question of initiative and implementation to take full advantage of this natural boon.
6. A key component of the tourism industry is attractions, which offer visitors a chance to explore the sights, facilities and wonders of their destination. Attractions generally include historic sites, heritage homes, museums, halls of fame, art galleries, botanical gardens, ski hills, aquariums, water parks, amusement parks, and cultural attractions. Besides wild life and natural beauties, national parks and wild life sanctuaries have lot of other tourism based potentials to offer. The other recreational activities which can be developed are: water sports, golf course, swimming pool, auditorium to exhibit cultural richness, watch tower and so on.
7. Government should conduct special skill development Certificate programmes of local youths in Hospitality and for Tourism Sector. The benefit of Skill India and 'Hunar Se Rojgartak' should be leveraged.
8. One of the important duties of the Government is to provide adequate infrastructural facilities in the tourist destinations like toilet facility, safe drinking water facility, and proper accommodation and so on. Moreover, sanitation and cleanliness is another important priority for the development of tourism industry and for this effective implementation of Swachh Bharat Abhiyan is very much necessary.

CONCLUSION:

Tourism industry in Assam has enormous potentialities. The unique attractions of Assam are its wild life sanctuaries and cultural attractions, temples, monuments, art and craft.

Accessibility and tourist facilities around these attractions have to be enhanced and marketed aggressively. Augmenting tourism infrastructure, assurance of quality standards in services of tourism service providers, etc. are some of the responsibilities of the Ministry. Assam has the potential of attracting more foreign tourists, particularly those segments of tourists having a liking of cultural and wild life attractions. All these tourism activities are the latest alternations in foreign as well as domestic tourists. In view of the above facts, it can be ascertained that the State has considerable potential for expanding domestic tourism and attracting many more international tourists. Special efforts have to be therefore, made to improve the infrastructure facilities and marketing strategy should be adopted accordingly. For the development of a sector, the challenges should be removed completely. Since the tourism industry also provides a fillip to related industries such as the hospitality industry and the handloom and handicrafts industry, and provides employment opportunities to the local people and raise the living standard on the whole, a well-directed effort at realizing the potential of Assam as a tourist destination will go a long way in making the state prosperous and improve the country's GDP.

REFERENCE:

Books:

Pathak, R.K. and Kalwar, M.C, 'Marketing of service', Ashok Book Stall

Articles of Research Journal

Das, D. (2013), 'Tourism Industry in North-East Indian States: Prospects and Problems', *Global Research Methodology Journal, Vol-II*

Das, R. (2017), 'Prospects and Problems of tourism in Assam', *International Journal of Applied Research*

Hussain, M.M. (2012), 'Role of Tourism in the Socio-Economic Development of Assam', *Dialogue July-September, 2012, Volume 14 No.1*

Kalita, K. & Gogoi, M. (2015), 'Tourism in Assam-ails and opportunities', *Research Front, Vol-3*

Web Resources

Baruah, B.J. (2018), 'Tourism in Kaziranga-Challenges and the way forward' [<https://agoratoriresort.in/blogs/tourism-in-kaziranga-challenges-and-the-way-forward>, accessed on 15 February, 2018]

Singh, B., (Sep. 02, 2017), 'Assam declared disturbed area for six months beyond August 31, 2017', *The Economic Times*. Retrieved from [<https://economictimes.indiatimes.com/news/defence/assam-declared-disturbed-area-for-six-months-beyond-august-31-2017/articleshow/60325738.cms>]

Government Publications:

Economic Survey, Assam, 2016-17, *Directorate of Economics and Statistics, Assam, Planning and Development Department, Government of Assam*

Indian Tourism Statistics, 2015, *Market Research Division, Ministry of Tourism, Government of India*

Statistical Handbook, Assam 2016, *Directorate of Economics and Statistics, Government of Assam*

Tourism Policy of Assam, 2017, *Government of Assam*

MIGRATION AND ITS SOCIO ECONOMIC IMPACT ON THE ECONOMY OF ASSAM

Dr Parag Dutta

Assistant Professor

Department of Economics, Dispur College

Mrs Tulika Choudhury

Guest Faculty

Department of Economics, Dispur College

ABSTRACT:

The term migration stems from Latin root 'migrate' which means to move from one place to another. Migration may be internal or external. In internal migration people move to a new home within the home state, country or continent. On the other hand, the migration that happens while moving to a new home in a different state, country or continent is regarded as external migration. It is observed that employment among males and marriage among females are the main reasons for migration. International and internal migration has increasingly been recognized as a positive force for development as migrants transfer knowledge and skills to both receiving and origin locations, faster economic linkages and business opportunities between countries and regions.

Assam is a state located in North-East India with a population around 3 crores (as per 2011 census). In the post independence period during 1951-2011 the population growth of the state of Assam was 288.21% as against 235.15% of India. This high growth rate of population apparently suggests large scale migration of the state Assam. Illegal migration has generated a host of destabilizing political, social-economic, ethnic and communal tensions, economically increasing pressure on land, resulting in depletion of forest wealth, forcible occupation of Government land by the migrants and other issues which affect the entire North-East. Keeping in view of such impact of migration, this paper tries to analyze the causes of migration in Assam, impact of illegal migration on the economy of Assam and endeavors to suggest measures to solve the negative impact of the migration in Assam.

Keywords: Migration, Assam.

INTRODUCTION:

Migration has been defined as a movement from one place to another. It is considered as an important variable for demographic changes after birth and death rate. According to the International Organization for Migration (IOM), any replacement between two different countries or two different locations within the same country is called migration. The United Nations (UN) defined 'Migration as form of geographical or spatial mobility between one geographical unit and another'. It is a universal phenomenon and an important feature of human civilization and now it has become an integral part of the current global economy. But it has been the most challenging issue of the present century for most of the countries of the world.

According to the International Migration Report, 2017 of United Nations, Department of Economic and Social Welfare, the number of international migrants estimated to be 258 million in 2017. If this number continues to grow at the same pace as occurring the last 20 years, it could reach 405 million by 2050. It also states that 3.4 percent of the world's inhabitants are international migrants. This reflects a modest increase from a value of 2.8 percent in 2000. The number of migrants as a fraction of the population residing in high income countries rose from 9.6 percent in 2000 to 14 percent in 2017. It has been observed that international migration makes an important contribution to population growth in many parts of the world and even reverses population decline in some countries or areas. Between 2000 to 2015, migration contributed 42 percent of population growth in Northern America and 31 percent in Oceania. In Europe, the size of the total population would have declined during the time period 2000-2015 in the absence of migration. Migration in today's world is shaped by a number of factors related to economic, political, and religious and various socio-cultural risks. Migration from one place to another place is basically caused by two basic aspects. The push factors and pull factors. Push factors are those which force a person to move. For example, shortage of food, war and natural calamities such as tsunami, cyclones and earthquakes, lack of jobs and services, poor safety and security, etc. On the other hand, the instances of pull factors are climate, better food supply, political security, education, freedom, job opportunities, etc.

There are various ways in which migration takes place depending on how, why and where it happens. For instance, internal migration is the kind of migration that takes place while people move to a new home within the same state, country or continent. On the other hand, the migration that happens while moving to a new home in a different state, country or continent is regarded as external migration. The migration from one country to another country is known as international migrant or "Immigrant". Involuntary or forced migration is one, in which Government forces a large group of people out of the region on the basis of ethnicity or religious. Conversely, when people move out of a country due to political problems or religious precautions it becomes imposed migration. A chain migration often begins with one family member who sends money to bring other family members to the new location. The process of moving for a period of time in response to labour or climate is called circular migration. The other types of migration include rural and urban migration. Rural to urban migration is more common in developing countries and urban to rural migration is regular happening in developed countries. The series of shorter or less extreme migration from one person's place of origin

to final destination such as moving from a farm to a village, to a town and finally to a city is step migration.

Assam is a state which is rich in natural resources. The state had extensive international border with Bhutan in the North West and with Bangladesh in the South West. The state has experienced large scale migration particularly in the post-independence period. Its wild life, scenic beauty and natural resources base always attracts people from different parts of the country and even from outside the country. But the large scale migration and illegal immigration from the neighboring countries has caused many socio-economic problems in the state. Considering the above fact, this paper is an attempt to analyse the socio-economic impact of migration in Assam. The methodology adopted for carrying out this work is basically analytical and it is based on secondary sources such as Directorate of Census Operation, Assam, Directorate of Economics and statistics, Assam, Comptroller and Auditor General of India, etc.

OBJECTIVES:

- The specific objectives of the present paper are to highlight the following issues:
- (a) To analyse the factors of migration.
- (b) To examine the demographic profile of Assam.
- (c) To analyse the socio-economic consequences of illegal migration.

REVIEW OF RELATED LITERATURE:

Review of literature plays a significant role in any kind of scientific research. It assumes importance in formulating the research gap and research problem. Any kind of scientific research requires a detailed review of existing literature. Keeping this fact in mind, a review of existing literature on socio-economic impact of migration is carried out in this section of the paper. There are a number of studies, articles that focus on the socio-economic and political issues related to migration. But the most dominant theory in explaining causes of migration is the neo-classical theory. The Neo-classical theory basically concentrates on wages. The neo-classical theory assumes that migration is stimulated primarily by rational economic consideration of relative benefit and cost (Todaro and Smith 2006). The neoclassical theory understands migration to be driven by differences in returns to labour across markets. It was Hicks (1932), Lewis (1954) and Harris and Todaro (1970) who developed the basic theory to explain migration in the process of economic development. They highlighted that migration to results from actual differences across markets or countries that emerged from heterogeneous degrees of labour market tightness. Migration is driven by geographic differences in labour supply and demand and resulting differentials in wages between labour-rich versus capita-rich countries. Later in the extended neo-classical model as given by Bauer and Zimmermann (1999) and Massey, et. al. (1993), they were of the view that migration is determined by expected rather than actual earnings and the key variable was earnings weighted by the probability of employment. Jennissen (2007) states that migration is mainly caused by pull factors in developed countries. The author provided her argument in line with the dual labour market theory. The

dual labour market theory assumes that labour market in developed countries consists of primary and secondary market. It is the pull factors that results migration from developing countries to developed countries. The new economic theory of labour migration view migration is a result of risk aversion on the part of a household that has insufficient income. The household can achieve their extra income through remittances sent back by the family members who work abroad. Another theory popularly known as relative deprivation theory states that income difference in neighbour or other developed countries is the reason for migration. The incentive to migrate is comparatively high in those areas, states or countries with high level of income-inequality.

There are conflicting views as given by the researcher on social consequences of migration (Das and Talukdar, 2017; Goswami, 2010). One view is that migration adversely affects the welfare of the source areas because of rising urban unemployment, increasing environmental problem, overgrowing of population and shortage of amenities. The other view was that migration directly or indirectly affects urbanisation, cultural transformation and development.

ASSAM AND HISTORICAL BACKGROUND OF MIGRATION:

Assam is one of the North-Eastern states of India, situated south of the eastern Himalayas along the Brahmaputra and covers an area of 78,438 KM² with vast natural resources. The pace of migration in Assam has accelerated since the 18th century from different directions such as China, Nepal, Burma, and Tibet and from other states of India. The history of Assam took a new turn since the Burmese invasion and subsequent occupation of Assam by British since 1826. The tea gardens started by the British and the expansion necessitated the import of a large number of persons from Orissa, Bihar, Andhra Pradesh, Madhya Pradesh, Bengal etc. The migrants from the states of Bihar and Uttar Pradesh also started coming with the beginning of British rule in Assam. These migrants were absorbed as cobblers, sweepers, and wage labourers and after independence their demand for services increases as a result of urbanization in the region.

Furthermore, other migrants from Bengal started coming for trade and commerce and to the Government office. Marwari migrants came significantly along with British rule and the development of commercial and industrial establishment. It has been found that Muslim peasants started to settle mostly from East Bengal.

Another stream of migrants in Assam consists of Nepalese. They were more or less unnoticed. They mainly settled in the forest areas near the hill-slopes, supplying milk and fuel. Besides this, a large number of Nepalese are employed as office-peon and chowkiders etc. Despite the fact that historically migration has contributed to economic development, but in recent times it has created adverse affects that have out-weighed the benefits of life.

Available literature are of the view that migration can contribute to wider developmental goals such as access to education and health, poverty reduction, transfer of knowledge, foster economic linkages and business opportunities, providing employment specially for women, helps to raising standard of living, provide sources of capital, investment, etc. But we cannot ignore

the negative effect of migration particularly in state like Assam. The illegal immigration from the neighboring countries particularly Bangladesh has caused many problems in the state. Bangladesh is one of the most densely populated countries of the world. It is very frequently lashed by severe cyclones and is subject to extreme climatic conditions like rising sea levels, floods, droughts, cyclones, etc. Assam has long been troubled by the issue of illegal migration from Bangladesh. The numbers of illegal immigrants have changed the demographic picture of the state causing serious harm to the indigenous people of the state.

DEMOGRAPHIC PROFILE OF ASSAM:

Migration has profound effects on the size, structure and growth pattern of populations. The migration of people effects on population of the places that people leave as well as the population of those places where they settle. These effects vary with different kinds of migration and length of migrants' stay in those places. Available literatures on migration are of the view that unabated migration has changed the whole demographic scenario of the state of Assam. As per Census 2011, the total population of Assam stood at 311.69 Lakh (2.5 % of all India) making in the 14th most populated state in India. In Assam, as per religious census 2011, Hindu are majority in Assam, Hinduism constitutes 61.47% of Assam population. Muslim constitutes significantly 34.22% of total population. The religion based census data released by the Register General and Census Commissioner of India showed a significant rise in Muslim population in India than its Hindu population as given in table 2. Compared to 2001 census data, the data in 2011 shows that the Hindus population in Assam is 19180759 (61.46 %) with a remarkable decline of 3.43 percent. The population of Muslim is 10679345 (34.22%) which is significant increase by 3.3 percent in the state. In 2001, six districts in Assam were Muslim dominated but in 2011 it increased to 9 as given in table 3. According to the census report as given in table 3, Dhubri district has recorded the highest Muslim population of (24.40) percent followed by Morigaon (23.39%) and Goalpara (22.74 %). The table 3 shows that the Dhubri (76.67%) has highest Muslim people and lowest number in Dhemaji (1.96%). Though there is no documented data on the number of illegal migration, it is assumed that out of the 26 million people residing in Assam, around six million are illegal Bangladeshi Migrants (Goswami, 2010). Some influential Assamese intellectuals warned that Assam could become a part of "Greater Bangladesh" with districts like Dhubri and Goalpara witnessing a change in their demographic profile.

SOCIAL AND ECONOMICAL IMPACT ON THE ECONOMY OF ASSAM:

Assam is rich in natural resources. Its wild life, scenic beauty and natural resource base always attracts people from different parts of the country and even from outside of the country. But the illegal immigration from the neighboring countries, particularly Bangladesh has caused many socio-economic problems in the state. The Bangladeshis settle down in a safe place, where their livelihood will be stable. They have been settled in the char areas of Brahmaputra Valley which they found to be ideal for agricultural activities. The Brahmaputra valley is found to be ideal for agricultural crops. The growth of population in such areas has been found abnormally

high. As a result, the land-man ratio has declined or density of population has increased. The availability of cultivable land per capita has been declining rapidly. It has been argued that the communal violence in Assam between the Bodos and "Illegal Immigrants" creates a national security threat. Moreover, encroachment by illegal migrants into forests or public wastelands has created ecological problems. The percent of forest land area is declining from 39% in 1951-52 to about 30% now. Most migrant people in Assam particularly from Bangladesh and states like Bihar are the manual workforce. They work as road construction workers, house construction workers, cobblers, barbers, rickshaw pullers, vegetable vendors, Shop-keepers, thela-pullers etc. These migrants' workers work very hard at a very low remuneration which local Assamese labourers are not willing to do. So, the migrants at least 50 percent of tribal belts and blocks are under occupation of illegal migrants and other unauthorized person. They have captured the un-organised labour market, which accelerates the problem of unemployment and poverty in the state. Moreover, as the suspected immigrant crisis of identity among the indigenous Assamese. The influx of immigrants created a populations are mostly illiterate and they do not get employment opportunities in the organized sectors of the state. They are mostly engaged in the unorganised sector's job. As a result, a huge group of population remains outside the purview of the tax authorities which is a drain on the exchequer of the state.

On the other hand, the huge influx of immigrant laborers adds to pressure on the expenditure of the Government on education, medical, housing facilities or other infrastructural facilities which retards economic growth and per capita income. The suspected immigrants or mounting labour population increased the anti-social activities like theft, decoity, etc. which poses the threat to the internal peace of the state.

CONCLUSION:

This paper analyses various aspects of illegal migration in Assam. Due to huge influx of people, the state is becoming over stressed or over burdened. Migration is beneficial for both sending and receiving country. But huge infiltration is not beneficial for the receiving country. The immigrant's population act as a vote bank for the political parties in Assam. The recent initiative of National Register of citizens (NRC) is meant for the detection of illegal Bangladeshi migrants. The success of the NRC depends on the fair and accurate assessment. For controlling immigration, border fencing in Assam must be completed. The Assam Agitation (1979-1985) resulted in the Assam Accord 1985 which stated that anybody settled in Assam from Bangladesh after March 25, 1971 is not a citizen, but illegal migrants. But this provision of the Accord has not been implemented. The Government of Assam should look into the matter seriously. The Indo-Bangladesh border should be sealed immediately and border patrolling needs to be intensified and NRC should be updated as early as possible. Government should take bold steps to identify the illegal migrants; otherwise the indigenous people will lose their identity in their native place. But the problem of the state is that even after the 70 years of independence, India does not have proper laws to deal with refugees although India is a signatory to the United Nations Convention on refugees.

REFERENCE:

Cherunilam, F. (1987), "Migration, Causes, Correlates, Consequences, Trend and Policies", Himalayas Publishing House.
 Goswami, N. (2010), "Bangladeshi illegal Migration into Assam: Issues and concerns from the Field", Institute of Defense Studies and Analysis.
 Hicks, J.R. (1932), "The Theory of Wages", London, Macmillan
 Harris, J and M.P. Tadoro (1970), "Migration, unemployment and Development: A Two Sector Analysis", *American Economic Review*, Vol. 60, pp.126-142
 Jannissen, R. (2007), "Causality Chains in the International Migration Systems Approach", *Population Research and Policy Review*, Issue 26, No 4, pp. 411-36
 Lewis, W.A. (1954), "Economic development with Unlimited Supplies of Labour", *The Manchester School of Economic and Social Studies*, Vol. 22, pp.139-191
 Mahto, K. (1985), "Population Mobility and Economic Development in Eastern India", *Inter-India Publication*
 Mazumdar, I. et. al. (2013), "Migration and Gender in India", *Economic and Political Weekly*, Vol. 48, No.10
 Mishra, U. (1999), "Immigration and Density Transformation in Assam", *Economic and Political Weekly*, Vol. 34, Nos. 21
 Nayyar, D. (2000), "Globalisation and Migration, Retrospect and Prospect", *Yogana*, Vol. 44, No5
 Ray, D. (1998), "Rural Urban Migration", *Development Economics*, Princeton University Press
 accessed from <https://www.omlcssontine.org.in> on 30/01/2018
 Todaro, M. P. and S. Smith (2006), "Economic Development", Bostan, Addison Wesley
 UNDP (2018), *The International Migration Report 2017*, accessed from www.un.org on 22/02/2018.

LIST OF TABLES:

Table 1: Religious Composition of population in Assam in the year 2011

Religion	Percentage
Hindu	61.47
Muslim	34.22
Christian	3.74
Sikh	0.07
Buddhist	0.18
Others	0.09

Source: Assam Religious Census, 2011

Table 2: Major Religion of District of Assam

Serial No	District	Major Religion
1	Baska	Hindu
2	Barpeta	Muslim
3	Bongaigaon	Muslim
4	Cachar	Hindu
5	Chirang	Muslim
6	Darrang	Hindu
7	Dhemaji	Muslim
8	Dhubri	Hindu
9	Dibrugarh	Hindu
10	Dima Hasao	Muslim
11	Goalpara	Hindu
12	Golaghat	Muslim
13	Hailakandi	Hindu
14	Jorhat	Hindu
15	Kamrup	Hindu
16	Kamrup (Metro)	Hindu
17	Karbi Anglong	Muslim
18	Karimganj	Hindu
19	Kokrajhar	Hindu
20	Lakhimpur	Muslim
21	Marigaon	Muslim
22	Nagoan	Hindu
23	Nalbari	Hindu
24	Sivasagar	Hindu
25	Sonitpur	Hindu
26	Tinsukia	Hindu
27	Udalguri	Hindu

Table 3: District wise population by Religion

Sl No	District	Total Population	Hindu (%)	Muslim (%)
1	Baska		82.40	14.29
2	Barpeta	9501775	29.11	70.74
3	Bongaigaon	1693622	48.61	50.22
4	Cachar	738804	59.83	37.71
5	Chirang	1736617	66.50	22.66
6	Darrang	482162	33.25	64.34
7	Dima Hasao	928500	67.07	2.04
8	Dhemaji	214102	94.47	1.96

9	Dhubri			
10	Dibrugarh	1949558		
11	Goalpara	1326335	19.92	76.67
11	Golaghat	1008183	90.35	3.64
12	Hailakandi	1066888	34.51	57.52
13	Jorhat	-	85.99	5.01
14	Kamrup	1092256	-	-
15	Kamrup (Metro)	1517542	92.31	8.30
16	Karbi Anglong	1253938	57.82	39.66
17	Karimganj	956313	84.89	12.05
18	Kokrajhar	1228686	80.10	2.12
19	Lakhimpur	887172	42.48	56.36
20	Marigaon	1042137	59.64	28.44
21	Nagoan	957423	76.49	18.57
22	Nalbari	2823768	47.20	52.56
23	Sivasagar	-	43.39	8.46
24	Sonitpur	1151050	63.71	35.96
25	Tinsukia	1924110	92.31	8.30
26	Udalguri	1327929	73.95	18.29
27	Assam (Average)	831668	88.96	3.64
		31205576	73.74	12.66
			61.47	34.22

Source: Census of India, 2011

Table 4: Relative Decadal Percentage Growth of Population by Religion

Year	Assam		All India	
	Hindu	Muslim	Hindu	Muslim
1951-61	33.71	38.35	20.29	25.61
1961-71	37.17	30.99	23.72	30.85
1971-81	41.89	77.41	48.38	55.04
1991-01	-	29.30	19.9	29.3
2001-11	10.09	25.59	16.8	24.6

Source: Census of India, 2011

CONDITIONS AND ATTRIBUTES TOWARDS DEVELOPMENTAL ISSUE WITH SPECIAL REFERENCE TO DIMA HASAO DISTRICT

Roboni Khawbung

Assistant Professor (contractual)

Department of Education, Hills Degree College, Haflong

ABSTRACT:

The Barail mountain range in southern Assam's Dima Hasao district (erstwhile, North Cachar Hills District) has been a mute witness to the many aspirations of the fascinating tribes-people who have a rich history, a troubled present (for an instance, one can cite the recent incident of Maibang on 25th January 2018 where two innocent civilians lost their lives while upholding for their rights) and a future that's a mix of hope and challenges. Assam's district of Dima Hasao has long been neglected in terms of both economic and social development. For decades, the region has been a black-hole for business and enterprise. The sustained ethnic conflict, geographical isolation, difficult terrain, lack of attention from every corner, poor infrastructure (lack of proper roads), militancy and militarisation has led to a drying up of investments, and the lack of economic and social development in the region. This is despite the richness of natural resources and availability of local products in the region, and its beautiful picturesque for tourist destination presenting a huge opportunity for investment, an employment opportunity for the youth and growth of enterprise in the region. Dima Hasao is better known for its diversity in all aspects of life; ethnicity, religion, tradition, culture, customary law, and languages. Even though one can boast its diversity, but sometimes this very diversity and once the peace loving place as well as an abode of natural beauty found stumbling block for development due to certain possible reasons such as lack of brotherhood, lack of higher educational opportunity, dearth of diversified curriculum in the educational sector, supremacy over one community to another community, hatred, false propaganda, disturbed law and order conditions, poor connectivity, natural calamities, and many more. Adding to it, years of insurgency, political instability and financial scams of huge proportions had retarded the overall progress and development of Dima Hasao.

Keywords: Ethnic Conflict, Gun and *Bandh* Culture, Poor Connectivity, Natural Calamities, Lack of Diversified Educational Opportunity and Tourism.

INTRODUCTION:

Dima Hasao district (earlier called North Cachar Hills District) is an administrative district in the state of Assam in north-eastern India. The peace loving place and an abode of beauty, one of the hill districts of Assam witnessed extensive violence over years. If the north-eastern region is tagged as one of the backward regions of India, Dima Hasao would be among the top list in terms of backwardness in every sphere of the rest of the districts of Assam and north-east at large. It is well known fact that both Education and Society are vital parts and contribute to one another for progress and development. It is when these two are in deplorable states, development is impeded. It is the need of the hour to give more stress educational and all round development in every sphere.

REVIEW OF LITERATURE:

According to PK Dhar, in his book, "The Economy of Assam: Including Economy of North-East India", expressed his concern over the geographical isolation, difficult terrain and lack of attention to be the factors responsible for poor development of transport and communication facilities in Assam. Also technological progress is the root of economic progress but since Assam suffers from lack of technological development due to poor scientific educational facilities which still follows primitive technologies in agricultural sector and it results in stagnation of agricultural production (Page no. 35-37).

In the book, *Power Play in Assam Hills: Aspirations, Development and Politics in Dima Hasao* by Wasbir Hussain, mentioned that with an area of 4,888 square kilometres, the Dima Hasao district is Assam's second largest district. But, with poor infrastructure and human development indicators, governing this district, hit hard by violent insurgencies for the past two decades or more, has been a huge challenge both for the elected Autonomous District Council members as well as the State Government. According to him, the factors which pose as a governance challenge for the Council administration are such as, Insurgency, Infrastructural deficit, Political instability, Lack of funds, Ethnic tensions. All these challenges mentioned above continue to make the work of the Council difficult (Page no.169-180).

According to R.K. Lekhi in his book "Development and Environmental Economics", skilled labour to those work which is performed by human beings having some sort of special training or possess special knowledge. For instance the work of a doctor or an engineer will be called as skilled labour. On the contrary, unskilled labour is that for whom no special training is required. It includes the general physical work done by a layman. For instance, the work of labourers carrying bricks etc. can be termed as unskilled labour (Page no. 32).

According to Rev. Hrilrokhum Thiek in his book, "History of the Hmars in North-East India (with special reference to Assam)", he mentioned that the outbreak of war between the Hmars and the Dimasas way back in 2003 was due to misunderstanding between the two hill tribes Hmars and Dimasas. It was such that some cadres of suspected NSCN (IM) faction of deserters kidnapped 3(three) DHD (Dima Haram Daogah) cadres from Purana Zoar, a Hrangkhoh village on Cachar district border. The DHD mistakenly believed that the kidnapping was the handiwork of Hmar People Convention-Democratic (HPC-D). In revenge, the DHD

in full military uniforms attacked Purana Hnachangzawl and Purana Zoar villages on the 2nd March, 2003. The DHD continued to raid Hmar villages not only in North Cachar Hills but also in Cachar. The Hmars too attacked the Dimasas. This way the effected people from both the tribes fled away and deserted their homes to save their lives. Many lives were lost apart from their properties and belongings (Page nos. 251 and 260).

According to S.C. Rai and V.K. Bhatia in the journal of Indian Society of Agricultural Statistics of the topic entitled 'Dimensions of Regional Disparities in Socio-Economic Development of Assam', N.C. Hills (Dima Hasao) district though its literacy rate is quite high yet, the district is low developed in agricultural and industrial sectors. Most of the areas of the district are covered by hills and forests, where irrigation system is poor and fertilizer use is low (Page no. 188.a).

OBJECTIVES:

- The objectives of the paper are:
- To cite why Dima Hasao district has remained socially and economically backward.
 - To explore the unexplored tourist destination within the district.

METHODOLOGY:

The study follows descriptive method. In the present study, data have been collected by using secondary source through books, newspapers and journals. The study is delimited to Dima Hasao district of Assam.

STUDY OF THE PROBLEMS AND DISCUSSIONS:

In medical terms, developmental delay is such that it may varies in terms of genetic causes (like Down syndrome), or complications of pregnancy and birth (like prematurity or infections). Often, however, the specific cause is unknown, yet some causes can be easily reversed if caught early enough. When such developmental delay is detected they are diagnosed for recovery. So also in terms of societal as well as economic development, the sooner the problems are detected and diagnosed the better progress it will be. As such early intervention and special education program and developmental strategy of the administrative are expected.

With an area of 4888 sq. km., the Dima Hasao district had poor infrastructure and hit hard by violent insurgencies and the continuous gun and *bandh* culture for the past two decades or more, which has been a challenge both for the elected Autonomous District Council members as well as the State Government.

If one looks at the main reasons that pose as a governance challenge for the Council administration and the cause of being socially and economically backward, they are as follows:

1. Insurgency:

The Dima Hasao district has been on a boil ever since insurgency took shape in the district in the early 90's in the form of Dimasa National Security Force (DNSF). With the demand for 'revival of the lost Dimaland', insurgency movement put enough pressure on the Council, the state government and the security forces, such that the law and order situation has remained

fluid in the district over decades. Maintaining law and order has been the greatest governance challenge in Dima Hasao. It is because of the disturbed law and order conditions, developmental progress could not reach its zenith.

Counter-insurgency operations and peace talks with both the factions of the DHD finally led to the signing of a peace accord in October, 2012 and disbanding of both the factions. But insurgency has not yet died down in the district. A few new groups are still active which includes outfits like the Hill Tiger Force (HTF) and the Dima Jadi Naiso Army (DJNA). Insurgency, unfortunately is, still alive in the district and continues to pose a challenge to the authorities.

2. Ethnic violence (Communal fight):

Dima Hasao is a cauldron of numerous ethnic groups who have been living together for many years such as Dimasa, Zeme Naga, Hmar, Kuki, Hrangkhoh, Biate, Karbi, Jaintia, etc. But with the birth of insurgency in the district, conflicts along ethnic lines began to brew in the district. The Indigenous Students' Forum (ISF), the Indigenous Peoples' Forum (IPF), a banner organisation of non-Dimasa ethnic groups in the district, claims that non-Dimasas have been deprived of their rights in many ways, including in securing employment, development and many other grants and funds from the Government. With increase discontentment among the non-Dimasas several indigenous communities came forward to stand for their rights. They have also demanded a separate autonomous district for the non-Dimasa people living in the district.

Of the many communal tensions, the Dimasa-Hmar conflict of early 2003 can be traced. The then kidnapping, brutal killing and burning down of dwelling houses of one another communities became a stumbling block for growth and development of the district. As such the gun and *bandh* (shutdown) culture organised by various ethnic tribes upholding their rights caused retardations in developmental works. It has been witnessed that in order to stop *bandh* culture a *bandh* movement need to conduct which again caused disturbances of the daily activities of the people. This inter-ethnic rivalry shows how difficult it is to govern a district, which is a mix of several tribes.

The losses suffered by the Hmars during the ethnic clash were recorded as follows:

- Number of dwelling houses burnt down... 709(165 in Cachar district)
- Total- 1,642 (561 in Cachar)
- Total number of villages affected including 2 hamlets... 47(20 in Cachar)
- Number of villages deserted till date including 2 hamlets... 21
- Loss of human lives (including the Headman of Rawpuizawl village lost in a Dimasa village in 2004)... 45
- Other losses:
 - Church building (place of worship)... 20(10 in Cachar)
 - Pastor quarter... 7 (1 in Cachar)
 - School building... 16
 - Shops... 8
 - Granaries... 100 approx.
 - Pig sties... 250 approx.
 - Chicken sheds... 200 approx.

People belonging to both the communities fled to villages where their respective communities command the majority. Being displaced and when such communal fights took place one cannot expect development from any angle. Though situation seems to be in a better position, yet every community remains alert by forming themselves a village defence party in short known as VDP so that they are secured enough and get protection from any external danger.

3. Political instability:

Political instability has been a factor that has been hampering development in Dima Hasao for decades. Frequent change of leadership in between the terms of the District Council has been hampering the smooth governance in the district, which has had an impact on the various developmental activities. For instance, between October 2015 and June 2016, the leadership of the Council has shifted from Congress to the BJP, then back to Congress and then once again to the BJP. This episode of political instability had stopped almost all development works and government functioning in the district for almost eight months.

4. Unskilled labour exceeding the skilled labour:

Skilled labour is those work performed with special training or knowledge. Whereas unskilled are those for whom no special training is required. It has been witnessed that there is dearth of skilled labour in the district such as doctor, engineer who possesses special knowledge and training. On the contrary, there are numbers of unskilled labour who perform manual labour like carrying bricks, etc. Likewise the Government also initiated certain programme to benefit the underprivileged like the Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA), which provides a legal Guarantee of 100 days of wage employment to every household; whose adult members volunteer to do unskilled manual work, in short known as *job card*. Development is at slow rate when most of the people are working simply as daily wage earners, where every bit of works is manually done. This ultimately proved the poor infrastructural facilities of the district.

5. Infrastructural deficit:

Another challenge being faced by the district is the lack of proper infrastructure development. In the North-East Region District Infrastructure Index 2009, covering 80 districts in North-East India, Dima Hasao ranks 51 in terms of density and quality of roads, 42 in terms of Education Infrastructure, 62 in terms of Communication Infrastructure, 61 in terms of Health Infrastructure, and 53 in terms of Financial Infrastructure. The following table will show clearly the ranks of Dima Hasao in different category as per recorded, they are as follows:

Table 1: District Infrastructure Index 2009 and Dima Hasao's ranks in North-East Region

CATEGORY	RANK(out of 80 districts in North East)
1. Density and quality of roads	51
2. Education Infrastructure	42
3. Communication Infrastructure	62
4. Health Infrastructure	61
5. Financial Infrastructure	53

Source: District Infrastructure Index for North Eastern Region, September 2009, Ministry of Development of North Eastern Region (DoNER), Government of India.

The socio-economic indicators of Assam for the year 2001 shows that Dima Hasao district occupies last position in the infrastructure development index as well as agricultural development index among the then 23 districts of Assam. In terms of Industrial development, it ranks 22nd, i.e. second last position. Thus, in terms of overall socio-economic development, Dima Hasao occupies the last position among all the districts of Assam. With this, Dima Hasao district can be said that it is one of the most under developed districts in the state of Assam as well as North-East India. (Rai, S.C. and Bhatia, V.K., 'Dimensions of Regional Disparities in Socio-Economic Development of Assam'). Also it should be noted that technological progress is the root of economic progress. Great concentration should be given on this ground.

6. Lack of funds:

Capital deficiency is a characteristic feature of under-developed countries. This characteristic is nothing peculiar to Assam and Dima Hasao, when the whole country is suffering from capital deficiency. It is well known fact that the administration of the district council has three divisions, namely Legislative, Executive and Judiciary. The Indian Constitution has vested a significant amount of power to this council under article sixth. Except for the departments of the General Administration, Police, Treasury, and Electoral and judicial, the Assam Government has given independent responsibility to this district in rest of the departments. However, with very few avenues for revenue generation, it is difficult for the Council to run the administration.

The biggest challenge is the timely payment of salaries to the employees of the council. The annual revenue of the Council was around 22 Crore (2015-16), while the salary burden of the Council was around Rs. 46.8 crore. Insufficient revenue collections from different sources such as mainly from bamboo extraction, entry tax, market tax, coal royalty and limestone royalty, etc., delayed in collecting the estimated amount of money for the district fund. The Council Authorities too from time to time alleged that they had to face regular financial crunch because the Assam Government would not sanction and release grants on time. The frustrated employees had to face various problems in maintaining their children and family budget, and were even forced to sell their used materials at a cheap price in order to run their family.

A Government report, 2007 mentioned that there was delay even in case of release of funds under the state annual plan. The same report mentioned that developmental funds from the Central Government that were deposited in the state government's account were also irregular and funds were sometimes not released for three to four years. So besides a delay on the part of the Central and the State Government, the frequent change of leadership in between the terms of the District Council Executive Members and its Members of Autonomous Council are to blame for hampering the smooth governance in the district.

Table 2: Revenue Receipt, Dima Hasao Autonomous Council (2009-10 to 2015-16)

Year	Revenue Receipt (in Rs.)
2009-10	9,63,79,314.00
2010-11	24,63,35,166.00
2011-12	16,04,04,770.00
2012-13	16,15,17,170.00
2013-14	18,24,03,836.00
2014-15	22,34,27,062.00
2015-16	22,78,51,468.00
TOTAL	1,29,83,18,786.00

Source: Revenue Receipt, Dima Hasao Autonomous Council (2009-10 to 2015-16)

7. Connectivity in poor condition:

Earlier, it took about eight to nine hours to reach Guwahati from Haflong, but after renovation, one could make it in about five and half hours to six hours. Though the Government has initiated the National Highway project under the National Highway Authority of India (NHAI), and the Indian Railway Broad Gauge (BG) project of converting metre gauge lines into broad gauge lines as well, yet the condition did not serve much benefit to the local commuters and very minimum according to its need. For instance one of the main lifelines of the district, the Haflong-Silchar road, remained closed most of the time owing to natural calamities like landslides and the commuters also have to face many troubles due to incomplete construction of roads and damaged bridges, in which communication gets worsen especially during the rainy seasons. In fact the geographical isolation, difficult terrain, and lack of attention are some of the basic factors which are responsible for poor development of transport and communication facilities.

8. Lack of Higher Educational Opportunities:

In terms of education, the district literacy rate is not so low as compared to fellow districts. As such regarding ranking of districts by literacy rate of 2011 census, Dima Hasao stood the seventh rank with 77.54% out of which Male literacy rate comprises 83.29, and Female literacy rate comprises 71.33% respectively. But it is disheartening to know that there is less number of Higher Educational Institutes where students can explore their creativities. For instance there are only one Government College, i.e. Haflong Govt. College, and four other private colleges. Even in the Haflong Govt. College, there is insufficient number of Departments, and what is more disheartening to know is the availability of only two Department in the PG Section of Arts stream such as Political Science and History subjects. Apart from these two subjects, whether the students want it or not, they cannot go for other subjects for their Masters course. This has compelled parents to send their wards abroad for further studies, and the less advantaged ones discontinue pursuing their studies. What is the need of the hour is that more subjects like Education, Sociology, Anthropology, Geography, etc. should be

included in the college curriculum as per the need of the students and the society as well. Not only this, Medical Institute, Engineering College, Electronics Department, Business Administration, Tourism Education, Teacher Training college like the B.Ed. college, etc. should be established in the district at early stage. Interestingly, the ruling Government of the State mentioned in its budget session the inclusion of the establishment of B.Ed. College in Maibang and a college of Horticulture at head-quarter Haflong, Dima Hasao which is to be implemented in the coming days.

The Economy of Dima Hasao (erstwhile, NC Hills):

Economic scenario of NC Hills district as lack of infra-structural facilities and dearth of good educational opportunities are the main factors behind the low level of development. However, in spite of the gloomy scenario, prospects of Agriculture, Horticulture and Forestry are bright.

A. Agriculture:

Agricultural sector plays a strategic role in the progress of economic development of a country. It has already made a significant contribution to the economic prosperity of advanced countries and its role in the economic development of less developed countries is of vital importance. Even in the district the entire rural people are dependent upon Agriculture. A distinctive feature as regards to agricultural practices of the tribal people in the district is *jhumming* which is the traditional way of their life. About 70% of the total cultivated area is *jhumming* area where maize, zinger, turmeric, chillies, and other vegetables are cultivated in abundance. Some horticultural crops cultivation, viz. pineapple, orange, papaya and banana occupies a vital role in agricultural economy of the district. Though economic impact of *jhumming* cannot be ruled out at present, it has many drawbacks turning the hills slopes barren by soil erosion as well as less productive. Livestock and poultry occupy an important place in the rural economy of the district. Buffalo, pig, etc. are the most common livestock while hen and duck comprise poultry birds.

B. Forestry:

The major forest product consists of timber, cane, bamboo, Agar, etc. Boulders and gravels in the river beds along with stones are also available.

C. Industry:

Cement factories, saw-mills, are the private organized sector industries in the district. The NEEPCO has established Kopili Hydel Project at Umrangso, which produces sizable quantity of electricity. Apart from these, weaving is also considered to be a household industry in this district. Large areas have been covered by *Eri* and *Mulberry* farm.

D. Mines and Minerals:

The region has rich deposits of important minerals some of which are being commercially exploited while potential of other is yet to be prospected. Limestone and coal in small quantity are found in the neighbourhood of Garampani, i.e. from Khorangma to Garampani. The major rivers like Kopili, Jatinga, Diyung and Langting are rich in minor minerals like stones, gravels, sand, etc. and are extracted for construction of Roads, Buildings, etc.

How far is the Status of Tourism in the District:

As per Oxford Advanced Learner's Dictionary, 'Tourism' has been defined as, 'the business activity connected with providing accommodation, services and entertainment for people who are visiting a place for pleasure.' In fact, tourism is now one of the world's largest and most popular industries. Haflong, the district headquarter town, situated at 380 km away from Guwahati is a magnificent town with divine charm and known as the 'Scotland of Assam' for its natural beauty. Some of the breath-taking spot as well as the gifts of nature which will attract many tourists all over the world are the Jatinga which is only 9 km away from the districts headquarter. The mysterious behaviour of the birds flying over Jatinga from September to November has made this beautiful tiny place famous over the world.

1. Barail:

The major portion of the district is covered by hills. The main range is Borail of which Thumjang is the highest peak at 1,866 m followed by Hempeupet at 1,748 m. The other main range is Kharthong from Ditokchera to Garampani. Barail tracking has been one of the interesting sports of the district and there is a religious prayer ground of the Christian community where every year the congregations and students go there and offer prayer to the Almighty.

2. Thuruk:

Thuruk, which is the place with appealing natural beauty, and an abode of one of the hill tribes, Biate, is the coldest place of the district and about 110 km from Haflong via Sangbar road and only 13 km from Harangajao on foot. One can experience *snowfall* there during the winter. For trackers it is quite tempting.

3. Semkhor:

Semkhor is 29 km from Maibang. It is the only Dimasa village which is situated in a hilltop and not near the rivers like the others. The word Semkhor is a combination of two words *Sem* and *Dikhor*, which means *salt and well*. The people of Semkhor are known as *Semsa* which means *son of salt* or the *salt people*. Even today things have not changed much although the saline water wells have fallen to disuse.

4. Hajong:

Hajong, which is known as the *Tortoise Lake*, is located on Maibang-Hajadisa road. It is famous for the abundance of rare variety of hill *terrapins*. Hajong Lake is located in the Langting-Mupa reserve forest. Seven varieties of tortoise have been identified here.

5. Maibang

It is the *land of ancient glory* situated on the bank of river Mahur, 53 km away from Haflong and almost in the middle of the district. Maibang once flourished as the capital of Dimasa kingdom in the later part of the 16th century.

6. Umrangso

Another exotic destination in the district is Umrangso, which is the industrial town of Dima Hasao, situated 112 km away from Haflong and 224 km from Guwahati. It is located at the borders of Assam and Meghalaya. The huge Hydel plant has come up at Umrangso under North-East Electric Power Corporation (NEEPCO) with dams in the Kopiliriver. The beautiful Umrangso Lake, the hot water springs of Garampani, which is believed to possess medicinal

properties and the captivating views of water falls, and the exquisite scenery are enough to captivate attention. The Kopili Tea Estate is a pioneering plantation project, and limestone deposits near Umrangso have prompted another industrial activity in the region.

7. Panimoor:

It is a place of mesmerizing natural beauty situated about 120 km away from Haflong. The Kopili river turns into a thrilling waterfall, rolling over the rocks of Panimoor. People from different corners visited the place and the recent *bollywood* cinema *Rangoon* was also shot at this very place.

8. Harangajao:

It is known as the *Land of Green Valley*, which is situated along the border of the district. only 35 km from Haflong. It is the largest producer of pineapples. Also Agarwood, Orange, and varieties of fruits and plants have been found here. The beautiful picturesque attract people from outside the district. Now with the coming of Broad Gauge (BG) line from Guwahati via Lumding to Silchar and even to Agartala, one can see the scenic beauty which will wrap one's soul.

The view from Haflong Circuit House, the Boat House, Haflong lake, the beautiful places of worship at Haflong like the Presbyterian Church of India, the Jagannath Bari, Kali Bari and Shiva Temple, Namghar, Ram Krishna Seva Samiti, the Roman Catholic Church, Haflong Mosque, etc. have added the scenic beauty of the district which could serve as part of attraction for the tourists around the world and play as an important source for developing the region.

CONCLUSION:

When one thinks of joys that come with the adventures of travelling, we often envision exciting trips to beautiful places fit for a perfect photograph, unique foods and dishes that one doesn't find at home, feels the scenic beauty and encounters with people who are much different from those we are accustomed to. Tourism, apart from learning facts, allows us to immerse ourselves into the cultures and lifestyles of others which enhance our knowledge that help in bringing harmony with people and nature.

Apart from the scenic beauty, the speciality of Dima Hasao is its being a home to as many as 11 tribes and more than 7 non-tribal communities, all having their distinct culture, dialect and language-a perfect embodiment of pluralism, something rare in the country. That is why it brings interest to explore the district and has the possibilities of attracting tourist from around the nation and the world at large.

However, simply endorsing the gift of nature is not enough for growth and, development is not possible when there are people who want to satisfy their thirst with money. Even the district is not lacking behind in terms of corrupt practices. Also most of the people are residing in a village and remote area and they are not so much aware of their rights. Due to lack of ignorance and lack of awareness, development funds which are supposed to be owned by them have been tainted. Adding to it, the lack of attention from the Government and its delay in granting and implementing development plans for the region are due to its remote location and gap of communication as well as lack of concern from the citizen and the insincere activities of the leaders. Apart from the economic factors like natural calamities, geographical

isolation, and its difficult terrain, poor transport and communication facilities, lack of fund, lack of skilled personnel, etc., the non-economic factors like sensitive areas, disturbed law and order conditions, lack of efficient administrative machinery, the social structure like joint families etc. have made slow progress in the district.

REFERENCE:

Books:

Dhar, P.K., 'The Economy of Assam: Including Economy of North-East India', New Delhi: Kalyani
 Hussain, W. (2017), 'Power Play in Assam Hills: Aspirations, Development and Politics in DimaHasao', Guwahati:Genesis
 Lekhi, R.K. (2005), 'Development and Environmental Economics', New Delhi: Kalyani
 Thiek, H. (2013), 'History of the Hmars in North-East India (with special reference to Assam)', Guwahati: Bhabani

Article of Research Journal:

Rai, S.C. and Bhatia, V.K. (2004), 'Dimensions of Regional Disparities in Socio-Economic Development of Assam', Journal of the Indian Society of Agricultural Statistics, 57 (special volume), 2004:178-190, [http://js.iasri.res.in/jsp/volume/vol57/scrai.pdf]

ORGANIC FARMING: IT'S SOCIO-ECONOMIC IMPORTANCE FOR THE FARMERS OF NORTH-EAST INDIA

Tamalika Sikder*

Ph.D Research Scholar

Department of Commerce, Gauhati University

Dr. Amrit Pal Singh

Professor

Department of Commerce, Gauhati University

ABSTRACT:

Organic farming is an agricultural process that strives for sustainability as regards to soil quality, ecological balance and human health. It makes use of naturally occurring substances while prohibiting or strictly limiting the use of synthetic substances. Overall, it is a combination of traditional knowledge and modern scientific developments in the field of agriculture. The growing attention towards organic agriculture in recent decades has been due to the apparent side effects of 'conventional agriculture' that heavily relies on the use of artificial chemicals. The organic market was valued at 81.6 billion USD worldwide in 2015, which was 17.9 billion USD in 2000 and it is growing at a faster pace. Moreover, the organic food market in India is growing at the rate of 25%-30% annually and is expected to touch a whopping \$1.36 billion by 2020. Thus, there lies a sea of opportunity for organic farmers. As far as the potential of the different regions of India in respect of organic farming is concerned, the North Eastern States have been recognised as the best organic farming hotspot in the country as the use of chemical fertilizers and pesticides have been significantly low in this region when compared to the rest of India. These states are called 'organic by default'. As such, the farmers of the region are saved from the hassles involved in converting their lands into organic ones. They can save much of their time and cost in this regard and start off their organic ventures in full swing and earn the benefit of charging premium price for their products by meeting the growing consumer demand in this sector.

Keywords: Organic Farming, Socio-Economic Development and Government Policies.

INTRODUCTION:

"Organic agriculture is a production system that sustains the health of soils, ecosystems and people. It relies on ecological processes, biodiversity and cycles adapted to local conditions, rather than the use of inputs with adverse effects. Organic agriculture combines tradition, innovation and science to benefit the shared environment and promote fair relationships and good quality of life for all involved."-International Federation of Organic Agricultural Movements (IFOAM). While conventional agriculture uses synthetic pesticides and water soluble synthetically purified fertilizers, organic farmers are restricted by regulations to use natural pesticides and fertilizers. The principal methods of organic farming include crop rotation, use of green manures and compost, biological pest control and mechanical cultivation. These measures use the natural environment to enhance agricultural productivity: legumes are planted to fix the nitrogen in the soil, natural insect predators are encouraged, crops are rotated to confuse pests and renew soil and natural materials such as potassium bicarbonate and mulches are used to control diseases and weeds. Genetically modified seeds and animals are avoided.

The growing attention towards organic agriculture in recent decades has been due to the apparent side effects of 'conventional agriculture' that heavily relies on the use of artificial chemicals. The use of chemical pesticides and fertilizers, while beneficial in the short run has serious long term side effects such as soil compaction, erosion and decline in the overall soil fertility with health concerns such as toxic chemicals entering the food supply. Such deleterious effects on soil and human health have led many farmers and consumers to adopt the 'organic way'. This is reflected in a report released by Research Institute of Organic Agriculture (FiBL) on February 9, 2017 in the statistical yearbook "The World of Organic Agriculture" (data as per end of 2015). According to this report, organic farming continues to show a positive trend on various aspects. A total of 50.9 million hectares were organically managed at the end of 2015, representing a growth of 6.5 million hectares over 2014, the largest growth ever recorded. The organic market is valued at 81.6 billion USD worldwide which was 17.9 billion USD in 2000. The growing consumer demand is also reflected in the significant market growth of 11% in the United States, the world's largest organic market. In 2015, 2.4 million organic farmers were reported and India led the numbers with 585,200 organic producers.

Due to the growing demand for organic products and the price premium available on them, there has been a spurt in organic food exports from India. India has a huge potential for export of organic products and was ranked 11th in organic food exports in 2015. Key markets for India include developed countries such as the USA, the European Union, Canada, Switzerland, Japan and Australia and developing countries such as Bhutan, Saudi Arabia and ASEAN (Association of South East Asian Nations) countries. Moreover, according to a 2015 Economic Times report, the domestic organic food market in India is growing at the rate of (25-30) % annually and is expected to touch a whopping \$1.36 billion by 2020. Thus, there lies a sea of opportunities for India in the organic sector. In order to capitalise on such opportunities, India needs to do away with the barriers that can hamper its race towards becoming a major producer and exporter of organic food products globally. Some of the key issues that have to be dealt with in this regard are lack of a nodal agency, lack of a comprehensive policy for all round

development of this sector, lack of uniform standards for organic inputs, lack of labelling and certification standards for the domestic markets and for imports, lack of a proper supply chain which is more acutely felt in hilly, tribal and remote areas that have a high potential for organic farming but have difficult terrain or underdeveloped infrastructure. Despite these barriers, if an appropriate comprehensive policy is put into place, it can lead to the growth of organic food processing, enhance export earnings, enable India to attain sustainable development indicators, help double farmer's income by the year 2022, attract FDI in the organic food sector and develop India as an organic agro product processing hub to support the Prime Minister's 'Make in India' initiative.

The above developments provide an enviable opportunity for the farmers of North-East India who have long been neglected so much so that the benefits of Green Revolution initiated in the 1960s have still not percolated down to them. This has been a blessing in disguise as much of the land in this region is still untouched by chemicals thereby leaving it 'organic by default'. As 70% of the population in these states derive their livelihood from agriculture, growth of this sector can contribute to a rise in GDP and per capita income. The North Eastern (NE) States of Sikkim, Arunachal Pradesh, Assam, Manipur, Meghalaya, Nagaland, Tripura and Mizoram can provide a balance to the entire agricultural system of the country by adopting organic agriculture in a big way and integrating it with the other high yield methods persisting in the other states of the country so that sustainability can be achieved across the value chain for establishing a healthy and well fed society.

LITERATURE REVIEW:

Eyhorn F., 2004 stated that the challenges for India in emerging as a leading producer and marketer of organic products lay in creating a favourable export image, domestic market development, improvement of production methods, updating the legal framework and recognition of national certification bodies.

Giovanucci D., 2005 observed that organic agriculture among small farmers can contribute to poverty alleviation, resource conservation, crop diversification, food security and improvement of environmental conditions. But all these required a reliable institutional support system that can facilitate access to technology, provide initial financing for certification, inputs, production and marketing.

Venkateswarlu B., 2007 opined that while rain fed regions undoubtedly offer good scope for organic production at least in niche areas and commodities, a number of research, development and policy issues needed to be addressed before realising the potential.

Saikia S.P., 2009 proposed that organic farming is a welcome alternative from three angles: savings in finance drainage by small farmers, eco-friendly thereby improving soil quality and gradual trimming of government subsidies and fertilizers.

Chandrashekar H.M., 2010 suggested that in a country like India where labour is abundant and relatively cheap, organic farming is a good cost effective solution to the increasing costs involved in chemical farming.

Yadav S.K., 2013 stated that there is a need to identify suitable crops/products on regional basis for organic production that has international demand.

Phukan P.K., 2015 observed that though organic agriculture had benefited a large number of farmers in several ways, it had less impact for the producers in remote areas. Therefore, despite the favourable soil conditions of North-East India, the region is still an unexplored paradise for agribusiness.

Babu S., 2017 stated that there is tremendous scope for organic agriculture in NE India as the use of inorganic fertilizers and chemicals is least here making the land almost virgin. However, the inability of the government to bring about an effective policy for the promotion of organic farming in the region has been the most important drawback in the progress of this sector.

OBJECTIVES OF THE STUDY:

- To highlight the socio-economic importance of organic farming for the farmers of North-East India.
- To highlight the important aspects that require due consideration in the governmental policies as regards to organic farming in North-East India.

RESEARCH METHODOLOGY:

The present paper is descriptive in nature. It is primarily based on secondary data. A limited use of primary data has been made. Secondary data has been collected from various journals, magazines, books, periodicals, reports and different websites while ensuring their relevance and reliability. Primary data is based on personal interview with a pioneer in the field of organic farming in NE India.

RESULTS AND DISCUSSIONS:

Socio-economic importance of organic farming for the farmers of North-East India:

The farmers in NE India still prefer to use traditional methods of farming without the use of chemical fertilizers and pesticides. While the usage of chemical inputs led to improved crop yields in the western belt of India, it has also led to diminishing soil fertility overtime. Pests are becoming immune requiring farmers to use stronger dosages and costlier pesticides. These chemicals infuse into the food chain and cause ecological imbalance. The growing cases of cancer among farmers in the western belt show the dangerous side of conventional farming. Consumers in India and all over the world are becoming more and more conscious regarding what they eat and with increased purchasing power; they are ready to pay more for healthy food. Thus, this is an opportune time for the farmers of NE India as this region has the potential of becoming the organic hub of the country. A number of socio-economic benefits that farmers of this region can avail by adopting the organic way are as follows:

- **Increased profitability:** Organic farming is more profitable than conventional farming as the input cost is low and the final output can be sold at a premium price (40% higher than conventional products). An organic farmer need not buy expensive chemical pesticides and fertilizers as he depends on inputs produced within the farm. Also, he is relieved of the hassles

that come with increasing cost of chemical inputs while the commodity prices remain low. The farmers of North-East India mostly rely on on-farm resources which is itself a characteristic of organic farming. Moreover, due to financial constraints, they cannot always afford expensive fertilizers and pesticides. Thus, traditional farming can open doors for commercial exploration of the knowledge that already exists and also put an end to the financial hardships currently faced by the farmers.

- **Increasing yield:** Contrary to conventional farming where productivity decreases overtime due to the soil losing its fertility, organic farming yields continue to rise as understanding of the organic system grows. North-East India being considered organic by default has been fortunate enough to have not followed the path so followed by the farmers in the western belt of India. The productivity of land in the western states of India is falling with each passing day thereby leaving the farmers there with mental anxieties and suicidal tendencies. The North Eastern farmers can thus choose the better route by complying with what is natural and safe.

- **Better resilience to poor weather:** Organic soil has greater capacity to resist both dry and wet conditions. It results from the system that relies on building soil organic matter levels to ensure optimum health for crops and greater pest resistance. The soil has better water retention capacity during dry years and better soil tilt for improved drainage during wet ones. Farmers typically face a lot of difficulties when it comes to losing their crops due to harsh weather conditions. By adopting organic farming, they can, if not fully but to large extent prevent their hardwork from going into vain.

- **Crop diversification:** Organic farming encourages crop diversity as through polyculture (multiple crops in the same place) beneficial insects, friendly microbes and other factors that improve soil health can be supported. This makes the farmers self-sufficient as the soil becomes healthy enough to grow seasonal fruits and vegetables and leads to generation of more revenue streams. Also, when only one type of crop is produced, there are chances of other varieties going extinct overtime. Thus, multi-cropping must be encouraged if the unique food resources of the North Eastern States are to be preserved.

- **Growing national and international demand:** As previously stated, the demand for organic products in the national and international markets is on the rise. North-East India is home to some niche crops like Assam lemon, Medicinal rice and Passion fruit which has high market demand. It accounts for 45% of total pineapple production in India and also houses the best quality ginger. Supply of such niche crops besides other products on organic basis can attract huge amount of foreign currency, contribute to national GDP and raise the per capita income of farmers of this region.

- **Employment generation:** Organic farming is labour intensive and it will help in mitigate unemployment and underemployment problem currently faced by the society. Moreover, it will also help to reduce periodical unemployment by encouraging diversification of crops with their different planting and harvesting schedules. Employment generation is one of the key considerations when it comes to economic development of a state or a country and organic farming can act as a humble solution in this regard.

- **Better working conditions:** For organic certification, the final product has to meet all the necessary standards. There is a reciprocal connection between humane condition on farms and final product. If working conditions are poor, it will be reflected upon the quality of the final product. Therefore, proper working condition is an important requirement for organic farming thereby providing good health and livelihood to the farm workers.

- **Improved quality of labour:** It has been found that quality of labour is more positive in organic farming because the work is more diversified and less repetitive. This results in better yield and higher income.

- **Organic farm tourism:** In countries like Italy, organic farm tourism has largely added to the incomes of organic farmers. People are interested in knowing how an organic farm operates and organic farmers make sure to meet their expectations for which they charge a good price. It also acts as a channel for increasing the sale of their products and also promotes the product. The same can be imitated by the organic farmers of North-East to earn higher revenues. The excellent natural beauty and grandeur of these States combined with the choice of being close to nature can act as an attraction for nature lovers around the world and give a boost to the tourism industry here thereby opening an extra revenue door for the farmers.

- **Ecological balance, agricultural sustainability and physical safety:** North-East India has been identified as a biodiversity hotspot. Preservation of this biodiversity is crucial for sustainable development. Organic farming shall enable the farmers of this region to maintain the necessary ecological balance and thus ensure a safe and secured life for themselves. Farmers are the most vulnerable to fatal disease like cancer resulting from excessive use of chemicals in agricultural fields as witnessed in the western belt of the country. By adopting organic farming, they can fetch a healthy life for the society as well as for themselves.

Unless the North-East makes a rapid stride towards organic farming, the cost in terms of environmental degradation and health costs arising from agriculture could rise sharply. This region of India can become known for organic food and participate in a host of benefits like healthier food for people, environmental appreciation, contribution to national Gross Domestic Product (GDP), gradual trimming of subsidies by the government and savings in finance drainage by small farmers.

Important areas that require due consideration in governmental policies as regards to organic farming in North-East India:

Lately, the Central and State Governments have come up with several policies and schemes to encourage organic farming in North-East India. They have been promoting this region as the potential organic hotspot of the country due to presence of large areas of organic and virgin land. However, as of today, the actual planning and implementation of such policies and schemes have been far from being satisfactory. This is because the government has failed to realise the complexities involved in implementation of such ambitious projects. Through a primary study, the researcher has come to the conclusion that the following aspects require the most attention when it comes to promotion of organic farming in this region:

- **Organic certification:** Certification is an important factor when it comes to charging a premium price for the organic products. Without certification, organic products command the

same price as that of conventionally produced ones. But getting organic certification is a costly process. When an agricultural farm is in its conversion period (interim period for converting a farm into an organic one), a hefty certification fee needs to be paid at regular intervals to the certifying agency. Small and marginal farmers of the North-East are in no possible position to meet such expenses without government support. Also, there has been growing instances of corruption among the certifying agencies. The governmental policies should have sufficient room for checking such unethical practices. If these two aspects of organic certification are taken care of, more and more farmers will adopt the organic way and also consumer confidence in organic products will increase leading to widening of organic markets.

- **Focus on hilly regions:** The government policies should focus more on the hilly areas of the States and not the plain ones so far as organic farming is concerned. North Eastern States receive heavy rainfall because of which flood situation arises. If flood water enters organic farms, they no longer remain organic. In plain areas, flood water easily enters the fields while in hilly areas; rainwater gets drained away. Focussing on hilly regions so far as organic farming is concerned will therefore be more economical and ethical.

- **Crop mapping:** Crop mapping is of special importance for North Eastern States as because the ecological conditions here are immensely diverse. A crop which is suitable for a particular area may not be suitable for an area even at a shorter distance from the former area. Therefore, it is necessary to identify the crop most feasible for a given soil before any cultivation activity is initiated.

- **Education and training:** Research and development activities supported by the government will be of no use if the organic farmers are not properly educated and trained regarding the best organic practices. The farmers need to understand that when speaking about organic, it refers to the entire value chain. They need to be demonstrated how the entire value chain can be organically managed. Information technology can be of critical importance in this regard.

- **Marketing:** For the farmers to actually benefit from organic farming, marketing should be in their hands. This is because once middlemen enter the organic marketing scene, farmers will not get their due price and thus face exploitation. Also, incidence of mixing organic products with inorganic ones will increase. The governmental policies should strive to establish direct link between the organic farmers and potential consumers. Organic farmers' cooperative societies, organic markets in villages and highways are some of the distribution channels that can be adopted in this regard.

- **Self-sufficiency:** There are many instances where farmers practised organic farming as long as they received government subsidies. This reflects the inefficiencies that can paralyse the entire drive towards organic farming. For organic farming to succeed, organic farmers need to be self-sufficient. They should be capable of using on farm inputs and not rely on external sources of supply. For farms to be self-sufficient persistence and patience are the two most important requirements and the government should be ready to provide the necessary support till a farm becomes self-sufficient.

Reflecting upon the above points, it can be realised that organizing the entire system of

organic farming is the most crucial challenge for the Central and State governments. In the absence of a holistic approach, organic farming will be a futile exercise.

CONCLUSION:

Organic farming can prove to be a boon for the small and marginal farmers of North-East India. They can get rid of the inconveniences caused by extreme weather conditions, usage of chemical fertilizers and pesticides, seasonal unemployment, etc. through the extremely effective remedial measures that organic farming promises. They can finally see their income levels be at par with those of the farmers in the western belt of India. Along with higher income levels, comes agricultural sustainability that is not possible through conventional farming. However, such favourable changes can only become possible if the complexities involved in effective implementation of organic farming are duly recognised and addressed. The central and state governments need to commit adequate resources if positive results are to be achieved in this sector. Moreover, patience and persistence in their endeavour is what the present situation demands and if successful, organic farming can change the socio-economic picture of the North-East.

ACKNOWLEDGEMENT:

I have great pleasure in completing and presenting this seminar paper. I sincerely thank everybody who has a helping hand in my work.

At the very outset, I express my profound gratitude to my PhD guide Prof. Amrit Pal Singh, Department of Commerce, Gauhati University for his invaluable guidance in this endeavour. He has been a constant source of inspiration and I sincerely thank him for his suggestion and help to complete this paper.

I would also like to thank Dr. Anuj Baruah, a pioneer in the field of organic farming, for providing me with an overall background regarding what organic farming actually comprises of, its various challenges and prospects.

REFERENCES:

Edited books:
 Willer H., L. J. (2016), "The world of organic agriculture-statistics and emerging trends, 2016", FiBL & IFOAM - Organics International

Articles of research journal:
 Chandrashekar, H.M. (2010), "Changing scenario of organic farming in India. International NGO Journal", 5(1), 034-039
 Macrae, R.J., F. B. (2008), "Economic and social impacts of organic production system", Canadian Journal of Plant Sciences
 Yadav, S.K., B. S. (2013), "A review of Organic Farming for Sustainable Agriculture in North India", International Journal of Agronomy

Web Resources:
 Babu, S., S.R. (2017, may 19), 'Organic Farming: Problems and Prospects in NE India', Retrieved January 12, 2018, from https://www.researchgate.net/publication/317011678_Organic

Farming Problems and Prospects in North East India

Blobaum, R. (2005, September), "Inside Organic: The Public Benefits of Organic Farming and Why they Matter", Retrieved February 15, 2018, from <https://rogerblobaum.com/the-public-benefits-of-organic-farming-and-why-they-matter-an-urgent-call-to-action-to-get-this-important-story-told-sept-05/>

Eyhorn, F. (2004), "Organic Agriculture in India", Retrieved JANUARY 12, 2018, from http://orgprints.org/2768/1/eyhorn-2004-Organic_Agriculture_in_India.pdf

Nath, P. (2017, February 11), "Dark side of Assam tea and importance of organic farming", Retrieved February 12, 2018, from Assamica agro tea company website: <https://www.assamicaagro.in/blogs/posts/dark-side-of-assam-tea-and-importance-of-organic-farming>

Pathak, A. (2006, October 15), "Growing organic tea in NE India is a difficult task", *Down to Earth*, Retrieved February 16, 2018, from <http://www.downtoearth.org.in/coverage/growing-organic-tea-in-northeast-india-is-a-difficult-task-8495>

Phukan, P.K. (2015, December 21), "Prospects of Organic Farming in North East", Retrieved January 13, 2018, from <https://www.nelive.in/north-east/business/prospects-organic-farming-north-east>

Saikia, S.P. (2009, August), "Organic Farming in Assam", *Eastern Panorama*, Retrieved January 14, 2018, from http://easternpanorama.in/index.php?option=com_content&view=article&id=360:organic-farming-in-assam&catid=6:contents&Itemid=10 www.wikipedia.com accessed on 9/1/2018, 15/1/2018, 7/2/2018, 17/2/2018 and 20/2/2018

Conference Paper:

Amario, A.D., M. F. (2005, July), "Social aspects of organic farming", *ENAOs, 2005- 4th ENAOs Summer Meeting*, ENAOs

Working Paper:

Giovannucci, D. (2005), "Organic Agriculture and Poverty Reduction in Asia: China and India focus", Food and Agriculture Organisation of the United Nations

Venkateswarlu, B. (2007), "Organic Farming in Rainfed Agriculture-Prospects & Limitations", Central Research Institute for Dryland Agriculture, Hyderabad: The Director, Central Research Institute of Dryland Agriculture, Santoshnagar, Hyderabad

ROLE OF "DEEN DAYAL ANTYODAYA YOJANA-NATIONAL RURAL LIVELIHOODS MISSION" (DAY-NRLM) TOWARDS AGRICULTURE DEVELOPMENT THROUGH SHG PARTICIPATION

Vidisha Saikia

Ph.D Research Scholar

Department of Commerce, Dibrugarh University

ABSTRACT:

Poor have multiple livelihoods as a coping mechanism for survival their existing major livelihoods are-wage labour, small and marginal holding cultivation cattle rearing, forest produce, fishing and traditional non-firm occupation. The net incomes and employment days from current livelihoods are not adequate to meet their expenditure. NRLM would look at the entire portfolio of livelihoods of each poor household and work towards stabilizing and enhancing the existing agricultural livelihoods and subsequently diversifying their livelihoods. The study tries to examine the existing agricultural activity among the beneficiaries and the performances of Self-Help Groups (SHGs) and Village Organization (VOs) in the study area. It also studies profitability of the Livelihoods as well as its contribution to the members engaged in the Group activities and also examines the future impact on Agriculture development in Regional Sector.

Keywords: Self-Help groups (SHGs), Village Organization (VOs) and Livelihoods.

INTRODUCTION:

The NRLM is an integrated mission which takes initiative to do the various income generating activities through the different components of it. The main components of this scheme are like-social inclusion, social mobilisation, financial inclusion, skill and capacities building of SHG members. The impacts of these components have been studied in Khagorijan Development Block of Nagaon District. NRLM's core belief is that a number of obstacles due to psychological, economic, social, religious and political reasons suppress the capabilities of poor. Their intrinsic capabilities are unleashed only when they are organized into institutions that they truly own. The aim of this particular mission is to reduce poverty through building strong grassroots institutions of the poor women through SHG formation. Implementation of NRLM enables (a) focus on targets, outcomes and time bound delivery

(b) shift from the present allocation based strategy to a demand driven strategy enabling the states to formulate their own poverty reduction action plans and (c) monitoring against targets of poverty outcomes. Self-Help Groups are small voluntary association women created for enabling members to reap the benefits out of mutual help. Solidarity and joint responsibility benefits includes mobilization of saving across the formal credit facilities, capacity building and marketing.

Under NRLM, the SHG membership should be in the range of 10-25. The age group for membership is 18-60 and Village organization (VO) is combination of 10-25 SHGs who are belongs to a same revenue village under a Gaon Panchayat. Preference is given for the poorest women among the target group. Under the initiative of the Ministry of Rural Development, NABARD the formation of SHG with association of state government and various commercial banks and Gramin Vikash Bank etc. SHG/VO is recognize as an approach for the rural poorer because of its ability to help its members through organizing themselves into groups and ability to increase their social and economic empowerment apart from capacity building to stay and live in a society.

In Assam NRLM is sub divided into 3 phases for functioning of activities –State level (SMMU), District Level (DMMU) & block level (BMMU). Under NRLM, SHGs and VOs are forming with a motive to empower women by doing existing livelihoods as a income source. In the study area also NRLM team is giving a hand holding support to the rural women.

In the present study it will be summarized as a brief scenario of a SHG/VO under the DAY-NRLM & also tries to explain how the NRLM would look at the entire portfolio of livelihoods of each poor household and work towards stabilizing and enhancing the existing agricultural livelihoods and subsequently diversifying their livelihoods.

OBJECTIVES:

- To know the existing agricultural activity among the beneficiaries of the study area.
- To encounter the performances of Self-Help Groups (SHGs) and Village Organization (VOs) of the study area.
- To know about profitability of the Livelihoods as well as its contribution to the members engaged in the Group activities.
- To know the future impact on Agriculture development in Regional Sector.

REVIEW OF LITERATURE:

A census survey of literature has been done to take note of the findings that are related to the topic under consideration:
Kapur, N. said that the SHGs are helpful instrument for the empowerment of women SHG, an organisation of rural poor, particularly of women that deliver micro credit to undertake the economic activity. These income generating activities are reasonable solution for empowering Women.

Wale, V.S. and Deshmukh, A.M. said in their article "Women in the Empowerment through Self-help Group" that "The success of any strategy of women empowerment depends upon the following factors: level of education, hard work, Social custom, family planning, etc.

to increase the endowments of the poor/women enhance their exchange outcomes vis-à-vis the family, markets, state and community.

Ghadoliya, M. K. observed in his article "Empowering Women through Self -Help Groups: Role of Distance Education", that open education at present is mainly catering to the needs of elites in the urban areas and it has to make in roads in rural areas where India lives. In rural areas women are totally dependent on men, as they do not have economic power to spend. The historical relationships with their husbands can be seen as influenced by historical factors that shape the social structures of how they are subordinated.

Lakshmi, R. and Vadivalagan, G. said that women empowerment is a process in which women challenge the existing norms and culture, to effectively promote their wellbeing. The participation of women in Self-Help Groups (SHGs) made a significant impact on their empowerment both in social and economic aspects. This study addresses women empowerment through self-help groups in Dharmapuri district of Tamilnadu. The information required for the study has been collected from both the primary and secondary sources. A multistage random sampling method has been followed. Average and percentage analysis was used to find the reasons for joining the Self-Help Group. Factor analysis was used to measure and determine the relationship between the observed variables. The results of the study revealed that the SHGs have had greater impact on both economic and social aspects of the beneficiaries.

Goankar, R. (2001) in her study said that the movement of SHGs can significantly contribute towards the reduction of poverty and unemployment in the rural sector of the economy and the SHGs can lead to social transformation in terms of economic development and the social change.

Nailakabeer (2005) in a study apparently said that while access to financial services can and does make important contributions to the economic productivity and social wellbeing of poor women and their households, it does not "automatically" empower women – any more than do education, political quotas, access to waged work or any of the other interventions.

It has been observed by M. Anjugam (2007) that socially backward, landless and marginal farm households participate more in the Self-Help Group programme. Possession of livestock and consumer goods by the member households has been found to deter the joining of group. Gladis M.J. (2008) found that membership in SHG inculcated a great confidence in the mind of majority of women to succeed in day to day life. Positive change was found in the attitude of relatives and friends towards the women in Self-Help Groups.

S. Thangamani said that the women empowerment is a process in which women challenge the existing norms and culture, to effectively promote their wellbeing. The participation of women in Self-Help Groups (SHGs) made a significant impact on their empowerment both in social and economic aspects. This study addresses women empowerment through Self-Help Groups in Mettupalayam district of Tamil Nadu. The information required for the study has been collected from both the primary and secondary sources. A Random sampling method has been followed. Average and percentage analysis was carried out to draw meaningful interpretation of the results.

Manimekalai and Rajeswari (2002) conducted a study on "Grass roots entrepreneurship through Self-Help Groups (SHGs)", with the objective to find out the factors which have motivated women to become Self-Help Group members are eventually entrepreneurs and analyse the enterprise performance of Self-Help Groups in terms of growth of investment, turnover, capacity utilization, profit, etc. It is understood from the analysis that the Self-Help Group entrepreneurs have improved a lot with respect to their enterprise performance. It is observed that the women have been depending only on agriculture and now have become independent. Apart from the improvement on the personal growth, the community as a whole has gained through the organization of the Self-Help Groups.

Anand, J.S. (2002) said in her study, it has been clearly established that delivering credit alone may not produce the desired impact. The supporting services and structures through which credit is delivered remaining from group formation and training to awareness raising and a wide range of other supporting measures are critical to make the impact of group activity strong and sustainable.

Vasudeva Rao (2003) said in his study is that self-interest and self-motivation would go a long way for the sustenance of the group. The share of women in decision making regarding important domestic matter is varying between districts and caste groups. The rate of illiteracy can be further reduced through the existing programmes.

Varman, P.M. (2005), in a paper "Impact of Self-Help Groups on formal banking Habits", makes a model attempt to examine whether there is any association between the growth of Self-Help Groups and the increase in female bank deposit accounts and whether Self-Help Groups have a tendency to influence account holding in formal banks among individual households. The analysis also reveals that being member in Self-Help Groups and more importantly having leadership experience in Self-Help Groups greatly influence the bank account holding. Leadership experience in Self-Help Groups would also improve an individual banking status and aids to raise their standard of living. Women are becoming entrepreneurs with the help of Self-Help Groups which avoids the exploitation of women and helps empowering them.

S. Rajamohan (2005) reveals that Self-Help Group helps women to increase their status and aids to raise their standard of living. Women are becoming entrepreneurs with the help of Self-Help Groups which avoids the exploitation of women and helps empowering them. Pillai, B.V. and V. Harikumar (2006), in their research "SHGs is highly relevant to make the people of below poverty line hopeful and self-reliant. SHGs enable to increase their income improve their standard of living and status in society to the main stream ultimately, the nation reaps the advantages of socialism.

METHODOLOGY OF THE STUDY:

The present study was based on both primary and secondary sources. The primary data has been collected through a set of questionnaire comprising of 25 questions prepared for the purpose. While serving the questionnaire, a visit to the sample VO have done and some question putted through direct interview method to the SHGs and the NRLM officials by the researcher. Conceptual information's were collected through secondary sources like-internet, books, research papers, etc.

AREA OF THE STUDY:

Monikanchan Grammya Sangathan of Boragaon village under Khagorijan Development Block is adjacent to Nagaon town of the urban people. The life style of the urban people has greatly affected the life of people of Boragaon village and it became essential for many to search for additional income to support the family. At this point SHG act as a way to help, specifically the women in increasing the earnings of the family by undertaking existing livelihoods and other economic activities as their income sources.

In the study, the researcher takes into account a case study of the 50 bigha Green Gram cultivation done by the sample VO of Boragaon village.

The study confined with the people of Boragaon Village under Kachamari Panchayat of Khagorijan Development Block. There is only 1 (one) VO associated with the green gram cultivation which has been selected for the study as purposively.

SCOPE OF THE STUDY:

The SHGs under the VO associated with agricultural activities as their livelihoods. In terms of the life style of the SHG members it has been found that they were engaged in petty trade, daily wage earner and a little bit of agricultural activity. As we know that to maintain a rural area family it required a minimum income of Rs. 100,000/- to Rs. 150,000/- per annum. Therefore they planned for an alternative way for increasing source of income through large production of Green Gram cultivation as it is highly demanded in Assam and it requires less capital. So here is a need to study the group efforts, SHG members' participation and about profitability of the Livelihoods as well as its contribution to the members engaged in the Group activities.

In Assam 80% people depends on agriculture sector as livelihood, is one of the important economic activity of the SHG. So, in this study researcher most likely to measures the level of profitability or their performances and also reveals the problems faced by the SHGs and provides suggestion to solve the problems which specially help the SHGs and may be model for other SHGs.

PROFILE OF THE VILLAGE ORGANISATION:

Under Kachamari Gaon Panchayat of Khagorijan Development block, there is a census village named Boragaon (Revenue village: Niz-Kachamari) with around 204 families. In this village on 27th January, 2017, a VO of the SHGs was formed in presence of Block level NRLM staff along with Jeevika Sakhi's and named as Monikanchan Grammya Sangathan. The main livelihood activities in the village are agriculture, animal husbandry, handloom, bamboo products, etc. Though the standard of living of the people is below average, still they are high rich in their culture and traditions. They get together from the very young to the older one in every activities of the village, also supports their families and spouses very much. The villagers specially the women are very hard working and always eager to do something new for their livelihoods to upgrade their standard of living right from their children education to their health matter.

THE PRODUCTION OF GREEN GRAM CULTIVATION:

Table 1: Cost of Production, Price, Selling & Profit level

SL NO	Total quantity production (in Qntl)	Cost of production (in Rs)	Amount of Total sales (in Rs)	Profit margin (in Rs)	Percentage of profit
1	90	34500/-	81000/-	46500/-	57%

Source: Field survey

The table exhibits that the SHGs production level, pricing, selling and profit margins mentioned above and in the table it is also try to present the actual profit they have earned on the selling price of the products.

FINANCIAL ASSISTANCE RECEIVED BY THE SHG

The Monikanchan Village organisation received an amount of Rs. 500000/- as community Investment Fund (CIF), Rs. 25000/- as VO start-up cost. Out of the total 17 SHGs under the VO's all are availed the Revolving Fund from NRLM office for an amount of Rs. 15000/- to each. They are utilising the amount in their livelihood activities, internal lending and till date along with their saving they have a good corpus fund and they had applied for bank loan also for expanding their livelihood.

MARKET LINKAGE:

NRLM team are facilitating for market linkage within Nagaon district area as they have just starting the process of harvesting of the grams.

PROFIT MARGIN:

Profit margin of the VOs seems satisfactory as compared to the cost of production. It is able to know that their initial investment for the green gram cultivation is Rs. 34500/- whereas the profit on the investment comes to Rs. 46500/- which equally divided among the 17 SHGs under the Monikanchan VO.

CHALLENGES FACED BY THE MEMBERS:

Initially some of them had faced a lot of challenges as they all are women. But slowly when the seeds were growing properly, their spouses were also giving a helping hand to them, which are a great sign of becoming success.

MARKETING APPROACH AND SHG:

To success in placing a product in the market an effective and proper marketing approach is very essential. But it is difficult to have a well-organized marketing network for a Self-Help Group to continuously support its members in marketing its product. However with the help of various governments sponsored programmes and policies and agencies, SHG can go ahead in the market. In this case, NRLM has been playing an important role in the study area. If we look into the approaches of the SHG in placing their produce in the market

and consideration to different aspect of a product then the study area SHG exhibit that the picture which indicate that they are really accustomed with the term marketing in its real sense. With the help of NRLM official guidance the SHGs directly sales the production in local market as well as in Nagaon town. The all SHG members are very actively participates in the group activities on need based.

SOURCES OF SEED COLLECTION:

Krishi Vigyan Kendra, Nagaon has supplied the seeds for the cultivation of Green Gram with a very minimum cost.

PRICE FIXATION PRACTICES:

As an attempt to know the procedure of fixing price as it has direct impact on the earnings of the SHG and its members. They have applied a strategy to fixation of price of the products with the help of 2 ways:

- Cost plus margin method.
 - Based on demand for the product.
- They have adopted the pricing practices on need basis.

OTHER CONVERGENCES:

- On 25th May, 2017 they had organized "Pather Diwas" to encourage the local youth or farmers to take initiative in farming activities by setting live example of a success one.
- Mahila Kisan Divas were organized by KVK Nagaon on 15th October, 2017 in the presence of NRLM Khagorijan officials, officials from KVK Nagaon, Bank officials, other local dignitaries and rural farmers. All total 53 farm women took active participation in the programme. An interaction session was organized to know about their views on the "women Empowerment and their role in Agriculture development".
- On 9th November, 2017 representatives from Azim Premji Philantropical Initiatives (APPI) has visited the VO Office and accordingly appreciated them for their group efforts and other SHG products.

It is able to know from the beneficiaries that they were willingly participated in the livelihood activities and they are having heart of doing a green revolution through the help of their group efforts.

FUTURE PLANS:

- According to the SHG some glimpse of their future plan
- To expand of their cultivation.
- To increase their income in such a way that the other women can also motivate.
- To more empower of the SHG members & their family.
- Planning to do Fish Rice horticulture activity in their village.
- Planning for a green revolution through the existing livelihoods.

RESULTS/FINDINGS:

- From the case study it has been found that the SHG would be a role model to other communities through their group efforts as well as work initiatives.
- Coordination between the members seems very well organized.
- They have been preferred in existing livelihood only.
- As the most of the people are farmers in the study area, Agricultural like- paddy and pulses would be a role model livelihood.
- In the study area marketing tools application by the SHG seems an average level but in rural area it may be acceptable for them.
- Participation level is satisfactory among the SHG members.
- Pricing factors are based on need & demand for the product.
- Profitability level satisfactory.
- The SHG members are very hardworking and always eager to do something new for their livelihoods to upgrade their standard of living right from their children education to their health matter.

SUGGESTIONS:

- As a bid to increase earning the SHG must go for new or more varieties with the new design products to meet the demand of various types of consumers.
- SHG members should try to establish a link with some permanent sale centre and sales agent for regular disposal of their produce.
- Publicity of the product should be done to popularise the SHG product. The present market is very challenging and to introduce the market, good marketing strategy policy should be formed. It is must be important because the marketing strategy also can help the SHG for production and distribution system.

CONCLUSION:

From the case study it is clear that the SHG/VO is an important organization which can help the poor women members in reaping benefit from the group activities. The SHG members express that their life has changed the way of living standard, they can contribute in running their family. National Rural Livelihoods Mission will reach down to the household level to support in forming institutions for the poor and the aggregation of those institutions beyond the community level. NRLM is helping in supporting both financially and technically these families. The NRLM has contributed to develop a network culture in managing livelihood programmes. The dedicative approach of NRLM team as observed while analysing the data collected is really encouraging which will help to build innovators, social entrepreneurs and livelihood oriented firms to provide range of services with efficiency and effectiveness. In agriculture sector NRLM plays an important role for up-liftment of existing livelihoods through the formation of grass root level institutions. If the aims of NRLM going to be fulfilled definitely the development in agriculture will upgrade and women empowerment will automatically uplift one step more.

REFERENCES:

Journals & Seminar Paper:

Wale V.S. and Deshmukh A. M (2011), "Women Empowerment through Self-Help Group", Indian Streams Research Journal, Vol. - I, ISSUE - IV

Pillai, B. V. and V. Harikumar (2006), "SHGs is highly relevant to make the people of below poverty line"

S. Rajamohan (2005), "Opinion of the Members of Self-Help Groups"

John, G.M. (2008), "Women Empowerment through Self-Help Groups"

Anand, J.S. (2002), "Self-Help Groups in empowering women; case study of selected Self-Help Groups and Neighbor Hood Groups (NHGs)"

IOSR Journal of Business and Management, Volume 8, Issue 6 (Mar. Apr. 2013), "A Study on Women Empowerment through Self-Help Groups with Special Reference to Mettupalayam Taluk in Coimbatore District"

Lakshmi. R and Vadivalagan. G, "Women Empowerment through Self-Help Groups in Dharmapuri district of Tamilnadu"

M. Anjugam and C. Ramasamy (2007), "Determinants of Women's participation in Self-Help Group led micro finance programme in Tamil Nadu", Agricultural Economics Research Review, Vol. 20, Issue. 2

Varman. P.M. (2005), "Impact of Self-Help Groups on formal banking Habits" (SHGs)"

Manimekalai and Rajeswari (2002), "Grass roots entrepreneurship through Self-Help Groups in South Asia"

Naila Kabeer (2005), "Is Micro Finance a Magic Bullet for Women's Empowerment, South Asia "Economic and Political" Weekly, October 29, 2005

Kapoor, N. (15th Jan, 2013), "Entrepreneurship development of rural women through SHGs"

Ghadoliya, M.K. (2013), "Empowering Women through Self -Help Groups: Role of Distance Education"

Gaonkar, R.R. (2001), "Working and impact of Self-Help Groups in Goa", Indian Journal of Agricultural Economics, Vol.56, No.3, p .465

Rao, V. (2003), "Self-Help Groups and Social change"

Agrawal, M. (2012), "Rural Women Workers in India's Unorganized Sector", New Century Publication, N. Delhi, ISBN-978-81-7708-328-6

Jan, B. (2013), "At work in the informal Economy of India", OXFORD University Press, New Delhi, ISBN: 13:978-0-19-809034-2

P. Sindhuja (2011), "Economic Empowerment of Women through Self-Help Groups", New Century Publication, N. Delhi, ISBN: 976-81-8356-726-8

Guideline of SGSY (2004), Government of India, Ministry of Rural Development, New Delhi

Lokhande, M.A. (2014), "Micro Finance and Women Empowerment", New Century Publication, N. Delhi, ISBN: 978-81-7708-368-2

Paul, B.T. (2011), "Women Empowerment and Empowerment", New Century Publication, N. Delhi, ISBN: 978-81-7708-259-3

Some Snaps of Monikanchan VO:
Visit of AjimPremji Philanthropic Initiatives (APPI):



VO meeting:



Sample of Green Gram:



Seeds with members:



Celebrating PatharDiwas:



Flood relief:



IMPACT OF FEMALE LITERACY IN REDUCING INFANT MORTALITY IN INDIA

Shraddhanjali Bhattacharjee

Research Scholar

Department of Economics, Gauhati University

Ritusmita Gautam

Research Scholar

Department of Economics, Gauhati University

ABSTRACT:

A nation's development cannot be empowered only through achieving higher gross domestic product. Its socio economic development is implanted by human development goals. United Nations put forward millennium development goals in 2000 where infant mortality is an indicator to observe progress towards the fourth goal by the year 2015 that is to reduce child mortality. Infant mortality rate is considered as an indicator of the health status not only for infants but also for the socio economic status of a country. It is defined as the deaths under one year of age in a year per 1000 live births. The prevailing high infant mortality has been a matter of concern from pre independence period. Female literacy is regarded as a key instrument for the empowerment of women. Providing education to women increases the decision power, self-confidence and capability to access health care services. A wide regional variation in female literacy and infant mortality rate is a common feature in India. There has been a strong relationship between female literacy and infant mortality. Studies suggest that economic growth, improvement in income, mother's education and medical infrastructure have contributed successfully in declining infant mortality rate. The present paper attempts to understand the statewide variation of infant mortality rate in India and determines the factors affecting decline in infant mortality rate. The study found that female literacy rate is significant at 1% level with expected negative sign., i.e., infant mortality rate is negatively related with female literacy. Higher the female literacy rate lower will be the infant mortality rate and vice versa.

Keywords: Female literacy, Infant mortality, Per Capita NSDP, Health Services

INTRODUCTION:

A nation's development cannot be empowered only through achieving higher gross domestic product. Its socio economic development is implanted by human development goals. Human are the true wealth of nations; they educate, get power and nourish the nation to the development. The thinking of many factors addressing socio-economic development of a country is embedded in the human development index. In 2000, 189 nations made a promise to free people from extreme poverty and hunger through increasing literacy, promoting gender equality, empowering women, improving health and other environment related aspects of life. This is when United Nation put forward Millennium Development Goals (MDG) and this way emphasis on human development was strengthened.

Infant mortality is the deaths of young children less than one year of age. It is typically defined by Infant Mortality Rate which is the number of death children under one year of age per one thousand live births. United Nations put forward millennium development goals in 2000 where infant mortality is an indicator to observe progress towards the fourth goal by the year 2015 that is to reduce child mortality. It is also a persuasive measure of reducing infant mortality rate below 30 per thousand live births recommended by National Population Policy, 2000. According to Biotechnology and Health Sciences, education and life expectancy in the country is the leading indicator of infant mortality rate. Causes of infant mortality include low birth weight, sudden infant death syndrome, malnutrition and infectious diseases. Indeed prevailing high infant mortality has been a matter of concern from pre independence period.

Higher literacy is allied to higher incomes and development outcomes of a country. Female education results in higher household income and can go a long in reducing infant and child mortality rate (Schultz, 1992). Educating a woman means educating a nation. Women's education has often been quoted as one of the precious tools to reduce poverty and economic independence. In India, a wide gender disparity is seen as male literacy rate is 82.1%, whereas female literacy rate is 65.5% in 2011.

Studies suggest that economic growth, improvement in income, mother's education and medical infrastructure have contributed successfully in declining IMR. Infant mortality is negatively correlated with GDP. Increased household income provides more access to nutrients and health care, reducing the risks associated with infant mortality.

Large number of infant deaths can be avoided if deliveries take place in available health facilities and comprehensive emergency care. Infants delivered at a medical institution are likely to experience lower mortality than children delivered at home (Swaminathan, et al., 2007). In India, the per capita expenditure on health has increased from Rs. 1,243 in 2009-10 to Rs. 2,999 in 2015-16 (Economic Survey, 2015-16). Studies reveal that health service indicators (physicians and nurses, hospital beds, etc.) are important variables to influence infant mortality rates. This paper examines the effect of health services on mortality using availability of hospital beds as a factor for medical health.

Although the progressive of the decline in infant mortality rate is very impressive in India.

but there exists statewide disparities of this indicator. This paper attempts to study the interstate disparity in infant mortality rate of selected states and its major socio-economic and demographic determinants. The main objective of the study is to see which variables have greater impact in reducing infant mortality levels. In analyzing the factors affecting infant mortality, the most important variables taken are literacy rate, per capita income and number of hospital beds on the basis of availability of data.

REVIEW OF LITERATURE:

Shetty and Shetty (2014) discussed the impact of female literacy rate on infant mortality rate in case of Indian states. They have found that the states belong to high female literacy rate, infant mortality rate is declining at a faster pace. When the percentage of female literacy rate is below 50%, the rate of decline of infant mortality rate is not tangible. It has also found that there is the 60-70%, then there is swift reduction in infant mortality rate. Kapoor (2010) examined the correlates of infant mortality status of southern and northern states. In a study done in 1991 and 2001 Census Report of India. The researcher has found that increase in female literacy significantly reduces child mortality at the district level. On the other hand male literacy plays a small but not a very significant role in reducing child mortality. There is a significant relationship between crude birth rates (CBRs) and female literacy rate while by Saurabh et al (2013) found that crude birth rates (CBRs) are inversely related to literacy rates. There is a significant relationship between crude birth rates (CBRs) and female literacy rate while male literacy rate is not significantly related to CBR. Similarly multiple regression shows inverse relationship between infant mortality rate and female literacy rate. Later study indicated that the negative correlation between economic growth and IMR in China (Chen 2006). Later study indicated that the negative correlation between per capita GDP and IMR did not always exist (Li et al., 2016). Health expenditure has a very small and insignificant effect on infant mortality rate (Filmer et al., 1999). They found that 95% of the variation in the country is expressed by income per capita, income inequality and female education.

OBJECTIVES:

- The objective of the present study can be stated as below-
- To examine the factors affecting reduction of infant mortality rate in India.

DATA, METHODOLOGY AND ECONOMETRIC MODEL:

The study used secondary data from multiple sources collected through the Census of India (2011), Simple Registration System (2011) and Ministry of Health & Family Welfare as on 01-01-2011. The present study is based on the cross sectional data in 2011 for different major states of India. The SRS is a principal source for mortality data. The Census of India data are used in the study for the female literacy rate. The per capita Net State Domestic Product provided by RBI is used for the study. State-wise total number of hospital beds can be taken from Ministry of Health & Family Welfare, Government of India.

To explain the determinants of infant mortality rate in India we use multiple regression analysis. Multiple regression model can be described as:

$$IMR_i = \beta_0 + \beta_1 FLR_i + \beta_2 PCNSDP_i + \beta_3 HB_i + \delta SC_i + \mu_i$$

Where IMR_i , FLR_i , $PCNSDP_i$, HB_i , SC_i = IMR, NSDP, HB, SC, FLR for the i th state.
 β_i = Elasticity of the respective variables, $i = 1, \dots, 3$

μ is the random term which is assumed to be normally distributed

IMR= Infant Mortality Rate

FLR= Female Literacy Rate

NSDP= Per Capita Net state Domestic Product

HB= Hospital Bed

Here State category has taken as dummy variable

SC_i = 1 for mountainous state

= 0 for non-mountainous state

VARIABLES:

The outcome variable is the infant mortality rate and the predictor variables are female literacy rates, per capita NSDP, hospital beds per one lakh of population. Here we assume the state category is dummy variable which takes value of 1 for mountainous state and 0 for non-mountainous state. The definitions for the variables used in the study are presented Table: 1

Variable	Definition
Infant Mortality Rate (IMR)	The number of infant deaths per 1000 live births among children aged 0-11 months.
Net State Domestic Product (NSDP)	RBI measured the NSDP as equal to the gross domestic product (GDP) minus depreciation on a state's capital goods.
Female Literacy Rate (FLR)	The Census of India defines this as the percentage of women aged 7 years or above who can read and write with understanding.
Hospital Bed Density	Number of Hospital Bed per 1, 00,000 population

This study used cross sectional data to find out the factors associated with the infant mortality in India.

RESULTS AND DISCUSSION:

Table: 2 presents literacy rates, net state domestic product, hospital beds per 1 lakh population and infant mortality rates of different states in India in 2011.

Table: 2 Literacy Rates, Net State Domestic Product, Hospital Beds per 1 Lakh Population and Infant Mortality Rates

State	IMR	NSDP	FLR	Hospital Beds/1lakh Population	State Category
Andhra Pradesh	43	58733	59.15	45	0
Arunachal Pradesh	32	60961	57.7	362	1
Assam	55	33087	66.27	33	0
Bihar	44	19111	51.5	13	0
Chhattisgarh	48	41165	60.24	42	0
Goa	11	168024	84.66	1721	0
Gujarat	59	77485	69.68	59	0
Haryana	41	93852	65.94	31	1
Himachal Pradesh	44	68297	75.93	124	1
Jammu Kashmir	38	68297	75.93	58	0
Jharkhand	41	40089	56.43	16	0
Karnataka	39	34721	55.42	85	0
Kerala	35	62251	68.08	111	0
Madhya Pradesh	12	69943	92.07	42	0
Maharashtra	59	32453	59.24	42	0
Manipur	25	84858	75.87	48	1
Meghalaya	11	28336	70.26	96	1
Mizoram	52	43766	72.89	97	1
Nagaland	34	50956	89.27	123	0
Odisha	21	55582	76.11	40	0
Punjab	57	39537	64.01	41	0
Rajasthan	30	69582	70.73	56	1
Sikkim	52	44644	52.12	255	0
Tamilnadu	26	108972	75.61	86	0
Tripura	22	78473	73.44	95	0
Uttar Pradesh	29	46050	82.73	28	0
Uttarakhand	57	26698	57.18	79	0
West Bangle	36	73819	70.01	85	0
	32	47245	70.54		

It is seen from the Table: 2 that infant mortality is as high as 59 in Madhya Pradesh in 2011 followed by the states Uttar Pradesh (57), Odisha (57), Assam (55) and Chhattisgarh (48). On the other hand, infant mortality rate is low in Goa (11) followed by Manipur (11), Kerala (12), Nagaland (21), Tamilnadu (22), Maharashtra (25) and Tripura (29). The lowest infant mortality rate in Goa is caused by high access to health care facility of the households in the

state. State-wide disparities in infant mortality rate are obviously caused by state-wide variations in access to different health care facilities.

Table 3: Result of Regression Model of Infant Mortality Rate

Particulars	Coefficient	Significance level
Constant	89.31*** (6.54)	.000
PCNSDP	0.000 (-1.13)	.271
FLR	-0.640*** (-2.814)	.010
HB per 1 lakh of population	-0.025 (-0.688)	.499
SC	-1.634 (-3.06)	.763
F Statistic	5.953***	.002
R ²	.51	

*** represents significance at 1% respectively. The figure in brackets represents t statistics.

Data Source: Census, SRS and Ministry of Health & Family Welfare, Government of India 2011

We have attempted multiple regression model by taking infant mortality rate as a dependent variable. In terms of multiple coefficient of determination (R²), the overall goodness-of-fit of the model is quite satisfactory as it is observed as 0.51. It means that 51% variation in dependent variable IMR can be explained by the explanatory variables- FLR, PCNSDP, SC. The overall performance of the model i.e. significant at 1 percent level. Here the study also found that t value is negative for FLR, PCNSDP and HB per 1 lakh of population.

It is seen from Table: 3 that infant mortality is inversely related to the percentage of female literacy rate, per capita NSDP, number of hospital beds and state category level. FLR is significant at 1% level with expected negative sign, i.e., IMR is negatively related with FLR. Higher the FLR lower will be the IMR and vice versa.

HYPOTHESIS TESTING:

Table: 3 shows that constant term β_0 is highly significant i.e. .000. If constant term is highly significant then the model is not a good one because we left the excluded variables. To check whether two variables are associated or not the study has taken two hypotheses. The first is null hypothesis (H₀) which assumes that there is no association between variables. i.e. female literacy rate and infant mortality rate.

H₀ ($\beta_1=0$)
And the second hypotheses will be an alternative hypothesis (H_A), which assumes that there is association between these variables.

H_A ($\beta_1 \neq 0$)
From the multiple regression model, we found that value of P is 0.01 (P=.01). This tells us that there is statistically significant inverse relationship between female literacy rate and infant mortality rate as P value is less than the p value at 5% level. So here we are able to reject null hypothesis that is association between female literacy rate and infant mortality rate. It means female literacy rate has significant impact on IMR which is explained by the fact that education is one of the most important indicators which has significant influence on the treatment seeking behavior of households' members.

On the contrary in case of PCNSDP, HB and SC, since P is greater than 10%, so we can't take the risk of rejecting H₀. Here we have to accept H₀. To test whether PCNSDP and IMR are associated or not the study has taken null hypothesis (H₀), which assumes that there is no association between variables PCNSDP and infant mortality rate (IMR).

H₀ = (B₂=0)
And the second hypothesis will be an alternative hypothesis (H_A), which assumes that there is association between these variables.

H_A = (B₂≠0)
The result showed that P=0.271. This tells us that there is no statistically significant association between PCNSDP and infant mortality rate as P value is greater than the p value at 10% level. So here we are unable to reject null hypothesis that no association between PCNSDP and infant mortality rate. It means PCNSDP has no significant impact on IMR.

Similarly to see the IMR and HB the study has taken null hypothesis (H₀), which assumes that there is no association between variables HB and infant mortality rate (IMR).

H₀ = (B₃=0)
And the second hypothesis will be an alternative hypothesis (H_A) which assumes that there is association between variables.

H_A = (B₃≠0)
Here P=0.499 tells us that there is no statistically significant association between HB and infant mortality rate as P value is greater than the p value at 10% level. So here we are unable to reject null hypothesis that is no association between HB and infant mortality rate. It means HB has no significant impact on IMR. This finding is similar to the study where health expenditure has a very small and statistically insignificant effect on infant mortality (Filmer, et. al., 1999).

Finally to test state category and infant mortality rate the null hypothesis (H₀) has taken which assumes that there is no association between state Category (SC) and infant mortality rate (IMR).

H₀ = ($\delta=0$)
And the second hypothesis will be an alternative hypothesis (H_A) which assumes that there is association between variables.

$$H_A = (\delta \neq 0)$$

There is no statistically significant association between SC and infant mortality rate as P value is greater than the p value at 10% level. So here we are unable to reject null hypothesis that is no association between SC and infant mortality rate. It means SC has no significant impact on IMR.

For F statistics,

The study has taken null hypothesis,

$$H_0 = (\text{all slope coefficients are equal to zero})$$

$$H_A = (\text{all slope coefficients are not equal to zero})$$

As F is significant at 1 percent level of significance we accept alternative hypothesis and reject null hypothesis.

CONCLUSION:

According to Sample Registration Bulletin (SRS), India has registered a significant decline of 8% in infant mortality rate in 2016. IMR in India has declined by three points from 37 per 1000 live births in 2015 to 34 per 1000 live births in 2016. But in current pace, the country will miss the target to achieve the fourth Millennium Development Goal, which aims to reduce under-five mortality rate and IMR by two third between 1990 and 2015.

In the present study an attempt was made to analyze the various factors affecting reduction of infant mortality rate. Multiple regression results show that it is the socio-economic variable that has a close association with infant mortality rate. Thus female literacy is a crucial issue for developing countries like India. A higher percentage of literacy leads a country towards the path of development. Improvement in literacy rate of women results in a downward turn in infant mortality rate.

Reduction in infant mortality is possible in any country in every stage of development. It can be attained through advancing human knowledge. In spite of improvement in health care and easy access to health facilities, the existing requirements are still short of necessity. Government can provide recommendations to the policy maker to reduce infant mortality by addressing the need for education, nutrition and basic health services.

REFERENCES:

- Chen, J.S. (2006), 'Economic growth, investment in human capital and reduction of infant mortality', *Econ Rev* 2006, pp. 52-57
- Filmer, D. and L. Pritchett (1999), 'The impact of public spending on health: does money matter?', *Social Science and Medicine*, 49 (10), pp. 1309-1323
- Ijaz, Z. (2012), 'Impact of Female Literacy Rate and Health Facilities on Infant Mortality Rate in Pakistan', *International Journal of Humanities and Social Science*, Vol.2, No.13
- Kapoor, S. (2010), 'Infant Mortality Rates in India: District Level Variations and Correlations', available at https://www.isid.ac.in/~pu/conference/dec_10_conf/Papers/ShrutiKapoor.pdf.
- Li H., Feng H., Wang J., Qian Z. and Gu J. (2017), 'Relationship among Gross Domestic Product Per Capita, Government Health Expenditure Per Capita and Infant Mortality Rate in China', *Biomedical Research*, Vol. 28, Issue. 6

Saurabh, S, Sarkar S. and Pandey D. K. (2013), 'Female Literacy Rate is a Better Predictor of Birth Rate and Infant Mortality Rate in India', *Journal of Family Medicine and Primary Care*, 2(4), pp. 349-353

Schultz & T.P. (1992), 'Investments in the Schooling and Health of Women and Men: Quantities and returns', Paper presented at the Conference on Women's Human Capital and Development, Bellagio, Italy, pp. 18-22

Shetty, A and Shetty, S (2014), 'The Impact of Female Literacy on Infant Mortality Rate in Indian States', *Curr Pediatr Res*, Vol. 18(1), pp. 49-56

Sikder, U. K. and Roy, M. S. (2015), 'Interstates Disparities in Infant Mortality Rates and their Major Determinants in India: Study based on Latest Census, 2011', *IOSR Journal of Humanities and Social Sciences*, Vol. 20, Issue 8, pp 11-16
www.census.govt.in

AGRICULTURAL MODERNIZATION AND ITS IMPACT ON THE RURAL ECOLOGY AND ECONOMY OF A FLOOD PLAIN VILLAGE IN NAGAON DISTRICT, ASSAM

Manash Jyoti Bhuyan

Research Scholar
Department of Geography, Gauhati University

Nityananda Deka

Assistant Professor
Department of Geography, Gauhati University

ABSTRACT:

The floodplains of the Brahmaputra valley, composed basically of fertile alluvial soils and inhabited mainly by peasant farmers, have been one of the most important regions of the world which favors for the evolution of traditional agricultural systems. The traditional agricultural systems, which become the principal source of livelihoods of majority of the people and become the base for the evolution of cultural landscapes in the valley, are closely associated with the ecological conditions of the Brahmaputra floodplains. The traditional agricultural systems have also been easily adopted by the peasant farmers of the valley. However, after 1980s the wave of so-called agricultural modernization started penetrating into the valley's agricultural landscapes causing greater damage to the local ecological conditions as well as degradation of the rural ecological and economic conditions has of late resulted in many serious social problems, such as rural depopulation, agricultural land abandonment, occupational shifts, market fundamentalism, etc. in the valley. The present study is therefore an attempt to investigate the impact of agricultural modernization on the socio-economic and ecological conditions of a floodplain village, called Kahargaon located in Nagaon district of Assam. The study is basically based on the primary data and information collected from the village through household survey using a well-structured questionnaire cum schedule and oral interviews among the age-old people.

Keywords: Floodplains, Peasant Farmers, Agricultural Modernization, Rural Economy and Ecology

INTRODUCTION:

The Brahmaputra valley, in respect to its physiographic diversity and varied ethnicity, is an ideal region for the evolution and development of traditional agricultural systems. The traditional agriculture being closely connected to the concerned ecological settings becomes the part of the broad ecosystems of the valley. The agroecosystems, which is very diverse in different physiographic settings carried out by different ethnic groups, are the main source of the life and livelihoods of the majority of the people, basically for those who are living in the rural areas of the valley. The growing and raising of a variety of local crops through traditional methods help in enriching the ecological conditions of the rural Brahmaputra valley. It has been observed that the rich ecological conditions of the rural landscapes of the valley have been providing a range of goods and services especially to the villagers. The rural ecology is the feeder to many landless and jobless people of the villages of the Brahmaputra valley.

However, the traditional agricultural systems, which make the rural ecology diverse and rural economy sustainable, have undergone drastic changes after the advent of agricultural modernization during and after 1980s. The unscientific applications of modern agricultural inputs and implements by the untrained farmers have caused great changes and damages to the rural ecological diversity and economic conditions of the valley. Agricultural modernization in the Valley has caused various other social and economic problems, like dilution of indigenous culture and tradition, rural depopulation, agricultural land abandonment, occupational shifts, dominance of market fundamentalism, etc. The introduction of modern agricultural inputs and implements in agriculture like HYV seeds, chemical fertilizers, pesticides, insecticides, fungicides, tractors, power tillers, sprayers, harvesters, threshers, etc. have changed the traditional rural land use patterns and practices in the valley (Deka, *et al.*, 2011).

Rural depopulation has become a quite serious problem in the Valley where the rural people have started leaving their native villages in search of some secondary and tertiary activities in the city centers and other urban areas. At present, agricultural practices in the entire valley have become significantly less and thus, many agricultural fields in some rural areas remain barren. This leads to the problem of agricultural land abandonment in the valley. In addition to it, the occupational shifts from the primary agricultural activities to some secondary and tertiary activities have caused great threat to the entire rural economy of the Brahmaputra valley. It has been a matter of serious concern that, the recently emerged market fundamentalism has been gradually grasping the valley's entire rural production systems and thus posed a great threat to the rural ecology, culture and economy of the entire Brahmaputra Valley. Keeping these points in view, the present study is an attempt to investigate the status and changes in traditional agricultural systems and also the impacts of agricultural modernization on the rural ecological and economic conditions of a floodplain village within the broad geographical framework of the Brahmaputra Valley.

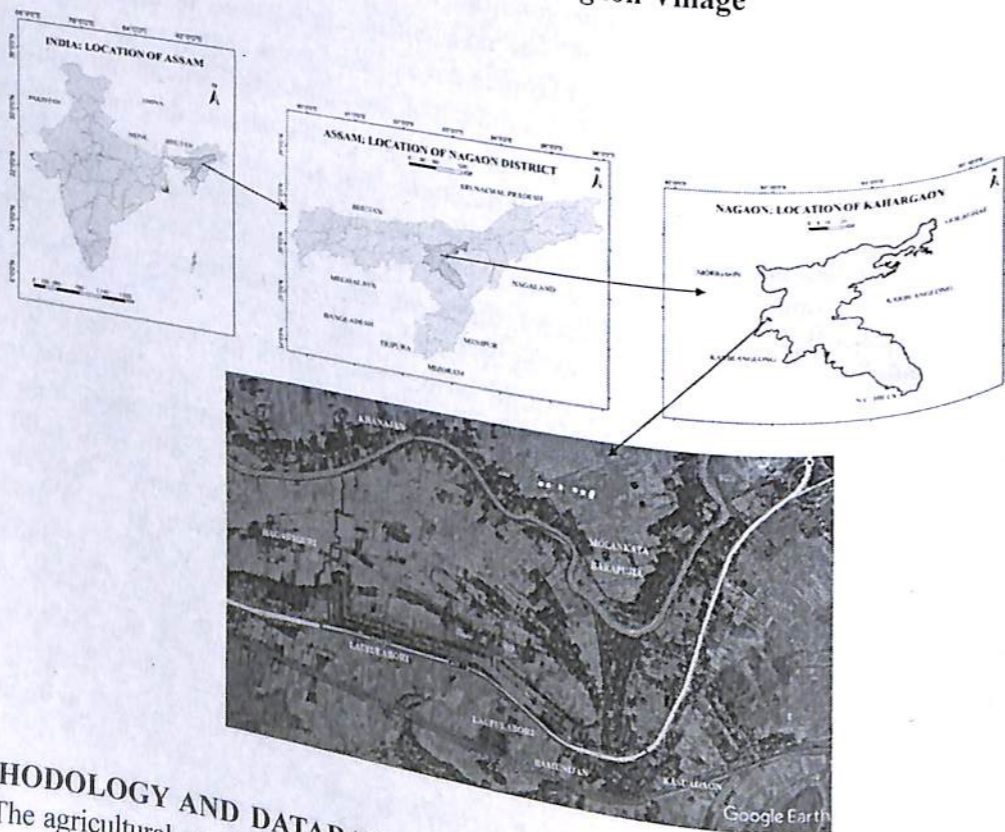
BACKGROUND OF THE VILLAGE:

The present study has been carried out in a typical Assamese village called Kahargaon

which is located under the jurisdiction of Raha Revenue Circle of Nagaon district, Assam. The village is on the southern floodplain of the Brahmaputra valley and is confined within 26° 12' 10" N to 26° 13' 36" N latitudes and 92° 28' 6" E to 92° 29' 45" E longitude (Fig.1). This floodplain village covers an area of 3.80 sq. km with a total population of 1,374 as per 2011 census. It is located 5 kilometers away from the Raha town, 28 kilometers from the district headquarter- Nagaon and approximately 92 kilometers from the State capital, Dispur. The village consists of 5 *chuburis* (Fig. 2.2) and lies to the South-West of the Raha town.

The village is surrounded by Molankata village both in the East and North-East, Bamunijan and Laufulabori villages in the South, Kachuagaon village in the South-East, Bagariguri in the entire West and Khanajan in the North. The entire northern boundary is demarcated by the river Kolong and a dead channel, locally called Mora-Kolong forms the eastern boundary. The river Kolong flows through the North of the village, while the river Kopili flows to its South. The village is also dotted with numerous natural and man-made wetlands.

Figure 1: Location of Kahargaon Village



METHODOLOGY AND DATABASE:

The agricultural systems of the village and its impact on the villagers were studied mainly on the basis of primary data/information collected from household survey among all families with the help of well-designed questionnaire, PRA methods, focus group discussion and oral

interviews among the elderly persons. Relevant secondary data were procured from various government sources, like Primary Census Abstract and Raha Revenue Circle, Government of Assam. Besides, the cropping pattern, land holding sizes, land use pattern and land cover status, field patterns, etc. were traced out through plot (*dag*) survey (Deka and Bhagabati, 2010) to get a vivid picture of the agricultural scenario of the village.

Some meaningful cartographic and statistical techniques were applied using Microsoft Excel, Google Earth Pro and ArcGIS 10.2.1 both for processing and representing the data so obtained in the form of tables, maps and diagrams.

RESULTS AND DISCUSSIONS:

Present Status of Agriculture in the Village:

The agricultural scenario in the village is not similar in all the *chuburis* (hamlets) because of the differences in soil quality and micro-topographic variations of the agricultural fields in general and hydrological conditions on the fields in particular. Thus, based on their traditional agricultural knowledge and belief systems, the farmers in each *chuburi* adopt different strategies and cultivate a variety of crops suited to the concerned fields. At present, the village has a total agricultural land of about 94.7148 hectares. The agricultural scenario in the village is dominated by rice in summer season and mustard in winter season. The maximum proportion of agricultural land in the village is less than 1 hectare size (7.47 *bigha*) accounting for 34.67% of the total agricultural lands.

Table 1: Size and Distribution of Agricultural Land holdings

Size class (in ha)	Total Agricultural Land (in ha)	Number of Households Possessing Lands
0-1	34.673 (36.61)	204 (88.31)
1-2	14.72805 (15.55)	11 (4.76)
2-3	27.3774 (28.90)	11 (4.76)
3-4	9.36885 (9.89)	3 (1.3)
4-5	8.5675 (9.04)	2 (0.087)
Total	94.7148	231

Source: Field Survey, 2017-2018.
Note: Figures in the parentheses indicate the percentage to the total.

The Kalongpar *chuburi*, located in the northern part of the village and lying to the South of the river Kolong has relatively lesser arable land as because water doesn't retain in that *chuburi* mostly due to the predominance of sandy soils. During summers, cultivation is hardly

possible as flood water inundates the area very often. Again, during winters, as soon as the water level of the Kolong subsides, the surface water storages in the *chuburi* gradually dries up and thus, provide less scope for cultivation. Thus, only some *rabi* crops, like mustard are cultivated during winter.

Agriculture is intensively carried out in the Duboritoli *chuburi* of the village as because the agricultural fields of this *chuburi* are composed of fertile alluvial soils and the number of farmers is comparatively more in this *chuburi*. Rice, mustard, jute and black gram are intensively cultivated in this *chuburi*. *Sali* rice is the main crop of the *chuburi*, which is dependent on monsoonal rain water.

Salmara Pam *chuburi* is endowed with many wetlands, the prominent ones being the *Kherxona beel* and *Hatigeya beel*. These two *beels* are nothing but 'seasonal wetlands', which are covered by water for almost six to seven (6-7) months of the year. Thus, cultivation of rice, especially *sali* rice becomes very difficult in the area. Autumn rice (*ahudhan*) and *ba* rice (a typical winter rice variety) are commonly grown here.

Table 2: Areas under Different Crops in Each Hamlet of Kahargaon Village, 2017

Crops	Area (in ha) under different crops in each <i>chuburis</i>					Total Area
	Kalongpar	Duboritoli	Salmara Pam	Garhmaj	Dighaliati	
Rice	4.008	32.7657	0.53548	15.7038	0	53.01298
Mustard	7.02409	15.26503	1.7403	4.6854	0	28.71482
Sugarcane	1.3387	1.9413	0.2677	1.47256	0	5.02026
Jute	1.4056	6.7604	0.6693	2.4096	0	11.2449
Black Gram	0.06024	4.0829	0	0	0	4.14314
Vegetables	3.01205	1.6064	0	0	0	5.15395
Others*	0.8032	1.4726	0	0	0	5.02
Total	17.65188	63.89433	3.48048	26.68096	0.6024	112.3101

Source: Field Survey, 2017-2018.

*betel nut, betel leaf, banana tree, lemon, etc.

Again, rice is an important crop cultivated in Garhmaj *chuburi*. During winter, the fields remain yellowish with the cultivation of mustard. However, it is interesting to mention that in Dighaliati *chuburi*, there has been no cultivation of crops other than betel nut, betel leaf, banana tree, lemon, etc. Out of all the *chuburis*, Duboritoli has the highest agricultural lands (63.89433 ha.), while Dighaliati has the least land under agricultural sector. It is because of the fact that Dighaliati *chuburi* is mainly dominated by the elements of cultural landscapes, like National Highways, market area, restaurants and other shops, settlements, schools and a primary health centre.

The Gross Cropped Area (GCA) in the village has been found as 112.3101 ha. while, the Net Sown Area (NSA) in the village is found to be 85.42918 ha. Thus, cropping intensity is calculated with the help of the following formula:

$$\text{Cropping Intensity (CI)} = \frac{\text{Gross Cropped Area (GCA)}}{\text{Net Shown Area (NSA)}} \times 100$$

Cropping intensity is highest in Duboritoli *chuburi* being 171.35%, followed by Kalongpar *chuburi* (149.81). However, the CI is found to be lowest in Dighaliati *chuburi* (4.344). Thus, the overall cropping intensity in the village is found as 131.46 %.

Table 3 Cropping Intensity in Each *Chuburi* of the Village

<i>Chuburis</i>	Net Sown Area (in ha.)	Gross Cropped Area (in ha.)	Cropping Intensity (in%)
Kalongpar	11.783	17.65188	149.8080285
Duboritoli	37.2875	63.89433	171.3558967
Salmara Pam	3.6145	3.48048	96.29215659
Garhmaj	18.87678	26.68096	141.3427502
Dighaliati	13.8674	0.6024	4.344001038
Kahargaon	85.42918	112.31005	131.4656772

Source: Field Survey, 2017-2018.

It is interesting to note that the agricultural production is highest in Duboritoli *chuburi* as it has the largest area under agriculture, followed by Kalongpar, Garhmaj, Salmara Pam and Dighaliati.

Table 4 Production of Different Crops in the Village

Crops	Area (in ha.)	Production (in quintals)	Remarks
Rice	53.01298	1742.43	Including all the varieties of rice: <i>Sali, Ahu and Bao</i>
Mustard	28.71482	343.199	-
Sugarcane	5.02026	49.50	Only Production of molasses have been taken under consideration
Jute	11.2449	33.599	-
Black Gram	4.14314	12.379	-
Vegetables	5.15395	-	-

Source: Field Survey, 2017-2018

Traditional Agricultural Systems:
Agriculture in the village was completely practiced by traditional methods especially before the 1980s. The agricultural inputs and implements were purely traditional and organic in nature. For the cultivation of rice, mustard, and comparatively large scale vegetable cultivation, tilling of land and harrowing were carried out with the help of bullock driven plough and harrow. But for small scale cultivation of vegetables, tilling of land was done with hoes (*kur*). Again, for threshing (*moronamara*), cows and buffaloes were used.
The water supply to the agricultural fields was purely dependent on rain water. During

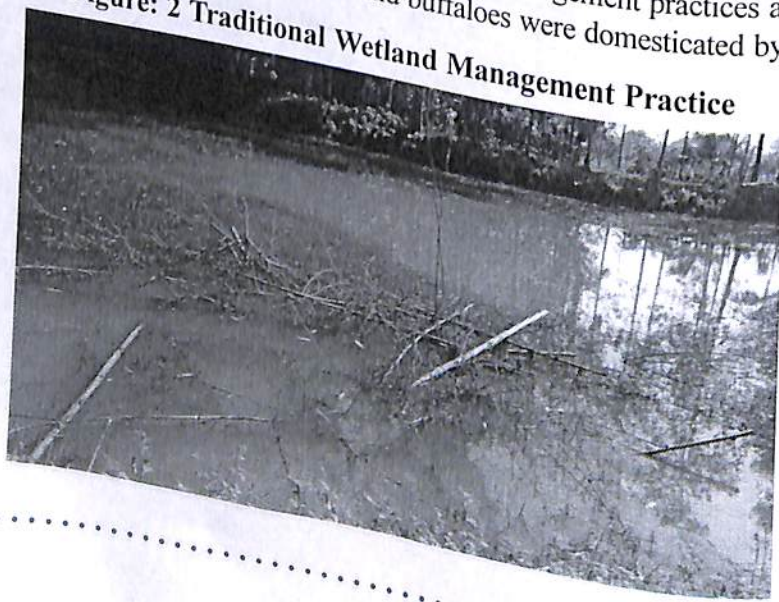
the dry season, the farmers used to supply water to the crops manually from the neighbouring wetlands, especially Kolong and Mora-Kolong. Similarly, the farmers use water from the adjacent *pukhuri* (man-made pond) or *khal* (natural pond) in the case, when the agricultural fields are not adjacent to the river and the dead channel.

The saplings of rice were grown on particular fields locally known as *kathiatolis*. The mode of agriculture was purely organic. Cow dung was the only manure that was provided to the crops. Besides, compost bio-manure, oil cakes, twigs, etc. were also used as fertilizer to the crops. It is note worthy that the farmers used lime, wood ash and citrus fruits as pesticides. During *katibihu*, earthen lamps were put in the agricultural fields so as to keep the crops safe from the insects and other micro-organisms. Again on that day, people used to eat *robabtenga* (*Citrus maxima*) in the agricultural fields, the rinds of which are thrown to the standing crops. These rinds provide the crops free from insects and micro-organisms. Again some farmers used to hang dead insects like crab, frog, snakes, etc. because by doing so, other crop eating insects get attracted to those dead organisms and thus the damages to the crops were reduced. These traditional crop protection measures were much eco-friendly and thus has no effect on the environment as well as on human health.

In the traditional agricultural system, local crop varieties are grown although the production of the local crops was comparatively lower than the HYV crops. The crops would barely meet the demands of the farmers as the mode of agriculture was self-subsistence. Though the farmers could not gain much profit, they lived happily with whatever they produced. In the *da-matis* (lowlands), apart from cultivating *bae* rice, some of the farmers practiced pisciculture.

It is important to note that almost each of the households has a wetland (*pukhuri* and *khal*) of their own. Rearing of fishes in these wetlands for their own consumption and also for income is an important characteristic feature of the traditional agricultural system. Thus, most of the people have practiced integrated livestock rearing and pisciculture on their wetlands. Again, branches of various thorny plants, branches of bamboo, bamboo fences, etc. are provided in the wetlands to protect the fishes from thieves. Thus, traditional wetland management practices are performed for fish protection. Besides, local variety of cows and buffaloes were domesticated by the people.

Figure: 2 Traditional Wetland Management Practice



Ecological and Economic Significance:

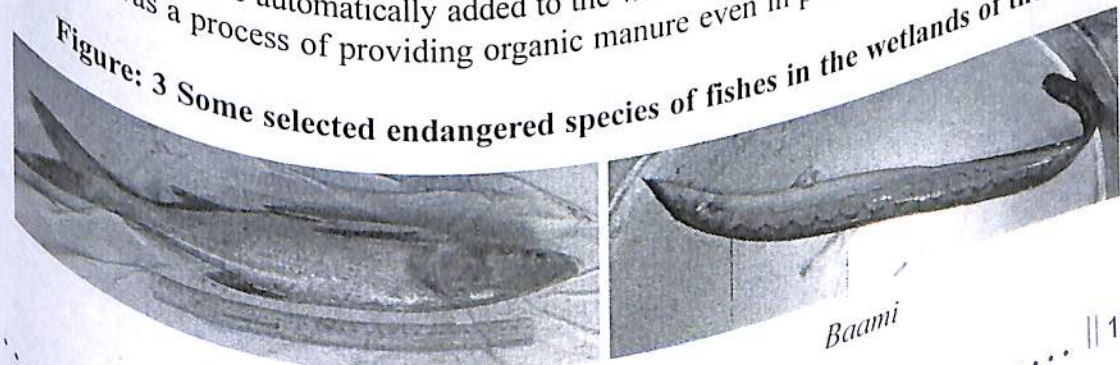
The traditional agriculture is ecologically adaptive. Its inputs (seeds, fertilizers, water, pesticides, insecticides, etc.) and implements (plough, harrow, harvesting and threshing tools) are locally available. The inputs to the agricultural fields are obtained directly from the local ecological settings, while the implements in agriculture like ploughing and harrowing tools (*nangol*, *juwoli*, *moi*, *karma*, etc.) and threshing tools (*ukhun*, *mukhora*, *saloni* and *dola*) can be obtained from the locally available bamboos. The agricultural landscape is closely associated with other ecological niches like the wetlands, forests, etc.

In the traditional agricultural system, the tilling of the agricultural fields by bullock driven plough and harrow does not cause harm to the soil organisms and micro-organisms living beneath the soil. However, the introductions of tractors and power tillers in the fields have caused much harm to the organisms especially to the earthworms, insects and other farmer-friendly organisms, which ultimately lessen natural soil fertility. Besides the use of tractors and power tillers in tilling the lands uproots the weeds and spread them on the entire fields which results in the sporadic growth of weeds here and there. The agricultural plots of the entire village are small in size, in which the movement of tractors hardly fit in due to which the corners of the fields cannot be tilled by them. For this, the farmers have to till the land manually using traditional tools like hoes and if the corners are not tilled then there will be unprecedented growth of weeds and harmful insects in the entire fields which affect the standing crops. Thus, the problem of weeds has become an important issue among the farmers now-a-days.

The rural landscape of the Brahmaputra valley is the outcome of the diverse use of its land for various productive purposes including agriculture (Deka, et. al. 2011). In the traditional farming practices, multiple cropping was very common. The cultivation of legume crops like black gram and green gram enhances natural fertility to the soil as legume crops acts as nitrogen fixer (Zahran, 1999; Kessel and Hartley, 2000; Santi et. al., 2013). But such multiple cropping is rarely seen in the village.

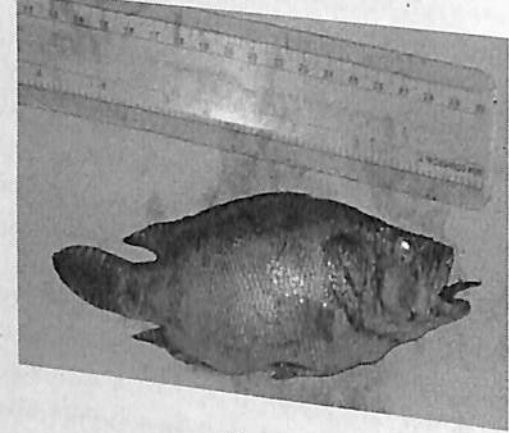
With the application of fertilizers like urea in the wetlands, especially ponds varieties of diseases in the fishes have become common. Many fishes have died in such cases and over the years many species of fishes have become endangered (Figs.3). In the traditional agricultural system, cow dung was kept on the banks of the wetlands and when the water level rises, the dried up cow dung are automatically added to the water which are then consumed by the fishes. Thus there was a process of providing organic manure even in pisciculture.

Figure: 3 Some selected endangered species of fishes in the wetlands of the village

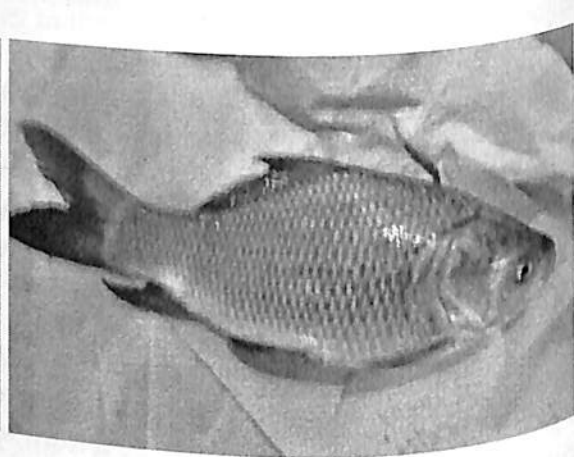


Bighead

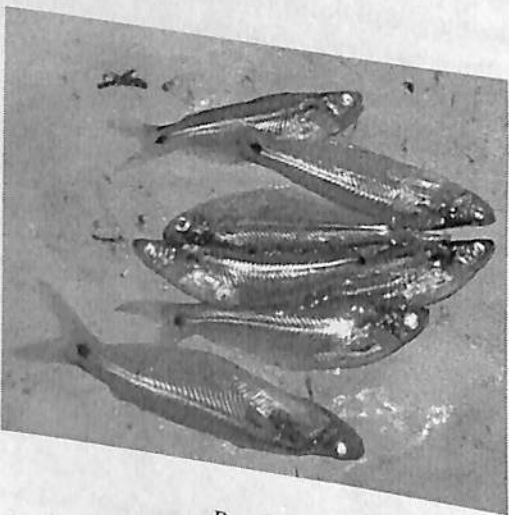
Baami



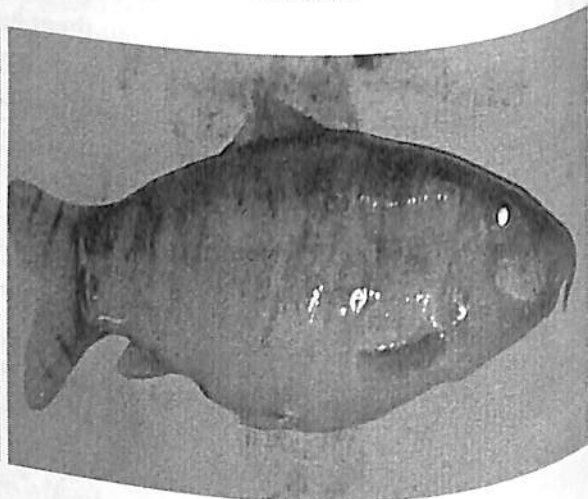
Bhakua



Bhedeli



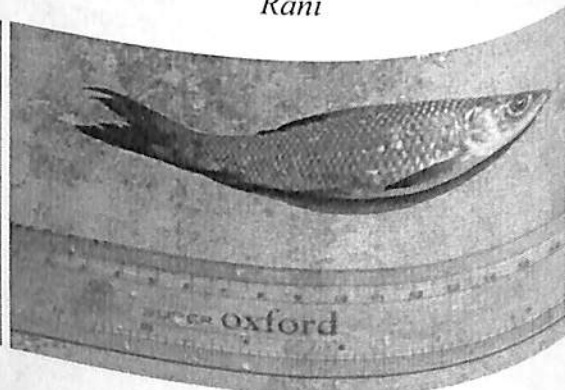
Bordoia



Rani



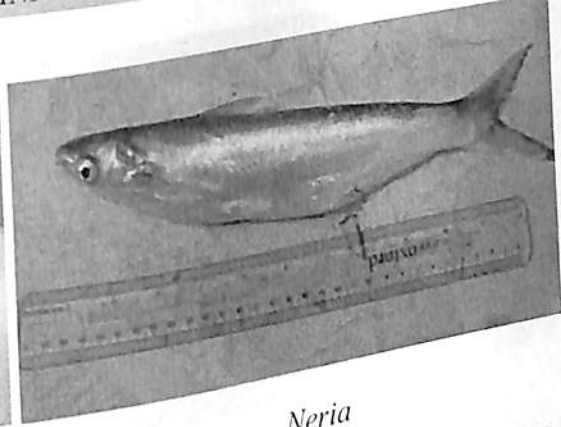
Bagas



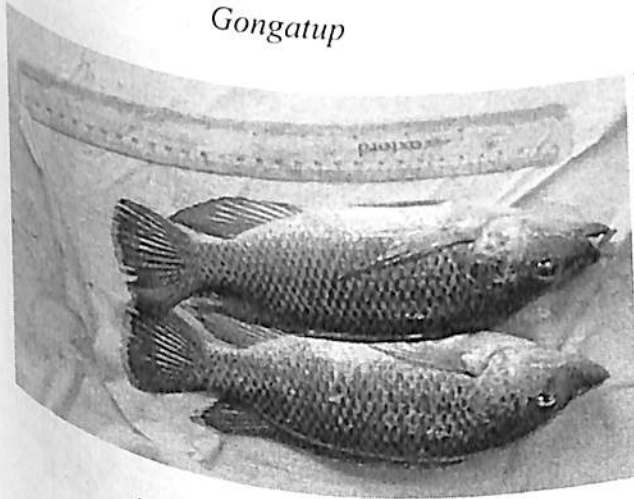
Kokiladora



Gongatup



Neria



Telepia or Japani Kawoi



Kajoli



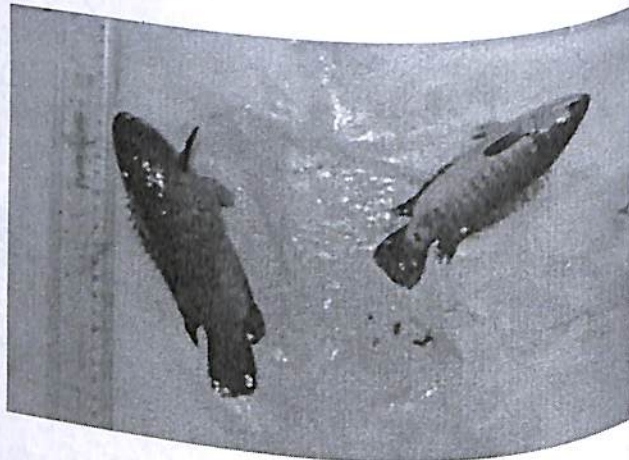
Koroti



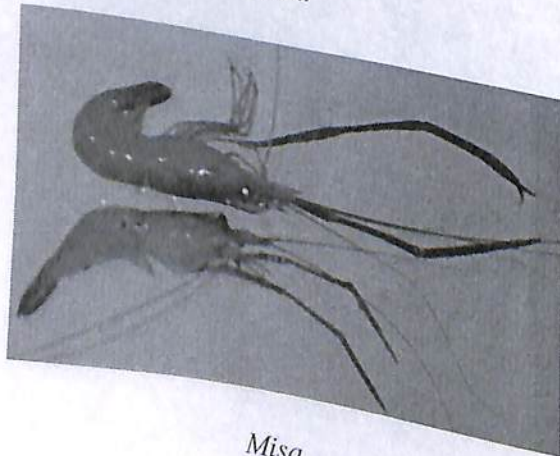
Kusia



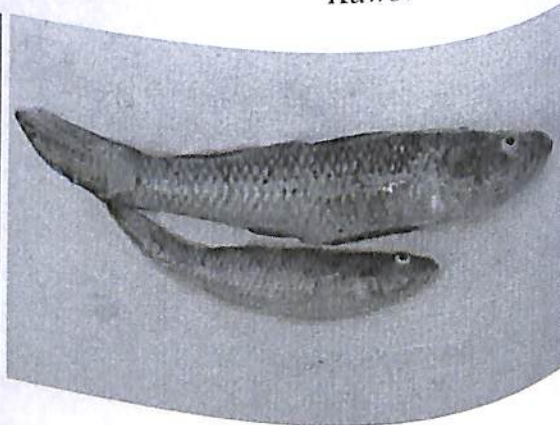
Lassa



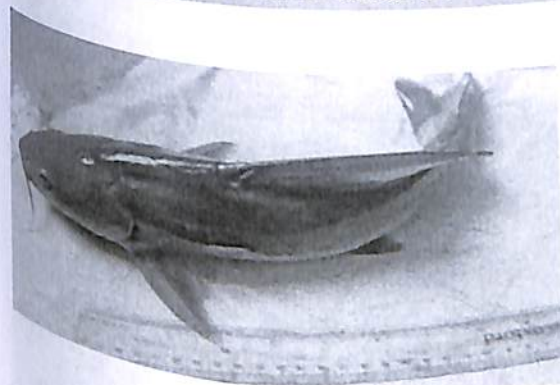
Kawoi



Misa



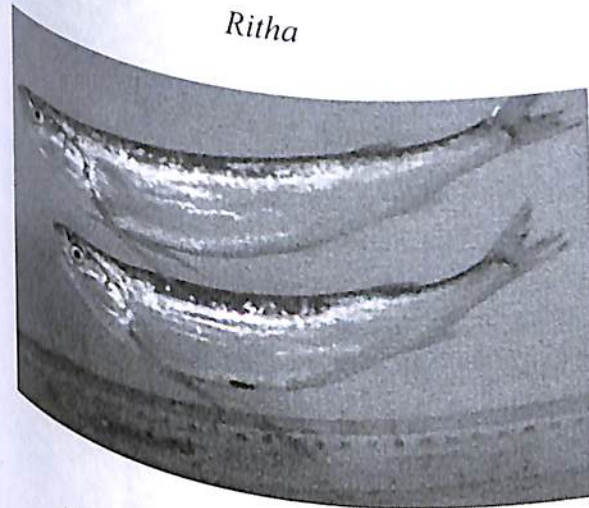
Patit mutura



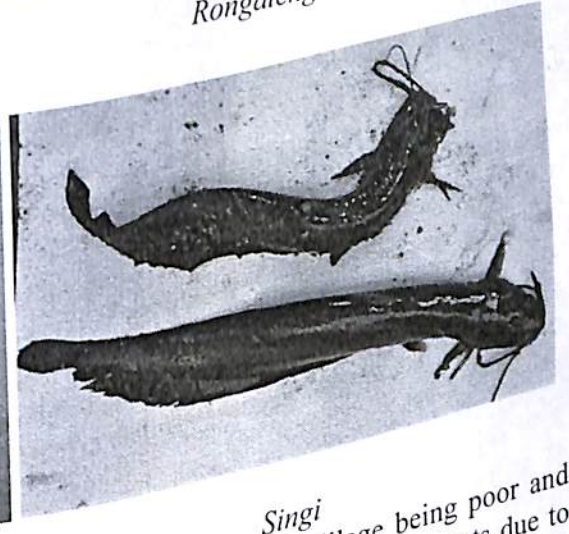
Ritha



Rongatengera



Selekona



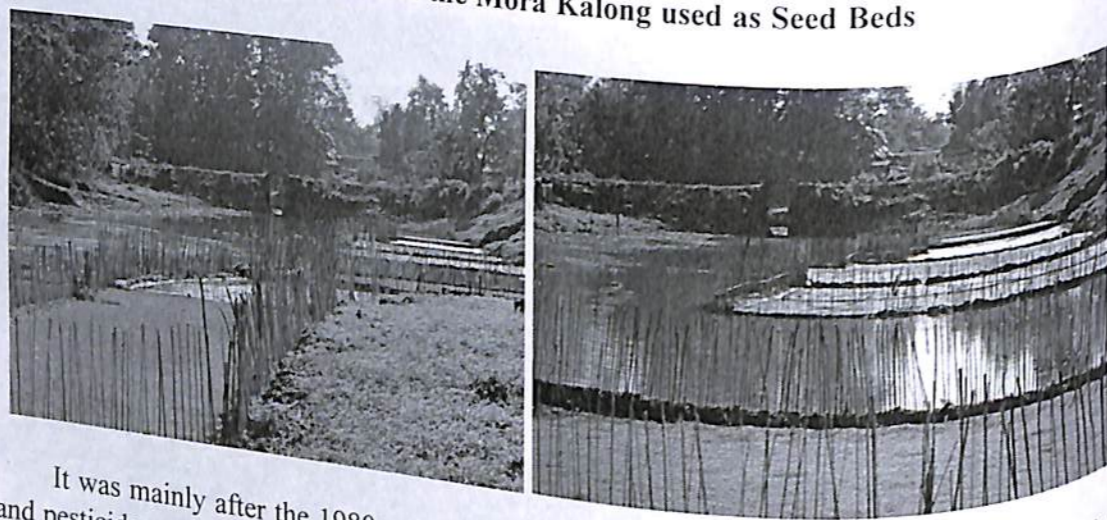
Singi

However, it is interesting to mention that the farmers in the village being poor and marginal, cannot afford to use the modern costly agricultural inputs and implements due to which some of them still followed the traditional method of agriculture.

Changes in Agricultural System:

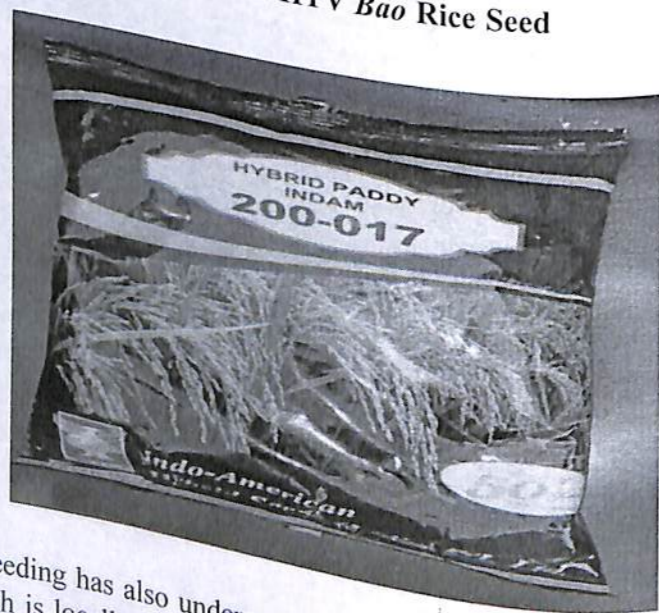
Agricultural scenario in the village has undergone drastic changes especially after the 1980s. There have been changes in the methods, cropping pattern, inputs and implements. Though in some fields, tilling of land is still done by traditional ploughing method with the help of bullocks and buffaloes, but this has been replaced by the power tillers and tractors. Replacing the use of water from the wetlands of the village, the farmers during the dry season irrigated the fields using tube wells and cello water pumps. As a consequence, traditional water supplying tools like *sichani* and *lahati* are not used by the farmers now-a-days. Apart from growing the saplings of rice on *kathiatolis*, the farmers now-a-days started using the *Mora-Kolong* as seed beds (Fig.4).

Figure: 4 A part of the Mora Kalong used as Seed Beds



It was mainly after the 1980s when the inputs in agriculture like fertilizers, insecticides and pesticides were changed from organic to chemical. The major fertilizers used in the fields were nitrogen, potash, phosphorus, urea, diammonium phosphate (DAP), etc. Even the seeds of rice were now being replaced with HYV varieties like *Aijong*. Local varieties of *Boro* rice are replaced with many HYV seeds like INDAM (Fig.5). Such replacement of local varieties with HYV rice (*Sali, Ahu and Bao*) has made the local species vulnerable. The local varieties of *Ahu* rice like *ehojot, pajixeri, dhusuri, bengenguti*, etc. are now not found in the village.

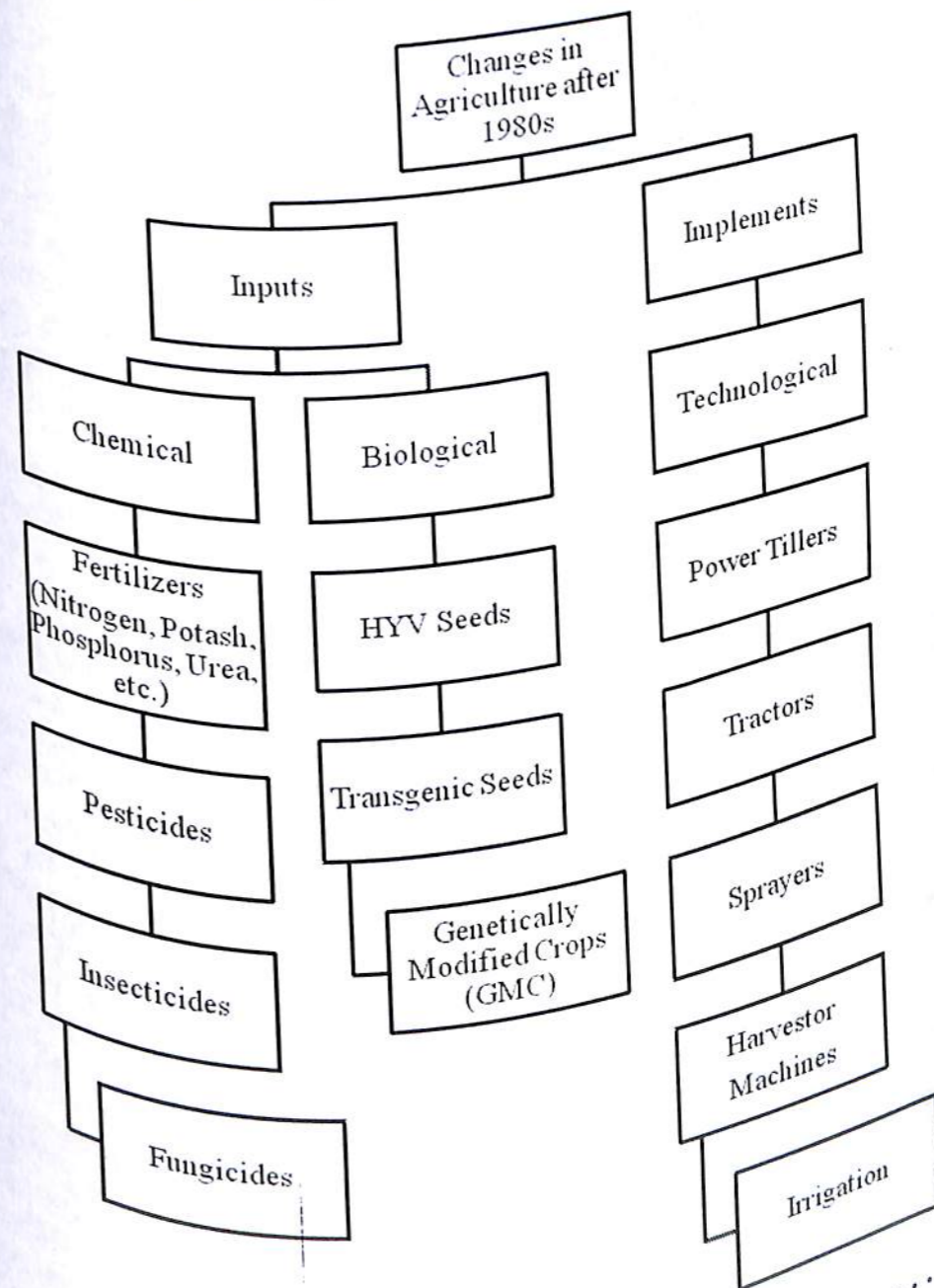
Figure 5: INDAM- a HYV Bao Rice Seed



The practice of weeding has also undergone changes with time. Earlier, people practiced weeding manually which is locally known as *chahmora* or *bonsikunua* but now a days, these

methods are not practiced much as tractors or power tillers are used for tilling the lands and the unwanted plants in the agricultural fields are spread over the entire field. Though the process of weeding has not changed much over time but the usage of weeding implements, like *zaboka, bindha, hoe*, etc. for weeding has definitely decreased. Actually, people don't want to separate the unwanted plants as the tractors and power tillers spread them over the entire field.

Figure: 6 Changes in Agriculture System after 1980s



The method of harvesting has not been changed in the village but the process of threshing operation has changed mainly after 2012. Earlier, threshing was done with bullocks in which traditional tools made of bamboo like *ukhun*, *saloni* and *dola* were used but now this operation in many places is performed by power tillers and threshers.

Now-a-days, during *bihu*, *chirra* (parched rice), *muri* (pop rice) and *akhoi* (pop rice) are not made at home instead, and they are often bought from the market. Again other rice products like *xandohguri* (roasted rice powder), *pithaguri* (rice powder), rice cake (*tilpitha*, *ghilapitha*, *bhapotdiya pitha*, etc.) are consumed by people with tea which has now been replaced with biscuits, maggi, chowmin, *bhujia*, etc. Thus, market fundamentalism has grasped the rural culture and altered the food habits of the people.

Besides, pisciculture has been practiced mostly for generating income and in the process of earning more, some chemical fertilizers like urea, potash have been applied in the *pukhuris*, so that the fishes grow earlier at a faster rate. The application of such fertilizer has not only affected the aquatic plants and other animals in the ponds (*pukhuris*), but has indirectly affected the entire pond's ecology. It has been reported that consuming such fishes has caused many health problems in humans. Traditional rice, fish farming may be considered to derive solely from the farmer-based technology, where modern rice fish farming involves a shift from completely farmer-based technology relying mainly on the use of on-farm and agricultural by products to science-based technology such as use of improved breeds, inorganic fertilizers and formulated feeds (Das, 2002).

Again, domestication of cows, buffaloes and ducks has decreased with time. Some people domesticate cows only for milk and now a days, the local cow species have been injected to produce calves of a cross variety of jersey breed.

Figure: 7(a) Change in Cropping Technology in Kahargaon Village during 1980-2017

Crops cultivated	Preparation of seed beds		Land preparation for paddy	
	Ploughing (P) Harrowing (H) (in number)		Ploughing (P) Harrowing (H) (in number)	
	Before 1980	In 2017	Before 1980	In 2017
Winter (Sali) rice	P= 5 H= 5	P= 3 H= 3	P= 5 H= 5	P= 3 H= 3
Baorice	P= 0 H= 0	P= 0 H= 0	P= 4/5 H= 0	P= 4/5 H= 0
Autumn (Ahu) rice	P= 5 H= 6	P= 5 H= 6	P= 5 H= 5	P= 2 H= 2
Mustard	P= 0 H= 0	P= 0 H= 0	P= 4 H= 3	P= 1 H= 1

Source: Field Survey, 2017-2018

Figure: 7(b) Change in Cropping Technology in Kahargaon Village during 1980-2017

Crops cultivated	Kind of fertilizer applied		Kind of pesticides used		Method of weeding	
	Before 1980	In 2017	Before 1980	In 2017	Before 1980	In 2017
	Winter (Sali) rice	Cow dung compost bio-manure, oil cakes, twigs, etc.	Urea, potash, phosphorus, nitrogen, DAP	Citrus fruits, lime, oil cake, wood ash	Ustad, gamaksin, malathian	Using zaboka
Baorice	Nil	Nil	Herbal concoction, citrus fruits	Herbal concoction, citrus fruits	Using zaboka	Using zaboka
Autumn (Ahu) rice	Cow dung	Urea, potash, phosphorus, nitrogen	Herbal Concoction, Citrus fruits	Malathian	Using Zaboka	Using zaboka
Mustard	Cow dung	Urea, potash, phosphorus, nitrogen	Citrus fruits, oil cake, wood ash	Ustad, Malathian, Gamaksin.	Manually	Manually

Source: Field Survey, 2017-2018

Future Prospects:

The rural people of the entire Valley have been either directly or indirectly engaging in agricultural systems. Thus, they have the traditional knowledge of practicing the agricultural activities. The village has a number of peasant farmers who have the potential to produce more but lag behind due to economic constraints. The village further holds extensive fertile alluvial soils provided by the river Kolong and its dead channel (Mora-Kolong) on which agriculture can be carried out utilizing the natural fertility of the soils. Such utilization of the natural soil fertility will enable the villagers to preserve and restore the already lost ecology of the village and in turn will make them free from many diseases, especially rheumatic pain, hair loss, skin diseases, etc. that they have been facing now-a-days. Besides, the village comprises of numerous wetlands like *nodi* (river), *morasuti* (dead channel), *pukhuris* (man-made ponds), *khals* (natural ponds), *hola* (shallow depression), *pitoni* (marsh), *doloni* (swamp), etc., the water of which can be used for irrigation. This will be cost-effective and can easily be afforded by the local peasant farmers. Again in those wetlands of the village, if pisciculture is properly practiced, even importing fish from the other areas and states of the country is not even needed. This will then gain the farmers much profit and thus they can add another source of income to sustain their livelihoods. If all these prospects within the village are properly utilized, it would make the village sustain and function sustainably in all its aspects.

CONCLUSION:

The present study explores the impacts of modernization of agriculture on rural ecology and economy of a floodplain village called Kahargaon village in Nagaon district. The traditional

agricultural system with the local inputs and implements for tilling the lands, water supply, crop protection, harvesting, threshing and storage and preservation of seeds are both ecologically and economically adaptive as they are locally available. The poor and the marginal farmers of the village can thus easily afford to use them in the agricultural fields. On the other hand, though green revolution has shook the agricultural scenario of the village resulting in high production and productivity, yet its long term negative effects on the ecology, culture as well the landscape cannot be ignored. The peasant farmers of the village could not afford these modern inputs and implements with their marginalized income. With the introduction of some of the modern machines and tools in the agricultural system, many traditional tools, local variety of crop-seeds and traditional culture have become endangered. Besides, the usage of modern tools and techniques has in turn, posed threats for the ecological and biological community. Thus, adopting traditional agricultural system will not only save the ecology and culture, but will also help in sustainable functioning of the village ecosystem.

Acknowledgement:

The authors are thankful to the villagers for their co-operation, help and providing information on agriculture and other allied issues.

REFERENCES:

Census of India (2011), *Primary Census Abstract*, Nagaon District, Directorate of Census Operations, Assam
 Das, D.N. (2002), "Fish farming in rice environments of North Eastern India", *Aquaculture Asia*, Vol. 7, No. 2, pp. 43-47
 Deka, N., and Bhagabati, A. K. (2010), "Farming Practice in a Floodplain Village of Assam (India): Continuity and Change", *Indonesian Journal of Geography*, Vol. 42, pp.13-34
 Deka, N., Bhagabati, A.K. and Ando, K. (2011), "Rural Land Use in Brahmaputra Floodplain Environment, Assam: A Case of Muktapur Village", *Contemporary India*, Japan, Vol.1, pp. 177-193
 Santi, C., Bogusz, D., and Franche, C. (2013), "Biological nitrogen fixation in non-legume plants", *Annals of botany*, Vol. 111, No. 5, pp. 743-767
 Van Kessel, C., & Hartley, C. (2000), "Agricultural management of grain legumes: has it led to an increase in nitrogen fixation?", *Field Crops Research*, Vol. 6, No. 2-3, pp. 165-181
 Zahran, H. H. (1999), "Rhizobium-legume symbiosis and nitrogen fixation under severe conditions and in an arid climate", *Microbiology and molecular biology reviews*, Vol. 63, No. 4, pp. 968-989

ROLE OF SELF-HELP GROUPS IN RURAL DEVELOPMENT OF ASSAM, WITH REFERENCE TO DIMORIA BLOCK OF KAMRUP (M) DISTRICT

Isha Bora¹ and Bhaswati Das²

^{1, 2}Assistant Professor
 Department of Commerce
 B.M.B.B.Commerce College
 Bharalumukh, Guwahati, Kamrup (M)

ABSTRACT:

India is a developing country with a population of around 1027.01 million where about 70% live in rural areas. About 40% of the rural population and 23.62% of the urban population are estimated to be living below poverty line. The problem of rural poverty is increasing day by day which calls for economic support by the government. One of the measures to improve the financial condition of the rural population is to provide financial support to the rural women through self help groups. Providing economic support e.g. loans help them to strengthen their position and also empower them both economically and socially. In this study, we will examine the relation between SHGs and rural and socio-economic development in rural community of Sonapur block of Kamrup district. Both primary and secondary data are collected for this study.

Keywords: Poverty, Rural Women, Self Help Groups (SHGs) and Socio-Economic Development.

INTRODUCTION

India's Eleventh National Development Plan depict that more than 300 million people are poor. Though country has been successful in reducing the proportion of poor people from about 55 per cent in 1973 to about 27 per cent in 2004, but almost one third of the country's population continues to live below the poverty line and a large proportion of poor people live in rural areas. Poverty is specially seen in female faces in India. In rural India, poor people or people Below Poverty Line (BPL) are often indebted the burden of which constantly deteriorates their economic condition. In a recent survey conducted jointly by the World Bank and the National Council of Applied Economic Research, India (NCAER) - the Rural Finance Access Survey, 2003 (RFAS-2003) highlights inadequacies in rural access to formal finance

(World Bank 2004). Thus, reduction of poverty and provision of rural financial services is considered to be necessary for rural development of India. Hence microfinance is considered as an important tool for inclusive growth and special emphasis has been given on 11th Five Year Plan (2007-2012). SHGs of Microfinance concept is successfully implemented in recent times as it is trying to break the cycle of indebtedness and provide self-employment opportunities.

Self-Help Groups (SHGs) and Women : The United Nations Development Programme (UNDP) in its report in 1995 had clearly stated that unless women are engendered, they will be endangered. According to the latest Global Human Development Report 2014, India ranks 135 in Human Development Index and ranks 132 in Gender Related Development Index among 187 countries which are adjusted for gender inequalities. The report advised widespread attention regarding status of women globally, otherwise gender inequality will have a negative impact on economic growth. Microcredit Summit Campaign reports that 80% of microfinance clients are female and women have been shown to repay their loans more often and direct a higher share of enterprise proceeds to their families even and compared to men, women perform better and their participation has more desirable development outcomes (Pitt and Khandker, 1998). Though several parameters exist to empower women, their active role in formation and deriving economic benefit from Self-Help Groups (SHGs) by providing self-employment is adopted as a main tool for empowerment and rural development. Individually poor women below poverty line fail to overcome the problem but, participating collectively, group effort will definitely lead to empowerment. Today SHGs have become the vehicle for changing the poor and marginalized group of our society for the better by assisting women in adapting to entrepreneurial activities. The successful functioning of SHGs will definitely lead to economic independence of women, increase their bargaining power in the society and will empower women both socially and economically, which will ultimately strengthen the society and economy.

Concept of Self-Help Groups (SHGs) : A Self-Help Group (SHG) is a village based committee usually composed of 10-20 members, mainly poor people having homogeneous socio-economic background. Members are voluntarily coming together to save the regular sums of money and they mutually agreed to contribute the common fund for meeting their emergency needs. They have been able to effectively recycle the resources generated among the members for meeting the productive and emergent credit needs of members of the group. A SHG is defined as a "self-governed, peer controlled information group of people with similar socio-economic background and having a desire to collectively perform common purpose". This concept derives its roots from Bangladesh and India has adopted the model in a modified form. Microfinance is a dynamic field and itself implies informal and flexible approach to meet the credit needs of the poor. There is clearly not a definite approach or model that fits in all nations to deliver services and therefore many delivery models have been developed all over the world according to the circumstances and the local needs.

Concept of Rural Development : Rural development generally refers the improvement of quality life, standard of living of the people living in the rural areas. The term "Rural development" consists of various factors like physical, technological, socio-economic and

economic factors. According to Robert Chambers, rural development is a strategy to enable a specific group of people, poor rural women and men, to gain for themselves, and their children more of what they want and need. It involves helping the poorest among those who, seek a livelihood in the rural areas to demand and control more of the benefits of rural development. The group includes small scale farmers, tenants and the landless.

OBJECTIVES OF THE STUDY:

- To assess the socio-economic development of the region, i.e., Dimoria Block of Kamrup (M) District.
- To evaluate the impact of SHGs on women of the society.

SELF-HELP GROUPS IN ASSAM:

The status of women in Assam compare with the women of other parts of India is high in many aspects. It is because social evils like child marriage, dowry, bride burning, female infanticide and feticide are prevalent in Assamese society. But patriarchy continues the subjugation of women in Assam. From the ages under male domination most of them do not dare or are hesitate to play leadership roles in society and hesitate to talk freely with people outside the family. It is one of the causes of high gender inequality in Assam National Human Development Report, 2002, showed higher gender inequality in the state as compared to all India situations. Assam got 29th rank among the 32 states and Union Territories in India. According to Assam Human Development Report, 2003, in the north eastern region, Assam lagged behind Manipur, Meghalaya, Arunachal Pradesh, Mizoram and Nagaland in terms of gender equality. From few decades Self-Help Groups is emerging as a major instrument which creates employment opportunities for women. Under SGSY programme, 40% of the allocated fund is reserved for women with the objectives that if women are benefitted and as a result the health, nutrition and education of rural children have better chances of improvement.

In case of Assam, micro finance movement had started lately. It is only 1997-98 that micro finance movement had really begun and has been rapidly picking up since then. Noble Prize winner Professor Muhammed Yunus agreed to extend his help to government of Assam for introducing a microcredit scheme for uplift of the people of rural areas of Assam. After that Assam government had prepared a draft role on the 3 years project and an amount of rupees 835 lakhs disbursed as loan in three years. The aim of this project was to provide loan approximately 18,000 beneficiaries who are living below poverty line. As per the proposal of State Government, at the initial stage, the project implemented in the Sonitpur District and the district had been selected to launch the project as according to the study by the RBI. The first phase was opened in the blocks of Sonitpur District, Tezpur, Balipara and Biswanath Chariali. The second phase was opened in another three blocks Rangapara, Chaydur and Dhekiajuli. The major government programme for poverty eradication in the Sonitpur District and the programmes promoted by Assam and other state government of North-East India and Central Government are Ministry of Development of North Eastern Region's North-East Livelihood

Projects, Chief Minister's Micro Finance Scheme, North Eastern region Community Resource Management Project, Chief Minister's Assam Bikash Yojna, etc.

RESEARCH METHODOLOGY:

The study is mainly based on primary data and data has been collected from the field survey in Dimoria block of Kamrup (M) District of Assam. A total number of 50 respondents from two SHGs namely, Anamika SHG and Anjuma SHG from this block is selected using non random sampling method. Secondary data are collected from the existing literature and websites, various publications of Central and State Government Organization, books, magazines, news papers, reports, seminar papers etc. Information is also gained from the discussion with officials and non-officials of DRDA (District Rural Development Agencies). For analyzing the data percentage method is used, respondent's socio-economic backgrounds have been analyzed with reference to their age, educational qualification, family member, etc.

ANALYSIS AND INTERPRETATION:

Age, family size, marital status, education, status in the family etc. are some of the variables that affect the rural people particularly the women in their socio-economic development. An analysis has been made from a sample survey of 50 members who are working in the SHGs of Sonapur village of Dimoria Block of Assam. Table 1 shows the socio-economic profile of the respondents.

Table 1: Socio-Economic Status of Respondents with their Demographic Characteristics

PARTICULARS	NUMBER OF RESPONDANTS	PERCENTAGE (%)
Age Group		16%
Below 30	8	84%
30-50	42	-
More than 50	-	92%
Marital Status	46	8%
Married	4	-
Unmarried	-	76%
Educational Qualification		20%
Illiterate	38	4%
Below HSLC	10	-
Up to HSLC	2	-
HS	-	88%
Graduate	-	12%
Head of family	44	-
Husband	6	-
Any other male member	-	40%
Women member herself	-	12%
Type of Activity of SHG	20	12%
Cattle farming	6	36%
Weaving	6	-
Handicraft	12	-
Weaving and handicraft	-	60%
Purchase of any productive asset after membership	30	20%
Cattle	10	8%
Handloom /Machine	4	12%
Other	6	-
Nothing	-	32%
Purpose of taking loan from SHGs	16	20%
Education of children	10	48%
To repay another loan	24	-
To purchase machine/handloom/cattle	-	88%
Preference for girl child	44	12%
Yes	6	-
No	-	64%
Preference for girl education and early marriage	32	32%
Education	16	72%
Marriage	-	28%
Widow marriage	36	-
Yes	14	-
No	-	-

Source: Primary Data

From the Table:1 the following conclusions can be expressed:

- Age is an important factor which determines the efficiency of an individual. The analysis of the age wise classification of the respondents reveals that **84%** of respondents fall under the age group of **30-50** and rest **16%** are **below 30**.
- Education leads to knowledge and self-confidence. Entrepreneurship is also determined by the education. Education plays a vital role in decision making They are not poor in terms of education and literacy, all are literate, out of them **76%** are **below HSLC**, whereas, **4%** of them are even **HS pass**.
- Out of the 50 respondents, **92%** of them are **married women**. It is seen that the head of the family is either husband or other male member which is due to patriarchal society in India.
- Most of the respondents i.e., **40%** are engaged in cattle farming and **36%** of respondents are engaged in both handloom and handicraft.
- **After membership** with SHG, **88%** of them **purchased some productive asset** from which they can again generate income, but **12%** **purchased nothing**.
- It is unfortunate to see that **20%** took loan to **repay another** loan that means they are **already indebted**, but **48%** took loan to purchase some **productive assets** and **32%** are taking loan for **education** of their children.
- With increase in income of women it is assumed that their social thinking have also improved as **88%** respondents prefer **girl child**, **64%** of them prefer **girl education** over marriage and **72%** are with **widow marriage**. But, **12%** respondents still prefer **boy child**, **16%** prefer **early marriage**.

Impact of SHGs on the Sonapur Region: The socio-economic development of a region can be evaluated by measuring certain parameters such as bank accounts, savings from income, employment of people in that region, organization of activities such as melas, trade fairs to generate income, etc. An analysis has been made to assess the socio-economic development of the Sonapur village of Dimoria block of Assam.

Table 2: Respondent's Socio-Economic Condition before and after joining SHG

Particulars	Before Joining SHG		After Joining SHG	
	No. of Respondents	Percentage (%)	No. of Respondents	Percentage (%)
Bank Account	22	44%	50	100%
Savings from income	7	14%	30	60%
Loans and advances	50	100%	38	76%
Income from Trade Fairs, Melasetc	6	12%		

Source: Primary Data

The following conclusions can be drawn from the Table 2:
 ➤ It is observed that there has been an increase of bank account holders from **44%** to **100%** after joining SHGs which is a very good sign of development.

- With an increase in income, savings have been increased from **14%** to **100%**
- Burden of loans and advances have been reduced from **100%** to **60%**.
- With a contribution in trade fairs and melas organized in that region, the members of the SHGs are earning an income which has been increased to **76%** from just **12%**.

Thus, it has been observed that the SHGs have a great contribution in the socio-economic development of the Sonapur area of Dimoria Block. The socio-economic conditions of the people in that region have been improved after joining the SHGs.

Impact of SHGs on Women of the Sonapur Region: The impact of a SHGs on women of the region can be evaluated by measuring certain variables such as Employment of the members, Income of the members, Contribution to family, etc. of the women members before and after joining the SHGs of the Sonapur village of Dimoria block of Assam.

Table 3: Income (per month) of women members before and after joining SHG

Income per month (Rs.)	No. of respondents before joining SHG	Percentage (%)	No. of respondents after joining SHG	Percentage (%)
Less than 1000	39	78%	11	22%
1000 - 1500	8	16%	17	34%
1500 - 2500	3	6%	7	14%
2500 above	-	-	50	100%
TOTAL	50	100%		

Source: Primary Data

From the above table: 3 it is observed that the level of income of the respondents of the SHGs **increased from 6% to 30%** and from **0% to 14%** for the income groups **Rs. 1500-2500** and **above Rs. 2500** respectively. Whereas, for the income groups viz., **less than Rs. 1000** and **Rs. 1000-1500**, the level of income is decreased from **78% to 22%** and increased from **16% to 34%** respectively. This increase or decrease is noticed before and after joining of Self-Help Groups.

Variables such as employment, contribution to family, savings from income and purchases from savings of women members before joining SHG and changes after membership in SHGs is shown in TABLE 4:

PARTICULARS	Before Joining SHG		After Joining SHG	
	No. of Respondents	Percentage (%)	No. of Respondents	Percentage (%)
1. Employment	7	14%	39	78%
1. Contribution to Family	23	46%	47	94%
1. Savings from income	3	6%	41	92%
2. Purchase of any asset from savings	0	0%	44	84%

Source: Primary Data

The findings of the Table 4 are as follows:

- From table 4 it has been observed that, the **employment** percentage of the women has increased from **14% to 78%** after joining the SHGs.
- The **contribution** from their independent income to family has also increased to **94% from 46%**.
- Whatever be the income, the women are able to **save** a portion of their income which was just **6%** before joining the SHG to **92%** after joining the SHG.
- The women members of the SHGs can also **purchase useful assets** such as cattle, weaving and handicraft items, etc. from their income and the percentage has grown up to **84% from 0%**.

FINDINGS:

The following are the major findings of the study:

- Most of the women of the SHGs in the study area are belonged to the age group of 30-50 years and most of them have Secondary and Higher-Secondary level of education.
- About 78% of the SHG members are employed out of which 94% are contributing their income to family. Income of the SHG members is increased after joining the Self-Help Group.
- There has been an increase of bank account holders from 44% to 100% after joining SHGs, which is a very good sign of socio-economic development.
- Organizing exhibitions, *melas* and trade fairs in the region and earnings from them is a sign of socio-economic development of the region as well as become a way of earning income by the women members of the SHGs.

SUGGESION AND CONCLUSION:

- As the members of SHGs are mostly poor women and from remote places, they face problem in reaching the bank, and government offices for official purpose and financial support and moreover they find problem in marketing their products. Govt. and agency should give emphasis to the rural women for increasing their economic as well as entrepreneurial activities and there should be more exhibitions, *melas* for products of SHGs.
 - Training programme should be organized at regular intervals by the NGOs and other Government officials to aware about bank loan, maintenance of proper accounts, self-management, regulation of group etc.
 - The NGOs and the State government must also monitor at a regular interval the overall performance of SHGs.
- Self-Help Group is an important tool which helps the rural women to acquire power for their self-supportive life and nation building efforts. The empowerment of women through SHGs would lead benefits not only to the individual women, but also for the family and community. As a whole these SHGs have collective action in terms of development of the rural economy.

Empowering women is not just for meeting their economic needs, but also more holistic social development. The SHGs empower women and train them to take active part in socio-economic progress of the nation.

Though it has some negative sides it can be avoided, if women empowerment and rural development is taken as a serious objective. Only then greater emphasis needs to be placed on training, education and creation of awareness among women to achieve a larger and long lasting development. Pandit Jawaharlal Nehru said, "To awaken the people, it is women who must be awakened; once she is on the move, the family moves, the village moves and nation moves". Now, the women are awakened by the self-help groups.

REFERENCES:

- Anila, A. A. (2012), "A Study on Socio-Economic Condition of Self-Help Group Members in Tirunelveli District, Tamil Nadu", *ZENITH International Journal of Business Economics & Management Research*, 2 (2)
- Chowdhury, J. (2009), "Role of Rural Women and Self-Help Groups in Economic Development of Assam", Purbanchal Prakash, Guwahati, pp. 121-125
- Manmohan, G., Tushir, M. and Chadha, M. (2008), "Rural Banking and Micro Finance", *Southern Economist*, 47(2), pp. 9-12
- Mishra, C. (2005), "SHGs in the Unorganized Garments Sector – A Case Study of Madurai", *Kurukshetra*, 53(9), pp. 43-47
- Surender and Kumar, M. (2010), "SHGs and their Impact on Employment Generation", *Southern Economist*, 48(23), pp. 5-8
- Vinaya Gamoorthy, A. (2007), "Women Empowerment through Self – Help Groups: A case study in the North Tamil Nadu Social Welfare", 51(1), pp. 32-36

BRICK KILN INDUSTRY: PROSPECTS, PROBLEMS AND THE ROAD AHEAD

Dr. Reshma Kumari Tiwari
Assistant Professor

Department of Commerce, Tezpur University

Ms. Priya Jaiswal (Student)

ABSTRACT:

Brick kilns are a very old industry in Asia. India is the second largest brick producer after China. It has the highest number of brick units compared to its neighboring countries. Around 90 Lakh workers are engaged in production of brick countrywide. There are around 140,000 Brick-making enterprises in country consuming about 25 million tons of coal annually. Estimated emission from these brick kilns is 66 million tonnes (<http://www.cseindia.org>). The brick industry in India uses traditional firing technologies causing greater environmental pollution. It relies heavily on manual labour and is often criticized for paying lower wage rates. Most of the brick kilns are small-scale enterprises with limited financial, technical and managerial capabilities. These enterprises use clay as the dominant raw material and estimated consumption of clay is around 500 million m³ (<http://www.gkspl.in>). Soil quarrying activities by the brick kilns also causes serious damage to agricultural land. Although it has some positive aspect like employment generation, but there are negative and serious impacts of brick kiln environment particularly land. This is because it requires soil quarrying, causes soil erosion, generates solid wastes, and causes water logging, etc. All these factors contribute to degradation of the land. Further, the soil quality is getting deteriorated day by day because of damage caused to the top soil by the brick kiln factories. The present study attempts to carry out a Cost-Benefit analysis of brick kiln factories and the future ahead. The study is based on primary as well as secondary data.

Keywords: Brick kilns and soil damage.

INTRODUCTION

Soil is one of the very few assets whose value gets appreciated with the passage of time. It is highly valuable but finite natural resource and its loss and degradation is irrecoverable

within human lifetime. Soil is used for various purposes such as cropping, forestry, pasture/rangeland and urbanization. It is vital to satisfy demands of the growing population for food and energy production and raw materials extraction, etc. However, the natural area of productive soils is limited. Soil needs to be recognized and valued for its productive capacities, contribution to food security and the maintenance of key ecosystem services (Food and Agricultural Organization of the United Nations, 2015). Sustainable use of land resources is crucial. Soil quality refers to the ability of the soil to perform as per its caliber to satisfy the needs of people and environment (USDA, 1999). The declining vitality of Indian soil has already been accepted as a critical crisis by Indian policymakers. Industrialisation, urbanisation and use of chemical fertilisers, improper waste disposal, etc. have caused significant degradation in soil quality. Monitoring the quality and quantity of land and an analysis of impact of human activities on land becomes crucial (<http://www.fao.org>). Mushrooming brick kiln factories are a threat to the soil quality.

BRICK KILN INDUSTRY IN INDIA:

Brick kilns is a very old industry in Asia. India is the second largest producer of bricks after China. Around 90 Lakh workers are engaged in production of brick countrywide. There are around 140,000 Brick-making enterprises in country consuming about 25 million tonnes (<http://www.cseindia.org>). The brick industry in India uses traditional firing technologies causing greater environmental pollution. It relies heavily on manual labour and is often criticized for paying lower wage rates. Most of the brick kilns are small-scale enterprises with limited financial, technical and managerial capabilities. These enterprises use clay as the dominant raw material and estimated consumption of clay is around 500 million m³ (<http://www.gkspl.in>).

Review of Literature:

The poor and disadvantaged people have no option other than destroying their own environment in search of daily sustenance if they do not have opportunities of economic growth (Stroh and Raloff, 1992). This can be related very well with the poor farmers who give their land on lease to the brick kilns after knowing that it will destroy the fertility of the soil, only to get a little money. In India, mostly these kilns absorb the migrant labourers during the production season through their agents (Majumdar B., 2015). Brick Kiln Industries may cause severe damage to human health. Literature reveals that, the manufacturing process in these industries primarily involves the processing of clays with water to form a mixture of the required consistency, which is further processed to form individual bricks. The bricks are often coated in sand at the pressing or extrusion stage in order to add texture and colour. Then, the bricks are put to drying ovens and then finally fired in kilns. These processes are followed by packing and loading the finished product for despatch. Every stage of the process releases clay and/or sand dust which is hazardous to human health (Vocht, et. al., 2008). It may cause respiratory illnesses as the workers are exposed to smoke, heat and dust from brick kilns (Thomas, et. al., 2014).

OBJECTIVE AND METHODOLOGY:

The objective of the paper is to assess the problems and prospects of brick kilns and its socio-economic impact. The study is based on both primary as well as secondary data. To assess the problems and prospects of brick kiln factories data have been gleaned from the brick industry owners who take the land on lease. Responses have also been gathered from the farmers who let out their land on lease to the brick kilns. To study the socio-economic status of the workers working in the brick kiln factories, primary data have also been collected from the brick kiln workers. There are total 44 brick industries in Kaliabor sub-division. This industry supplies their bricks not only in Kaliabor but also in Arunachal Pradesh, Golaghat, Sivasagar and some more districts of Assam. Data have been collected from 23 brick kilns of three villages of Kaliabor (viz., Baraligaon, Borbhogia, Darigoji) applying the judgment sampling method.

Kaliabor is a sub-division in Nagaon District of Assam situated at a distance of 35 K.M. east of Nagaon town. It is surrounded in the north by the Mighty Brahmaputra, in the south by lofty hills of Karbi Anglong district, in the east by Kaziranga national park under Golaghat district and in the west by Samaguri under Nagaon Sadar Sub-division. Kaliabor sub-division covers many villages, which is the inhabited mostly by poor and lower middle class people. Many of them are wholly dependent on agriculture as their livelihood. Further, many farmers have given their land to brick kilns due to various reasons.

FIELD EVIDENCES:

a. Financial Analysis:

The brick kiln owners have to enter into lease agreement. The lease rent usually varies from Rs. 3000-5000 per bigha annually. The amount paid for chimney land is higher because that land is completely damaged and further it cannot be used for agricultural purpose. The amount for the chimney land varies from Rs.7000-10000 per bigha annually. However, if the land falls in the middle area and if some farmers are not willing to part with the land, then the owners offer a higher price to attract the land owner. The survey revealed Minimum Net turnover of industry is Rs. 7,000,000 and maximum is Rs. 15,000,000 yearly depending on their production capacity. Further, almost every year they suffer a loss of around 10-20 lakhs as the unbaked raw bricks gets melt due to the non-seasonal rain in winters.

b. Operational Analysis:

Production activity is carried on only for six months, i.e., from October/November to March /April. The Lease agreement is usually signed for 10 years. Total area of land required for a brick industry depends upon the production capacity. Approximately 20 bigha land are required for each brick factory and if it wants to produce more its requirement may vary up to 30 bighas of land. To carry out the activities in the factory, the owner hires around 10 persons for Office and Administration, who are salaried employees, around 100-120 labourers are directly engaged in production and around 15 workers are employed for burning coal.

IMPACT ASSESSMENT: BENEFITS:

a. Assured Returns:

Agricultural and farming activities involve costs such as input cost, labour costs etc. without assured returns. As a result, the farmers in the Kaliabor area are tilted towards giving their lands on lease to the brick kilns. Thus, the returns for the landlord are assured if they give their land to brick kilns. Again, Land owners whose livelihood is not farming prefer to give their lands to these brick kiln factories instead of share cropping as the returns are comparatively less and not guaranteed in share cropping activities. Further, India's agriculture is a monsoon dependent and the farmers of Kaliabor are also not an exception. An after effect of pollution is irregular monsoon resulting in either heavy rain falls which causes flood, and or draught in the areas surveyed. In order to get rid of these kinds of problems the farmers prefer to hand over their land to the brick kilns.

b. Employment Generation:

The brick kilns offer employment to the disguised and seasonal unemployed workers. It also provides an opportunity to the landless and unskilled workers to earn their livelihood. Further, the poorest of the poor are compelled by their economic condition to migrate within the national periphery to search for livelihood.

c. Promotion of Entrepreneurship:

Small entrepreneurs get the opportunity to start their own brick kilns. They often avail loans from banking institutions for brick kilns, whereas they find it tough to get loans for agricultural purposes.

IMPACT ASSESSMENT: PROBLEMS:

a. Damage to the Top Soil:

The soil quality is getting deteriorated day by day because of damage caused to the top soil by the brick kiln factories. As per rules the brick kiln shall be allowed only on such land, which is certified as Non-Agricultural Land by the concerned Circle Officer of Revenue Departments of the Government (The Assam Brick Kilns Establishment and Regulation Rules, 2013). However, the survey revealed that the top soil of the agricultural land is used for production of bricks. As the humus concentration is in the top soil and once the top soil is extracted, the land cannot be used for agricultural purpose. Further, the soil under the chimney is burnt and becomes completely unfit for future agricultural activities. Damage to top soil decreases the production of nuts and other agricultural produce. The farmers reported that a decade ago they used to produce 400-420 kg of paddy per bigha of land, which has been reduced to 280-300 kg only. Soil quarrying activities by the brick kilns also causes serious damage to agricultural land. This is because it requires soil quarrying, soil erosion, generates environment particularly land. The process of manufacture of bricks is a threat to the solid wastes, and it causes water logging problems, etc. All these factors contribute to degradation of the land.

b. Disturbance to wild Elephants:

In the south-east part of Kaliabor, there is a water fall and a hill named 'Reka-Pahar' which is covered with a great forest. This forest provides food and shelter to many wild animals. However, due to deforestation because of the stone-quarry and land cutting by brick kilns, the animals lost their home and also the only source of their food, and they are now compelled to enter the residential areas which often results in man-animal conflict.

c. Health of workers:

The workers working in these factories are continuously exposed to dust and they develop various types of respiratory diseases. Further, the working conditions and the residential arrangements in these factories are not healthy and hygienic. Medical facilities are not adequate. In one of the kilns, the workers hired a pharmacist who used to visit once in a month and examine all the laborers and their family members. Laborers at the end of the season used to pay a lump sum amount to him.

d. Issue of Child Labour:

It was observed during the field visits that many children below the age of fourteen were working in the brick kilns. The brick kiln owners denied their engagement. However, it was found that these child workers were engaged by their parents working in these brick kilns to get more family income as the remuneration is paid on piece rate basis.

CONCLUSION:

In the last few years the number of brick industries in Kaliabor has significantly increased. The main reason behind availability of non-residential crop lands of Kaliabor, and large number of unskilled and illiterate labourers. The factories need to take permission before starting such kind of factories, which may harm the local people's health as well as wealth. The government authorities who accord permission to these kinds of activities should be cautious while giving permission. Although, these brick kilns have some positive aspect like employment generation and promotion of entrepreneurial activities, but there are negative and serious impacts of brick kiln industries on people and environment. Developed countries use highly mechanized and automated process for brick production which is environmental friendly. Automation of brick kiln factories with the help of advanced technologies is the need of the hour. Further, adequate attention must be given to the socio-economic status of the workers working in the factories. It should be ensured that the workers should get adequate wages, compensation, working conditions and they should not be deprived of basic amenities of life.

REFERENCES:

Agricultural Research Service and Natural Resources Conservation Centre, August, pp. 1-82, Available at: <http://www.jstor.org/stable/3976415>
Bhukuth, A. and Ballet, J. (2006), "Is child labour a substitute for adult labour? A case study of brick kiln workers in Tamil Nadu, India", *International Journal of Social Economics*, Vol. 33 Issue: 8, pp. 594 - 600
Food and Agricultural Organization of the United Nations (2015), Soil is a non-renewable

source: Its preservation is essential for food security and our sustainable future; retrieved from: <http://www.fao.org/3/a-i4373e.pdf>
Kheyrodin H. (November 9, 2014), 'Important of soil quality and soil agriculture indicators', Academia Publishing
Kinyangi J. (September 27, 2007), 'Soil Health and Soil Quality: A Review'
Majumdar B. (June 27, 2015), 'Forced Migration of Labourers to Brick Kilns in Uttar Pradesh: An Exploratory Analysis', *Economic & Political Weekly*, Retrieved from: https://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/stelprdb1044790.pdf
Stroh M. and Raloff J. (1992), 'New UN Soil Survey: The Dirt on Erosion', *Society for Science & the Public*, *Science News*, Vol. 141, No. 14, pp. 215
The Assam Brick Kilns Establishment and Regulation Rules, 2013; Retrieved from: https://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/stelprdb1044790.pdf
Thomas, B., Charles, N., Watson, B., Chandrasekaran, V., Kumar, I, R. S., Dhanalakshmi, A., Wares, F., and Swaminathan, S. (2014), "Prevalence of chest symptoms amongst brick kiln migrant workers and care seeking behaviour: a study from South India", *Journal of Public Health*, Vol. 37, No. 4, pp. 590-596
USDA (1999), Soil quality test kit guide, United States Department of Agriculture
Vocht, F.D., Hirst, A., and Gardner, A. (2008), "Application of PUF Foam Inserts for Respirable Dust Measurements in the Brick-Manufacturing Industry", *The Annals of Occupational Hygiene*, Oxford University Press, Vol. 53, No. 1, pp. 19-25

Websites:
<http://www.fao.org/docrep/w4745e/w4745e09.htm>; Date accessed: 20 December, 2016
<http://www.cseindia.org/docs/aad2015/11.03.2015%20Brick%20Presentation.pdf>; Date accessed: 22 December, 2016
http://www.gkspl.in/reports/energy_efficiency/Exec%20sum_print_final_11apr12.pdf; Date accessed: 22 December, 2016

A STUDY ON THE ROLE AND PERFORMANCE OF INSTITUTIONAL CREDIT IN ASSAM FOR AGRICULTURAL DEVELOPMENT

Jayashree Bordoloi

MPhil Research Scholar

Department of Economics, Gauhati University, Guwahati

ABSTRACT:

Agriculture is the backbone of Assam and almost half of the population depends on agriculture for their livelihood. The development of agriculture has a significant and positive effect on the growth of the Indian Economy. Agricultural credit plays a dynamic role in maintaining agricultural production by meeting the credit needs of producers during the entire process of crop production. The institutional agencies are providing credit, plays an important role in stimulating economic development of the state. In recent years, the growth rate of agriculture sector in India decelerated due to the lack of access to institutional credit, high costs of input and inefficiency of market conditions. Modern agriculture is a costly affair and *Kisaan Credit Card* (KCC) Scheme is one of the important key products developed into the economy. The study is purely based on secondary data. The paper aims to examine its roles, problems and highlight its potentiality of KCC Scheme to improve the inclusive growth towards achieving a sustainability path in agricultural sector. The study concludes with some policy suggestions reposing great hope on the government initiatives as well as the institutional agencies.

Keywords: Agricultural Credit, KCC Scheme, Inclusive Growth and Sustainability.

INTRODUCTION:

In India, agriculture occupies a key position and almost 70% of the population depends on agriculture for their livelihood. Basically, agriculture is the backbone of the rural population. The development of agriculture has a significant and positive effect on the growth of the Indian Economy. The agriculture and the allied sectors contribute around 14.6% and 58.2% to the GDP and employment and around 10.6% to national exports in 2009-10 (GOI, 2010-11). As the agrarian structure is characterized mainly by the small and marginal farmers accounting for more than 82%, they cannot afford to invest in agriculture which establishes the need of agricultural credit to improve the efficiency of production in the economy. Thus, in the sustained

growth of agricultural sector, credit plays a major role in the economic system. Again, the introduction of modern technology in agricultural sector has also led to intensive use of inputs results an increase in the requirement of credit.

Since the 1970's, the "multi-agency approach" by enacting the Credit Co-operative Societies Act 1904, nationalisation of 14 Scheduled Commercial Banks (SCB's) in 1969 and 6 more in 1980 and establishing the Regional Rural Banks (RRB's) in 1975, NABARD in 1982 has been followed to cater to the credit needs of the peasants in rural areas. But, the limited access to timely and adequate institutional credit has led the farmers to be the victim of indebtedness. Darling stated (1925) that "the Indian Peasants is born in debt, lives in debt and dies in debt," still remains true for a great majority of the peasant communities in rural areas.

In the continued efforts to ensure adequate and timely credit for the rural areas, the financial sector reforms were introduced in early 1990s. The introduction of financial system reforms, 1990 has brought about several improvements in the aspects of credit delivery system in India. In spite of various measures, the flow of credit to agricultural sector remained poor. So, the Reserve Bank of India (RBI) has set up one man high level committee under the chairmanship of Shri R.V.Gupta in Dec 1997. Based on the recommendations of the committee, NABARD introduced Kisan Credit Card Scheme (KCCS) in August, 1998. The KCCS aimed at providing timely and adequate credit to the farmers in a cost effective and flexible manner. Thus, the present study is designed to analyse the role, present status and performance of the institutional credit in Assam and draw policy implications for better management of rural credit delivery system.

OBJECTIVES:

1. To study the present status of the agriculture performance and its role of credit for the development of the agriculture and allied sectors.
2. To examine the status of KCC Scheme given to the agricultural sector agency-wise since its inception and also highlight some policy recommendations.

METHODOLOGY:

The study has been conducted mainly on the basis of literature survey and secondary information. Various journals, research papers, annual reports and Newspaper articles have been surveyed in making this study.

ROLE OF CREDIT IN AGRICULTURE:

Credit not only plays an important role in increasing agricultural production, but also in improving the standard of living in rural households. In Assam, four groups of banks are extending credit to agriculture and allied sectors for different activities. These are the State Bank of India and its associates, other Nationalized Banks, Regional Rural Banks (Assam Gramin Vikash Bank), Apex Banks Cooperative Limited and Private Sector Banks. Before the introduction of KCC Scheme, these banks sanctioned crop loans to the farmers under different

schemes of the Government of India. But later on, crop loans and term loans were given to the farmers through the KCC Scheme involving all banks in the state.

Farmers generally demand two types of credit – short term credit to meet the current expenditure on seeds, fertilizers, insecticides, pesticides, hired labour, transportation of harvested product to the farm houses, etc. and the long term credit is to meet the capital expenditure on bullocks, power tiller, farm house, modern machinery, rent for leased in land, etc. almost 80% of the agricultural credit goes for the short term loan. In Assam, about 85% farmers belong to small and marginal group covering 49% of the total operated area of the state. In this regard, introduction of the Kishan Credit Card in 1998-99 is considered as the most effective credit system.

In India, the flow of agricultural credit since 2003-04 has consistently exceeded the target. The target of agricultural credit flow for the year 2012-13 was fixed at Rs 575,000 crores against which achievement as of September 2012 was Rs 2.39,629 crores. In Assam, credit flow to agriculture and allied activities under annual credit plan was Rs 100.81 crores in 2003-04 which increased to Rs 2002.47 crores in 2011-12. The CAGR grew at the rate of 33.69 percent during 2007-12 and percentage of growth in 2011-12 was 128.39 percent over 2010-11.

The number of operative KCC issued by the Cooperative and Regional Rural Banks as on 31st august was 4.07 crores and the number of cumulative KCC issued by Commercial Bank as on 1st of March 2012 was 5.47 crores in the country. In Assam, 94,377 number of KCC were issued in 2003-04 which increased to 371,474 in 2011-12. The amount of sanctioned loan was Rs. 9728.64 lakhs in 2003-04 which was increased to the tune of Rs 130,329.35 lakhs against the number of cards issued in the respective years. The scheme covered around 35.20 percent of the total farm families (As per Agricultural census of 2005-06, total farm families stood at 27.50 lakhs in the state) of the state.

PRESENT STATUS OF AGRICULTURE IN ASSAM:

Agriculture and allied sector plays an important role in the economic growth of Assam. This sector provides employment to 49.35 % of the total working force in the state.

Table 1: Status of farmers in the Total Working Force of the State in 2011 (Combining Main and Marginal Workers)

Total Population	Total working Population	Total workforce engaged in agriculture	Percentage of agricultural working force to the total working force in the state
312.06	119.70	59.07	49.35 (52.36 in 2001)

Source: Agricultural Statistics at a glance 2013, MoA,GoI

Every agricultural worker in Assam is capable of feeding 6.17 persons per annum in the state in terms of food grains. Despite of having such capability, the average income of this segment of the population is not sufficient enough to maintain the minimum standard of living. The present policy initiatives of the state appear to be inadequate to ensure development of the farming community.

Table 2: Estimated per capita contribution of Agricultural Workers in Total Food-Grain production in 2010-11 in Assam

Total workforce engaged in agriculture(in lakh population)	Total food-grains production in the state (in lakh tonnes)	Estimated per worker contribution in food-grain production in the state (in quintal)	Per capita annual requirement of food grains (in quintal)	Estimated number of persons supported by each agricultural worker in terms of food grains production per annum
59.07	51.78	8.76	1.42	6.17

Source: Agricultural Statistics at a glance 2013, MoA, GoI

The trend of growth of agriculture sector in terms of GSDP at constant prices (2004-05) is presented in the table 3. The share of agriculture sector is showing a gradual fall from 21.39 percent in 2005-06 to 17.77 percent in 2013-14. It is due to sustained progress of the secondary and tertiary sectors of the state. But, the annual average growth of the GSDP has shown a significant rise from 3.40 percent in 2005-06 to 5.87 percent in 2013-14.

Table 3: Trend of growth of agriculture sector (GSDP at constant prices 2004-05), (Excluding Fishery, Forestry & Logging and Mining) in Assam

Year	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12(P)	2012-13(Q)	2013-14(ADV)
Share to GSDP	21.39	20.78	20.43	19.56	19.11	18.40	18.31	18.01	17.77
AGR	3.40	4.65	4.82	5.72	9.00	7.26	5.33	6.06	5.87

Source: Statistical Handbook, DES, Govt. of Assam

PERFORMANCE OF AGRICULTURAL CREDIT IN INDIA:

Institutional Arrangement: Agricultural credit is disbursed through a multi-agency network consisting of commercial banks, Regional Rural Banks and Cooperatives. There are approximately 121,225 million village level primary agricultural credit societies (PACS), 371 District Cooperative Banks (DCBS) with 13327 branches and 31 State Cooperative banks (SCBS) with 1028 branches providing primarily short and medium term agricultural credit in India. The long-term cooperative structure consists of 20 states cooperative Agricultural and Rural Development Banks with 2609 operational units. Agricultural credit started depicting a growth after bank nationalisation and it has been growing continuously. This has resulted in a significant increase in the access of rural cultivators to institutional credit and the contribution of informal agencies as credit sources has declined.

Table 4: Institutional credit flow to agricultural sector (Rs in crore)

Year	Co-operative banks	Regional Rural Banks	Scheduled Commercial Banks	Total
1972-73	824 (86.5%)	0 (0.0%)	18 (1.9%)	952
1981-82	2109 (59.4%)	168 (4.7%)	1245 (35.0%)	3553
1991-92	4763 (46.3%)	526 (5.1%)	4988 (48.5%)	10277
2001-02	20923 (39.0%)	4082 (7.6%)	28709 (53.4%)	53713
2008-09	42162 (17.5%)	23866 (9.9%)	174775 (72.6%)	240803

Note: during 1972-73, remaining 11.6% of total loan was issued by the State Government.
Sources: a) Economic Survey and NABARD Databank (various issues)
b) Website of Reserve Bank of India (RBI)

The share of different institutional agencies in the agricultural credit flow is depicted in the above table 4. The above table reveals that the institutional sources of agricultural credit flow have undergone a structural change. The share of SCBs has increased from a mere 1.9% in 1972-73 to 73% in 2008-09. Prior to nationalisation, the commercial banks were virtually not lending credit to the agricultural sector. The share of RRBs in institutional credit disbursement increased from about 5% during 1981-82 to 10% during 2008-09. The co-operative banks which were the primary source of institutional credit to agriculture have witnessed a sharp decline in their share in agricultural credit, which has consistently declined from 86.5% in 1972-73 to 18% in 2008-09.

Flow of Credit: The data shows trend in the flow of agricultural credit over the given period of time.

Table 5: Flow of agricultural credit (Rupees in crore)

Year	Target	Achievement
2006-07	175,000	229,400
2007-08	225,000	254,658
2008-09	280,000	301,908
2009-10	325,000	384,514
2010-11	375,000	446,779
2011-12	475,000	476,550
2012-13	575,000	607,375
2013-14	700,000	7,23,225

As on 3rd March, 2014

Source: Annual Report NABARD, Annual Report RBI, Ministry of Agriculture

The above table shows that targeted credit flow to agriculture during the year 2006-07 is 175,000 (in crores). Corresponding achievement is 229,400. The percentage of achievement on targeted is 131%. During the year 2007-08 agricultural credit flow achieved Rs 254,658 against the targeted amount Rs 225,000. It shows that agricultural credit flow achieved is 113%. As compared to the year 2006-07, agricultural credit flow is less during the year 2007-08. During 2013-14, the targeted credit flow Rs 700,000 crore and the achievement is Rs 7,23,225 crore, 103 percent of target. Thus we see that the percentage of credit flow is showing decreasing trend upto 2011-12 and slightly improved thereafter.

In Assam, prior to the introduction of KCC Scheme, the agricultural credit was given in terms of crop loan. Table 5.1 visualises credit flow to agriculture and allied activities under annual credit plan in Assam.

Table 5.1: Credit flow to Agriculture and allied activities under Annual credit plan in Assam

Year	Advance Agriculture and Allied Activities (Rs in crore)	Crop loan (Rs in crore)	Percentage share of crop loan to total Agricultural Advance	Per Capita Crop Loan (In rupees)	Crop loan per farm family
2003-04		43.82	43	16.44	161
2004-05	100.81	79.46	33	20.81	293
2005-06	243.76	84.31	25	31.63	311
2006-07	331.89	79.44	17	29.80	448
2007-08	468.91	121.61	21	45.62	749
2008-09	566.71	203.12	39	76.20	1307
2009-10	523.38	359.39	44	134.82	1359
2010-11	814.69	373.63	43	139.94	3935
2011-12	876.76	1082.03	54	346.86	3303
2012-13	2002.47	908.28	49	292.05	(-)16.1
Growth (2012-13) over (2011-12)	(-)7.56	(-) 16.06		(-)15.79	19.12
ACGR	15.44	19.23	3.33	19.24	

Note: Total farmer family=27.20 lakh as per Agricultural census, 2000-01
Total farmer family = 27.50 lakh as per Agricultural census, 2005-06
Source: Reports of State level Bankers committee, Assam, Economic Survey, Assam, 2013-14

The advance under agriculture and allied activities increased from Rs 100.81 crore in 2003-04 to Rs 2002.47 in 2011-12, but in the succeeding year it decreased to Rs 1851.01 crore with a negative growth of 7.56 per cent over 2011-12. But the ACGR grew at the rate of 15.44 percent during the reference period. In case of crop loan, the amount of loan increased from Rs 43.82 crore in 2003-04 to Rs 1082 crore in 2011-12 and in the succeeding year it came down to Rs 908.28 crore with a negative growth of 16.06 percent over 2011-12. The ACGR of crop

loan grew at the rate of 19.23 %. However, per capita and per family crop loan did not show any significant rise during the reference period. The decreasing trend of credit advance in the last year over the previous year might be due to shortfall in repayment for which the financial institutes were reluctant to disburse the eligible amounts to the loan seekers.

Credit Card Scheme: The Kisan Credit Card introduced by Government of India in 1998 as a part of economic reforms introduced in Agricultural sector. The introduction of the KCC Scheme is a landmark in the rural credit delivery system in India. The KCC was introduced for short and medium term loans to provide adequate and timely credit support from the banking system in a flexible and cost effective manner, covers 644.65 lakh farmers throughout India during 2011-12. The KCC Scheme covers all the short-term credit needs of the farmers, including crop loan and other items of production credit/ working capital/short term requirements for non-farm activities. The predominant idea behind this approach was to ensure farmers to get adequate credit to meet all of their short term credit needs through the single window of Kisan card. The provision of timely and adequate credit for development of rural economy, in general, and agriculture in particular, has been a major worry of the formal banking institutions in India since nationalisation.

Table 6: Agency wise Kisan Credit Cards issued during the year (in lakh)

YEAR	KCC Cards issued (lakhs)				% share in total no of cards issued		
	Coop	RRBs	Comm banks	Total	Coop	RRBs	Comm banks
1998-99	01.56	0.06	6.22	7.84	19.90	0.77	79.34
1999-00	35.95	1.73	13.66	51.34	70.02	3.37	26.61
2000-01	56.14	6.48	23.90	86.52	64.89	7.49	27.62
2001-02	45.79	8.34	30.71	93.41	58.20	8.93	32.88
2002-03	48.78	9.64	27.00	82.43	55.55	11.69	32.76
2003-04	35.56	12.74	30.94	92.46	52.76	13.78	33.46
2004-05	25.98	17.29	43.95	96.8	36.74	17.86	45.40
2005-06	22.97	12.49	41.65	80.12	32.43	15.59	51.98
2006-07	20.91	14.06	48.08	85.11	26.99	16.52	56.49
2007-08	13.44	17.73	46.06	84.7	24.69	20.93	54.38
2008-09	17.50	14.14	58.30	85.88	15.65	16.46	67.89
2009-10	28.10	19.50	53.10	90.1	19.42	21.64	58.93
2010-11	29.95	17.70	55.80	101.6	27.66	17.42	54.92
2011-12	26.79	19.96	68.04	117.54	25.18	16.93	57.89
2012-13	26.89	20.30	82.43	129.52	20.68	15.67	63.65
2013-14	17.32	21.35	NA				
2014-15	507.99	238.47	717.52*	1463.98	34.70	16.29	49.01
Cumulative since inception							

Cumulative since inception
 Source: (i) EPWRF (2014). Agric credit in India: Trends, Regional spreads & Database issues, NABARD Occasional Paper No 59 for data from 1998-99 to 2011-12.
 (ii) *(cumulative Comm Bank) State - wise Progress of Kisan credit cards issued by commercial banks in India (as on 31.03.2015): www.indiastat.com

Agency-wise distribution of total cards issued since inception till date suggests that about 49 percent of cumulative KCCs have been issued by commercial banks followed by about 35 percent by cooperative banks and 16 percent by Regional Rural Banks. In fact, the share of cooperative bank in total KCC issued has come down from as high as 70% in 1999-2000 to 20.7% during 2012-13 and that of commercial bank has gone up from 26.6% to 63.7% during the same period. The high share of Cooperative Banks (52.9%) as compared to RRBs (16.7%) and commercial Banks (30.4%) in total number of operative /live K (as on 31st march 2015) indicates that despite the fact that the number of cards issued by cooperative bank is continuously declining, the farmers prefer to keep the KCC with cooperative banks alive, may be due to the advantages like availability of good quality fertilizers, seed, etc.

Table 6.1: Total flow of credit to agriculture and KCC Share during the year

Year	Flow of credit to agriculture				Credit flow under KCC			KCC as a % of total Agri credit		
	Coop	RRBs	Comm Banks	Other Agencies	Total	Coop	RRBs		Comm banks	
2000-01	20712	4220	27807	82	52821	9412	1400	5615	16427	31.10
2001-02	23524	4854	33587	80	62045	15952	2382	7524	25858	41.68
2002-03	23636	6070	39774	80	69560	15841	2955	7481	26277	37.78
2003-04	26875	7581	52441	84	86981	9855	2599	9331	21785	25.05
2004-05	31231	12404	81481	193	125309	15597	3833	14756	34186	27.28
2005-06	39404	15223	125477	382	180486	20339	8583	18780	47702	26.43
2006-07	42480	20435	166485	-	229400	15991	7373	19786	40300	17.57
2007-08	48258	25312	181088	-	254658	13141	8743	19900	48634	19.10
2008-09	45966	26765	228951	226	301908	13172	7632	25865	57678	15.46
2009-10	63497	35217	285800	-	384514	10719	11468	39940	66669	15.00
2010-11	78007	44293	345877	114	468291	10640	11520	50438	72625	15.51
2011-12	87963	54450	368616	-	511029	11174	12836	69510	91670	17.94
2012-13	111203	63681	432491	-	607375	10825	20689	NA	-	-
2013-14	119964	82652	509005	-	711621	7322	24248	NA	-	-
2014-15	138469	102483	599691	-	840643					

Source: (i) EPWRF (2014). Agric credit in India: Trends, Regional Spreads & Database issues, NABARD Occasional Paper No 59 for data from 1998-99 to 2011-12.

As for the amount of credit flow under KCC is concerned, it appears that despite a growing share of crop loan (vis-à-vis agricultural term loan) in total agricultural credit, the share of credit flow under KCC in total agricultural credit flow has tended to continuously fall until 2009-10. It was declined from 41.68% in 2001-02 to 15% in 2009-10, but only fractionally edged up to approximate 18% in 2011-12.

Table 6.2: Advance under KCC Scheme in Assam

Year	Annual Achievement		Cumulative Achievement	
	Card issued (No)	Amount (Rs in lakh)	Card issued (No)	Amount (Rs in lakh)
2003-04	94,377	9,728.60	-	-
2004-05	86,822	9,382.86	1,72,965	22,202.28
2005-06	70,238	9,677.79	3,39,750	38,839.94
2006-07	50,067	7,862.03	3,59,395	40,580.52
2007-08	62,132	16,365.83	3,29,932	67,908.97
2008-09	1,03,361	37,589.23	4,80,393	1,04,682.06
2009-10	1,49,822	43,055.94	6,30,070	1,58,372.04
2010-11	1,63,063	50,495.87	7,93,801	2,09,071.23
2011-12	3,71,474	1,30,329.35	9,67,220	3,07,834.01
2012-13	2,65,797	93,219.58	13,29,203	3,93,538.41
2013-14	3,08,306	1,50,567.42	15,86,687	15,51,091.21
ACGR	18.46	37.92		

Source: Reports of State level Banker's Committee, Assam

Table 6.2 reveals that the annual achievement against the number of card issued and amount disbursed during 2003-04 to 2013-14 in Assam. The number of card issued increased from 94377 in 2003-04 to 308,306 in 2013-14 with an ACGR of 18.46 percent while the amount of advance increased from Rs 9,728.6 lakh to Rs150,567.42 lakh during the reference period with an ACGR of 37.92 percent. The cumulative achievement of KCC issued, stood at 1586,687 for an amount of Rs 1551,091.21 lakh at the end of 2013-14.

RECOMMENDATION AND POLICY SUGGESSTIONS:

On the basis of the observations made, the following recommendations and suggestions have been drawn:

1. Introduction of proven varieties, provision of adequate irrigation water mechanisation of some agricultural activities and improvement of marketing infrastructure can help the farmers quite a lot to generate more income, thereby making them better off to repay the loaned amount at regular interval.
2. The farmers are to be brought under the National Agricultural Insurance Scheme (NAIS) in order to protect them from crop losses on account of biotic and abiotic factors.
3. Soil health card may be issued to the KCC holders so that they can judiciously use soil nutrients in the crop field to raise the level of production and productivity.
4. Extensive capacity building programme are to be launched to make the farmers aware of the modern technology to reap a good harvest for repayment of loan on time.
5. Relief may be given to the debt-ridden farmers in terms of interest -free loan at least for few years.

6. Regular supervision and monitoring on the part of the financial institutes is an action forward to ensure proper utilisation of loan obtained against the KCC.
7. Defaulters of loan are to be treated as per rules of the land.
8. Any bad elements in the system, right from credit sanctioning to credit distribution should be eliminated and penalty should be imposed upon him/her who is found guilty.

CONCLUSION:

Agricultural credit has played a vital role in supporting agricultural production in India as well in Assam. The target of agricultural credit was fixed at Rs. 700,000 crore during 2013-14 and the achievement Rs. 723,225 crore represents 103% of target. A review of performance of agricultural credit in India reveals that though the overall flow of institutional credit has increased over the years, there are several gaps in the system like inadequate provision of credit to small and marginal farmers, limited deposit mobilisation and heavy dependence on borrowed funds. Efforts are required to address and rectify these issues. The effect of education has indicated the need for capacity building of borrowing farmers. In the changed scenario, strong and viable agricultural financial institutions are needed to cater to the requirements of finance for building the necessary institutional and marketing infrastructure. The revised KCC scheme is no doubt an important policy initiative of the Govt of India to protect the farmers from the clutches of private money lenders. If implemented in right perspectives, it can contribute to improve the rural economy through agricultural development in particular and the State economy in general. In a capital starved state like Assam, if the scheme is channelized properly, it can do wonders for the benefits of the farming community. And it will be possible only when the farmers themselves, the administrators and field functionaries together make a concerned effort to implement the scheme in right earnest.

REFERENCES:

Biradar, R.R. and Shoukat Ali, M., 'Institutional credit Flow to Agriculture under Kisan Credit Card Scheme in India: Emerging Trends and Patterns'

Bordoloi, J. and Das, A.K.(2015), 'Impact of Credit on Agricultural production with special reference to crop loan and KCC Scheme- An empirical study in Assam'

Das Gupta, P. and Bhusan Dey, N.(2015), 'Performance of Institutional Agricultural Credit in Hailakandi District of Assam with special Reference to Kisan credit card scheme,' *IOSR Journal of Agriculture and Veterinary Science*, vol.8,pp: 62-68, ISSN: 2319-2372, [www.iosrjournals.org]

Godara, R.L, Singh, P. and Singla.S. (2014), 'Agriculture Credit in India: An analytical Study,' *International Journal of latest Trends in Engineering and Technology*, Vol.3, ISSN: 2278-621X

Jainuddin,et. al. (2015), 'Growth and Performance of Kisan Credit Card Scheme in India with special reference to Karnataka'

Kavitha, V., Umanath, M. and Paramasivam. R. (2016), 'An Economic Analysis of Institutional Agricultural Credit in India,' *International Journal of Science and Nature*, Vol. 7(3), ISSN: 2229-6441

Kumar. A., Singh, K.M. and Sinha, S.(2010), 'Institutional Credit to Agriculture Sector in India: Status, Performance and Determinants,' *Agricultural Economics Research Review*, Vol.23, pp: 253-264

- Roy, A. (2012), 'Agricultural Finance vs. profitability of Microfinance Institutions-A case study of the MFI's of Assam,' *Asia Pacific Journal of Marketing & Management Review*, Vol.1, No.3, ISSN: 2319-2836
- Sankaran, A. and Suresh, E.(2011), 'Institutional credit and Agricultural Development', *International journal of Management Research and Technology*, Vol.5, ISSN: 339-343
- Seena, P.C. (2015), 'Management of Agricultural Credit and the impact of Indian Banking sector Reforms on Agriculture, *International review of Research in Emerging Markets and the Global Economy*, Vol.1, ISSN: 2311-3200
- Study on Implementation of Kisan Credit Card Scheme (2016) [Accessed online on www.nabard.org]
- Talukdar, A. (2015), 'Role of Assam Gramin Vikash Bank in changing the economic condition of the farmers in the Nalbari District', *A peer reviewed International Journal of Humanities & Social Science*, Vol. IV, pp: 45-51, ISSN: 2278-5264 (online)

LOOK EAST POLICY AS A DEVELOPMENT STRATEGY FOR NORHT-EAST REGION

Oanannya Duarah

Accountant
Axiom Infracom, Guwahati, Assam

Risha Das

Assistant Professor
Gauhati Commerce College, Guwahati, Assam

ABSTRACT:

The Look East Policy, launched in 1991 by the then Narasimha Rao government has been emerged as a crucial foreign policy initiative of India in the post-cold war period. It not only provides an opportunity to consolidate India's relations with the nearest south-east Asian countries, but it also holds immense potential for trade expansion and regional development for the North-East India. Thus, this policy marked a shift in India's perspective of the world, where the strategic and economic importance of South East Asia to India's national interest is being recognized. The second phase which began in 2003 extends the coverage of the Look East Policy from Australia to East Asia, with ASEAN as its core. The new phase thus marks a shift in focus from trade to wider economic and security co-operation, political partnerships, physical connectivity through road and rail links. The North-East of India is the bridge between two sub-regions of Asia-South Asia and South-East Asia. Both regions are in the midst of tremendous positive change, spurred by economic growth and development. We in India have so far to a large extent not been able to leverage the various opportunities that this sub-region of India offers for the well-being and prosperity of the people who live here. Amongst the opportunities we should seize are not only the geographical factor of being a bridge head between South-Asia and South-East Asia, but also the natural and human resources of the Seven Sisters of the North-East. Moreover, the strategic, political and economic importance of North-East for India's Look East Policy cannot be overemphasized. It not only provides an opportunity to consolidate India's relations with the near South East Asian Countries, but it also holds immense potential for trade expansion and regional development for the North-East of India

within the framework of BIMSTEC, Mekong Ganga Project, K2K, Advantage Assam and other initiatives. In this paper, we are trying to put emphasis on development strategies of Look East Policy in NE region.

Keywords: BIMSTEC, ASEAN and Advantage Assam

INTRODUCTION:

'Look East' meant looking East ward for fostering newer ties with the immediate neighbors of South East Asia. North-East India offered the alibi realising such aspirations. Ironically, although the LEP in its present form got initiated during 1991, it was only in 2008 that North-East India appeared in related policy formulation with the launch of NER Vision Document 2020. Several factors determine India's interest in looking at the South East Asian region.

The open door policies of China, India's regional neighbour, during the 1980s had seen the meteoric rise of an emerging economic giant in Asia, in contrast with India's own Fabian socialist policies in India under Nehru's rule. China competes with India in the political, economic and military sphere and most importantly, for economic influence in the region of South East Asia. In short, India must adopt an economically aggressive stance to compete well with international market forces at work in the region. Indian Prime Minister Manmohan Singh said that he welcomed Foreign Direct Investment (FDI) into India, which rakes in only a current US\$3 billion as compared to US\$53 billion in FDI to China annually. India's FDI barely measures up to 6% of its main rivals. Obviously, there is a need to seek new markets in order for India to grow economically and to seek a significant way of countering China's own economic policies.

Thus, India seeks new markets to export its restless workforce. An ignoring of changing trends however, could well lead to serious social problems for the government of India. Although India also possesses business interests and provides foreign labour to the Middle East, undertaking of worthwhile financial investment in Middle Eastern countries. As a consequence, India remains hemmed in and severed from mainstream Asian affairs on either the western or northern direction. The only remaining alternative of potential development is to look East wards towards the South East Asian region. Despite having periodic irritants and economic disruptions such as occasional terrorist or militant attacks, as in the case of the Philippines, Indonesia and Thailand, the threat level remains well contained and pose no danger of regime change to SEA state governments.

IMPORTANCE OF LOOK EAST POLICY (LEP):

"India has two main reasons for this project, one to connect with ASEAN and one to compete with China," said Kim, a long-term observer of Indo-Burma relations and author of "Unfair Deal".
India's relationship with Burma is also largely based on a need to counter China's influence in the region. China has recently become Burma's second largest foreign investor and

has built its own port in Kyaukphyu, just 40 km or so from Sittwe. This Kaladan Project has secured India's North-Eastern province with a lifeline for opening up trade and transport to the rest of ASEAN and the world. Once completed, bilateral trade will grow manifold. Moreover, the overall development of India's North-East region, and particularly land-locked states like Mizoram, will be greatly increased. Bilateral trade meetings were held between Burmese trade and investment delegates and trade ministers from the four North-Eastern Indian states in mid-September 2010 in an attempt to strengthen border trade.

The Kaladan Project will likely open up the economic geography of the region, potentially connecting to the Asia highway in the future, which will open up international trade routes. Feeling threatened by the way in which China is strengthening its position in both South and Southeast Asia, India has recently decided to change the basis of its Look East policy in order to counter balance the Chinese rise in the region. According to today's Prime Minister Manmohan Singh "India's Look East Policy is not merely an external economic policy; it is also a strategic shift in India's vision of the world and India's place in the evolving global economy. Most of all it is about reaching out to our civilization neighbors in Southeast Asia and East Asia".

The new version of India's Look East policy has the idea of counterbalancing China as its implicit core, as it explicitly refers to the way in which New Delhi should strengthen its relations with neighboring countries today reckoning China as an important partner. With the aim of stabilizing China's position in these countries, India is developing a new strategy oriented at stressing geographical proximity as well as economic development to convince nations such as Pakistan, Nepal, Bhutan, Bangladesh, Sri Lanka, but also Vietnam, Myanmar and other Southeast Asian nations that New Delhi can "offer them more" than a distant country like China. India thinks that its functional relations with Asian countries could be reinforced by commonality of affinity of cultures, balancing with diplomacy China's military superiority and economic advantage.

Overall, the focal point of the "Look East Policy" of India at that time was put in economic cooperation. Due to various reasons, India did not positively promote the "Look East Policy" at that time and the Southeast Asian countries had paid their attention to East Asia and underestimated India. Subsequently, the "Look East Policy" did not exert obvious effects. Since the acceleration of globalization and change of Asian pattern in the 21st century, the "Look East Policy" of India has shown new vitality and rising trend.

India began adopting specific action, transforming to all-round cooperation from exclusive economic exchanges and enlarging its foreign policies from the Southeast Asia to East Asia and Australia. India strengthened its association with the Southeast Asian countries, joined the treaties of the Association of Southeast Asian Nations, established free trade zone with the Southeast Asian countries and participated in the East Asian cooperative mechanisms and the security forum of the Association of Southeast Asian Nations. The cooperative contents also expend to the military and cultural fields from exclusive economic cooperation.

The "Look East Policy" has become an important part of India's diplomatic strategy. Is the Southeast Asian countries and enlarged its foreign policies from the Southeast Asia to East Asia and Australia. India strengthened its association with the Southeast Asian countries, joined the treaties of the Association of Southeast Asian Nations, established free trade zone with the Southeast Asian countries and participated in the East Asian cooperative mechanisms and the security forum of the Association of Southeast Asian Nations. The cooperative contents also expend to the military and cultural fields from exclusive economic cooperation.

The "Look East Policy" related with the eastward transfer of American strategic focus? The facts above show India is much earlier in promoting the "Look East Policy" than the eastward transfer of American strategic focus. In order to realize the strategy of eastward transfer, the United States

positively encouraged India to participate in the East Asian affairs. As the strategy of eastward transfer catered to the psychology of India's misgivings and precautions against China, India also manifested its enthusiasm. India lately held a trilateral dialogue with the United States and Japan, and it has also close contacts with Vietnam, Burma and some other Southeast Asian countries. However, it cannot be deemed as the collaboration of the United States and India. India has been pursuing the independent foreign policy and mainly considers its own interests. India proposed a series of positive proposals, hoping deepening the relations of the BRICS, strengthening cooperative mechanism of these countries, which again embodies India's all-round diplomatic policy. Therefore, it is groundless to think its "Look East Policy" and the American strategy of eastward transfer are converging. As a part of the endeavour to strengthen India's linkages with East and Southeast Asian and to reinforce the Look East policy, a sub-regional grouping called BIST-EC comprising Bangladesh, India, Sri Lanka and Thailand was established in 1997 with economic cooperation as its primarily goal. With the addition of Myanmar in August 1997, and of Bhutan and Nepal in February 2004, the grouping came to be known as BIMSTEC or the Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation. This forum has identified six sectors for focused cooperation: trade and investment, technology, transport and communications, energy, tourism and fisheries. When India initiated BIMSTEC in 1997, it received strong support from Thailand, which also saw it as a political and economic forum to bridge Southeast Asia and South Asia. India promotes BIMSTEC to establish economic links with peninsula member countries of ASEAN to boost the development of its seven North-Eastern states. India is also part of the Mekong Ganga Cooperation (MCG) Project, which also includes Myanmar, Thailand, Laos, Cambodia and Vietnam. It came into being on November 10, 2000 where representatives of the six member states met at Vientiane and came up with a set of guidelines known as the "Vientiane Declaration". The declaration outlined the areas for institutional interaction based on assessment of the capabilities of its member states. In order to give a well-structured outlook to the initiative, a concept paper was worked out which delineated the agenda for cooperative efforts, where the project is primarily aimed at the development of three main areas for cooperation; tourism and culture, infrastructure and Information Technology as envisaged by the Vientiane Declaration. After two decades, the Look East policy has yielded many benefits and supported India's economic transformation and growth, including closer contacts between India and Southeast Asian countries, a remarkable leap in the quantum of bilateral trade and increased people-to-people interaction.

LEP AND ITS IMPORTANCE TO NORTHEAST INDIA:

The vision document expresses optimism that its agenda for development will elevate NER to the position of national economic eminence that it occupied during the time of independence. A process of inclusive growth through inclusive governance will change the socio-economic condition for the better. Economic prosperity will improve the life of the people and therefore insurgency can be minimized. Thus, NER will become the arrowhead of India's Look East Policy. No vision for NER is complete without a discussion of the Look East Policy and the

opportunities for trade and development associated with it. While it is not easy to date the exact emergence of the central government's Look East (LE) Policy it would be reasonable to infer that it was more or less part of the official policy launched in 1991. The basic logic for the policy stems from the landlocked nature of the NER states and their long international border. The NER states share 98 per cent of their border with Bangladesh, Bhutan, China, Myanmar and Nepal while a narrow strip of land constituting just about 2 per cent links the region with the rest of India. It is this tenuous geographical link with the country that leads to virtual isolation and high transport cost of supplies to and from the rest of the country. This has been the logic for the transport subsidy given in all the industrial policies for the NER states.

The LE Policy should promote commercial and geographic isolation of this region from the neighboring countries to try and break the economic and geographic isolation of this region from the rest of the country. In particular, the emphasis should be to promote trade links. The following sections will look at some of the measures taken in the context of trade with Myanmar, Bangladesh and China and how much more needs to be done in this regard. Since new trade links take some time to develop, we will look at both the short-and long-run trade strategies as part of the LE Policy for NER. Thus, while in the immediate short-run of the next few years, the strategy should attempt to promote ties of NER with its immediate neighbours, in the long-run NER must look beyond its borders to tap into the benefits of India's burgeoning trade with the ASEAN bloc.

The Look-East Policy is being embarked upon with the presupposition that the improving trade ties between India and ASEAN will certainly elevate the North-East out of the menace of insurgency, poverty and economic backwardness. The Look-East Policy is expected to usher in a new era of development for the North-East through network of pipelines, connectivity, communication and trade.

The Look East policy has the potential to undo the effects of colonial geopolitics as well as transform the region by opening borders for trade and commerce. In this foreign policy vision North-East India is often described as gateway to Southeast Asia.

According to Rajiv Sikri, Secretary East of India's Ministry of External Affairs, the Look East policy "envisages the North-East region not as the periphery of India, but as the centre of a thriving and integrated economic space linking two dynamic regions with a network of highways, railways, pipelines, transmission lines crisscrossing the region." 8 Thus, there is an effort to open the region in the economic and political arena as well as "opening doors and windows in intellectual, cultural, political matters."

PRESENT STATUS OF LEP:

Socio-Cultural and Development Cooperation: Socio-cultural cooperation and promotion of greater people-to-people interaction through increasing exchanges in culture, education, youth, sports, creative industries, science and technology, information and communication technology and software, human resource development and scholarly exchanges are areas which would lead to integration. Dissemination of knowledge about the civilisational links between ASEAN and India was another way forward in this area. Preservation, protection and restoration of symbols and structures representing civilisational bonds between ASEAN

and India like Angkor Wat in the Kingdom of Cambodia and many other such places in other ASEAN countries has been in important area where India and ASEAN countries have been working together with positive results. Further, India has also been paying special attention to the CLMV (Cambodia, Laos, Myanmar and Vietnam) countries that represent a bridge between ASEAN and India by intensifying focus on human resource development and capacity building e-initiatives. India has had close cultural and economic ties with Southeast-Asian countries throughout the history. But with the significant changes that occurred in the world's politics and economic scenario since the early 1990's and India's own march towards economic liberalization has compelled India to focus on strengthened and multifaceted relationship with ASEAN countries.

Economy and Trade: The trade volume between ASEAN and India has surpassed the USD 79.3 billion level in 2011-12 crossing the target of USD 70 billion by 2012 set in 2009. By 2015, trade figures have been projected to touch USD 100 billion. PM Manmohan Singh envisioned the trade volumes reaching USD 200 billion within 10 years from now. These are very ambitious targets but achievable if FTA in services sector is concluded soon. However, these trade volumes are much less when compared with ASEAN-China trade which stands at USD 362.8 billion. China is ASEAN's largest trading partner for the past three years. Even with an ambitious target of growth, it is unlikely that India will be able to catch up with China in the near future. After concluding Free Trade Agreement (FTA) with ASEAN in goods in 2009 (which was operationalised in 2011) India had hoped to sign FTA in services and investments with the ASEAN. However, only the negotiation process on FTA in services and investments has been concluded. It is likely that it may be signed sometime next year as some countries like Philippines are still wary that such an agreement may have negative domestic impact.

Improved Connectivity: Improved connectivity is another important factor that would strengthen the linkages between ASEAN and India. India is in the process of building India-Myanmar-Thailand Trilateral Highway and its extension to Lao PDR and Cambodia and has undertaken a new highway project connecting India-Myanmar-Lao PDR-Viet Nam-Cambodia as well as developing the Mekong-India Economic Corridor (MIEC) connecting Southeast Asia to South Asia on the eastern part of India in order to add greater momentum to the growing trade and investment linkages between ASEAN and India. But, as is well known, India has a record of tardy implementation of its projects and there are always some bureaucratic hassles in utilisation of allotted funds. Greater physical connectivity would provide the impetus for economic integration with the region.

Political and Security Cooperation: Use of existing ASEAN-led regional processes, such as the ASEAN Defense Ministers Meeting (ADMM) Plus to promote defense and military exchanges and cooperation, and the ASEAN Regional Forum (ARF) to foster constructive dialogue and consultation on political and security issues was emphasized during the summit. The aim is to address traditional and non-traditional security challenges, including transnational crimes and implementation of the ASEAN-India Joint Declaration for Cooperation to Combat International Terrorism.

Impact of LEP: India and ASEAN reciprocally have embarked upon a number of initiatives

for rejuvenating their ties in multiple areas. Frequent tête-à-tête from both the sides promulgates better implementation of the Policy. The improving intensification of economic linkages with ASEAN has inspired India to enter into the second phase of its Look-East Policy. Phase 2 is the deviation from complete economic issues to the broader agenda involving security cooperation, actively constructing transport corridors and erecting pillars of linkages and connectivity. This phase of India's Look-East Policy renders ample relevance to the development of its North-East Region because of its geographical proximity to South-East Asia. The North-Eastern tip of India consisting of contiguous seven sister states- Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland, Tripura and the state of Sikkim - constitutes a unique narrow passageway connecting the Indian subcontinent to East and South-East Asia and acts as a crucial corridor for human migration between these areas. The North-East region because of its favourable geographic location, cradled by the Himalayas in the north, Bay of Bengal in the south and flanked by 5 Asian countries- Nepal, Bhutan, China, Myanmar and Bangladesh, acts as a gateway to South-East Asia. There are ample possibilities for North-East India to reap benefits from India's thriving relations with South East Asia as the process of globalisation provides the countries with the opportunities to grapple with cross-market accessibility and enabling them alleviate their poverty and economic backwardness. The ecstatic beauty of India's North-East serves as an attractive tourist spot and its infrastructure is a hub of immense business potential. The term North-East is an ambiguous one leading to portray the image of a single state with homogenous attributes, which is vastly different from the actual standing. On the contrary, the North-East India largely bears the tenets of diversity and distinctness. The North-East through unfortunately is not free from many evils and is often thwarted by gruesome happenings retarding the pace of development. The Look-East Policy is being embarked upon with the presupposition that the improving trade ties between India and ASEAN will certainly elevate the North-East out of the menace of insurgency, poverty and economic backwardness. The Look-East Policy is expected to usher in a new era of development for the North-East through network of pipelines, connectivity, communication and trade. The ASEAN-India car rally of 2003 was a notable initiative undertaken by the Indian government to emphasise on the geographic proximity between North-East India and South-East Asia. Moreover, India has undertaken some bilateral and multilateral projects for boosting connectivity between the North-East and South East Asia. The important ongoing and potential infrastructure projects in this regard are **Moreh-Tamu-Kalewa Road, India-Myanmar rail linkages, Kaladan Multimodal Highway, Trans Asian Highway, India- Myanmar gas or oil pipeline, Tamanthi Hydroelectricity project and optical fiber network between North-East India and South East Asia.** But certain obstacles like lack of infrastructural development, absence of enthusiastic response from local people, frequent insurgencies, poor governance in the states, the easy availability of arms and weapons from across the international border to be utilized in armed movements and criminal activities impede increased relations between North-East India and South East Asia. Moreover, the geographic location of the North-Eastern region makes it more vulnerable to be the core of hostility with massive negative outcomes. There are enough avenues through which North-

East India can be related to South-East Asia. Racial, linguistic and cultural similarity prevails among the people of North-East India and those of South-East Asia. If the concerned governments really strive to translate their policies into reality their collaborative endeavors would invariably revive age-old cultural and historical bonds.

In the recent Assam investors' meet, 176 MoUs of Rs 65,186 crore signed on day 1 with 160 firms were signed in Guwahati on the first day of the Assam's maiden Global Investors' Summit, where Prime Minister Narendra Modi emphasised the need for an all-round development of the North-East.

Modi in his inaugural speech said the government has speeded up the functioning of official machinery and laid stress on the importance of 'Act East Policy' for further momentum to the country's growth story. "We want all programmes to be completed before target," the prime minister said at the programme attended by Bhutan Prime Minister Dasha Tshering Tobgay, Japan Ambassador to India Kenji Hiramatsu, captains of industry and representatives of USA, Germany, Japan, Korea, Israel, Vietnam, Myanmar, Cambodia, Czech Republic, Laos and Bangladesh.

Modi said the country has become the most preferred investment destination with the highest foreign direct investment (FDI) of \$ 60 billion last fiscal and the union government will now focus on development of infrastructure to turn Assam into the country's new growth engine. The focus of the development strategy is on "transformation through transportation" and hence stress has been laid on improving the road and rail connectivity in the region, he said. The government will work to bring about qualitative change in the lives of low and middle income classes and promote "Ease of Living" at the same time, he said.

The inaugural day of the first-ever Global Investors' Summit in Assam saw signing of 176 initial memorandums of understanding (MoUs) in a range of sectors with investment commitments worth Rs 65,186 crore, an official said. Public sector oil behemoth ONGC committed Rs 13,000 crore investment in the state, while another oil public sector unit (PSU) Oil India Ltd pledged an investment of Rs 10,000 crore, according to the summit spokesperson. Indian Oil Corporation (IOC) and Numaligarh Refinery Ltd also evinced interest to invest Rs 3,432 crore and Rs 3,410 crore, respectively, the spokesperson said. Among private players, Reliance Industries chairman and managing director Mukesh Ambani announced an investment of Rs 2,500 crore in Assam in various sectors, including retail, petroleum, telecom, tourism and sports, creating jobs for at least 80,000 people over the next three years.

With Tata Trusts joining hands with the Assam government to roll out an elaborate cancer care programme in 17 centres across 15 districts of the state from next year, the project will see an investment of around Rs 2,000 crore, Assam health minister Himanta Biswa Sarma said. Indo-UK Institute of Health will be investing Rs 2,700 crore, while Century Ply has shared plans of investing Rs 2,100 crore, the spokesperson said. Spicejet outlined plans of Rs 1,250 crore investment for Assam through seaplanes to boost the tourism sector besides connecting Lakhimpur and Jorhat under the Udaan Scheme.

Infinity Group will be investing Rs 1,000 crore in an IT park and real estate project in Guwahati, he said adding the Medanta Group proposed Rs 500 crore investment in the healthcare sector and Dalmia Bharat Cement announced an investment to the tune of Rs 1,100 crore.

"Tourism sector, which is one of the key focus areas of the government, saw an investment proposal in concurrence of around Rs 736 crore. Infrastructure sector, a prime determinant of progress, saw a total investment proposal worth Rs 2,347 crore," the spokesperson said.

Other major companies announcing investments in Assam are BPCL (Rs 350 crore), EsselInfraprojects (Rs 6,000 crore), Star Cement (Rs 2,100 crore), Infinity Infotech Parks (Rs 1,000 crore) and Mahindra Holidays and Resorts India (Rs 400 crore), among others, he added.

The government has identified 12 focus sectors for the summit, including agriculture and food processing, handloom-textile-handicrafts, logistics, river transport-port Township, IT-ITeS, pharmaceutical-medical equipment, plastics- petrochemicals and power. Tourism-hospitality-wellness, civil aviation, petroleum- natural gas and startups-innovation are other focus areas at the summit.

Assam chief minister Sarbananda Sonowal in his address asked investors to explore the investment potential in the state and come up with more ideas. He promised that the government would meet all of their expectations. Describing the summit as a historic event in the economic growth story of the state, Sonowal said his government is committed to turning Assam into a prime hub of economic activity in the North-East.

Union minister for commerce and industry Suresh Prabhu said there was the need to create a development road map. Tobgay in his speech emphasised the exemplary relations shared by the two countries and acknowledged the support and cooperation received from India for being a part of Bhutan's growth story.

He said India was a role model for his country, which stands to benefit from a prosperous Assam. Japan Ambassador Kenji Hiramatsu said his country was keen to continue ties with India and was committed to identify further areas of cooperation to contribute to Assam's development. The present Government of Assam has been campaigning for long about the need of rapid industrialization in the state.

The Government of Assam aims to create a platform for providing best support towards the prospective and existing business community in the state, and drives forward the state's vision of prosperity for all - by employing technology, innovation, inclusivity and sustainability as key factors for development.

The maiden Global Investors Summit, 2018 aims to project Assam as India's expressway to the South-East Asian nations. Advantage Assam will be the largest ever investment promotion and facilitation initiative by the Govt of Assam. Besides, the Summit will showcase the opportunities offered by the state in terms of export-oriented manufacturing and services to ASEAN and BBN countries. The objective of the Summit is to position Assam as India's Expressway to ASEAN.

CONSTRAINTS AND CHALLENGES:

India's attempt to promote trade with Bangladesh and Myanmar through Preferential Trade Areas has failed as India takes undue consideration of the law and order situation of the North-East and the military and security establishment having a say in India's foreign policy to these two countries. Trade with both these countries has been stagnant and there is a difference with

Bangladesh over transit arrangements that India seek for its links to the North-East and also 4 about the existence of training camps for insurgents in their territory. Similarly, trade with Tibet and Yunnan provinces of China have been almost absent except, the existing trade at Nathula in Sikkim, though India and China have agreed to initiate border trade through the Himalayan pass between Tibet and Sikkim.

There is much talked about opening new trade routes or reviving the ancient silk routes through North-East leading to economic development of the region. Before meaningful trading activities can take place the region needs to prepare itself starting from agriculture, in terms of productivity. Processing industries have to be set up to manufacture quality goods which can be offered in international markets at acceptable prices. The entire infrastructure of roads, railways, communication and air transport will have to be completely revamped. Similarly hotels, restaurants and resorts will have to be built for tourists. If this cannot be achieved the Look East policy will not benefit the region and in that case it will only act as a corridor between mainland India and Southeast Asia.

Considerable work of identification of agriculture, horticulture, floriculture and industrial products have also been carried out. What now needed is the real work in the field. When work is done in the field, only then the North-East can really reap from the Look East policy. Sushil Khanna complained that in contrast to the lukewarm effort for economic integration, the Look East policy concessions and aid are meant to persuade the neighboring countries to expel insurgent groups seeking shelter in these countries. As seen in the past, India's policy of developing ties with its eastern neighbors has been limited to counter insurgency strategy. Up till now there is almost no role for the North-Eastern states in the Look East policy, which is in sharp contrast with the role that the Yunnan province plays in the Chinese pursuit of closer relationship with its neighbors in Myanmar and Indo-China countries. There is little room for the North-Eastern states in the Mekong Ganga Cooperation, BCIM forum and in BIMSTEC.

RECOMMENDATIONS FOR THE LOOK EAST POLICY:

Unrestricted trade with neighboring countries in agricultural and meat products could lead to considerable reduction in the costs of these items in NER.

The LE Policy has important security dimensions. There is urgent need to promote interaction with neighboring countries through sports, music and other cultural activities. In the case of neighboring countries which are members of WTO, formal request for trade facilitation would improve trade access for NER states.

In the longer term, industrial output of NER should cater to the demand for industrial goods in the neighboring countries. This is particularly important for border trade in items like cement, coal, timber and steel.

To facilitate trade it is essential to activate existing land-customs stations (LCS) and to provide a secure transport corridor for traders.

In the long run, NER needs to plug into the growing trade with ASEAN countries particularly in items like wood products, ores and rubber products. It is imperative to integrate IT facilities in promoting infrastructure for trade with the ASEAN countries.

CONCLUSION:

India's LEP has over the last two decades strengthened its economic, political, security, and civilization links with the rest of Asia. To cope with the global financial turmoil, India however should become even more persistent and proficient in deepening its linkages with the rest of Asia, while strengthening its capacities to meet its developmental challenges.

To accomplish this task, India will need to develop far greater expertise in geo-economics, an area which has not received the requisite attention. India should also consider establishing a well-funded, resources, think-tank for researching, debating, communicating, and influencing foreign policy issues and options. This will also enable India to better communicate its intentions to rest of the world, including its partners in Asia.

Thus, the success of the policy depends on the commitment of the Indian government to implement the proposed plans and projects under the policy and to give role for the North-Eastern states in this policy. Nearly two decades since India initiated its Look East Policy (LEP), there has been substantial progress in expanding economic and strategic engagement with the rest of Asia.

The EAS better represents Asia as all major Asian powers are its members. India has bilateral or broader economic agreements in place (or they are being negotiated) with all the members of the EAS. India is also a member of the ASEAN Regional Forum, which promotes dialogue among Asian and select major non-Asian powers on security issues. Even though it is too early to presume that the Look East policy is a failure, sceptics argue that there is more rhetoric than substance in the policy. With the North-Eastern region filled with various insurrections and the subsequent law and order problem, the implementation of various developmental projects is an arduous task. However, such hindrances must not stop the pursuit for economic development. The government of India needs to actively engage with the insurgent groups for political dialogue striving for peaceful solution to the decades old problems of the region. They also need to simultaneously go ahead with the development projects. There is also an ardent need to give role to the North-Eastern states in this policy. Thus, the success of the policy depends on the commitment of the Indian government to implement the proposed plans and projects under the policy and to give role for the North-Eastern states in this policy.

REFERENCES:

- H.N. Das (2007), "Preparing the North-East for Look East Policy", *Dialogue*, Vol. 9, No. 1, July-September
- India's Look East Policy: Prospects and Challenges for North-East India-3, accessed electronically <http://haokip.bandamp.com/blog/17831.html>, on February 23, 2009
- Press Release by the Prime Minister's Office on November 22, 2004, "Prime Minister flags off Indo Asean Car Rally"
- Websites: <https://www.google.co.in/search?q=advantage+assam+project&oq=adva&aqs=chrome.1.69i57j35i39j0l4.2521j0j7&sourceid=chrome&ic=UTF-8>

ECO-TOURISM IN THE NAMPHAKE VILLAGE OF ASSAM : A SOCIOLOGICAL STUDY

Silpi Sikha Dowerah
Dept. of Sociology

Mahapurusha Srimanta Sankaradeva Viswavidyalaya, Nagaon, Assam

ABSTRACT:

Assam is the most vibrant of the eight states comprising North-East India. It is situated south of the eastern Himalayas along the Brahmaputra and Barak river valley. Tourism has a wide avenue in the state. Tourism in various forms can take shape in Assam whether it is wildlife or archeological or tea plantation. Eco-Tourism has also a great avenue in the state. The present paper shall deal with Eco-Tourism aspect in a tribal village in upper Assam named as the Namphake Village.

Eco-Tourism has a great boost in the village of Namphake which is a home to the Tai-Phake tribes. It is one of the largest of the Tai-Phake Village in Assam. About six kilometer from the upper Assam town of Naharkatia and 37 kms from the Dibrugarh is the Namphake village in the riverine area of Buridihing the village tribals showcase their cultures in a variety of forms in the village and the Buddhist temple situated in it is an added advantage. Hundreds of tourists visit this village every year. This paper is based on primary data which will portray Namphake as an eco-tourist spot. The researcher shall try to analyse the whole paper from a sociological perspective.

Key Words : Eco-Tourism, Namphake, Assam.

INTRODUCTION:

Eco-Tourism has a growing niche market within the larger travel industry with the potential of being an important sustainable development tool. Eco-Tourism is the symbiotic relationship between tourism and environment which benefits the socio-economic condition of local inhabitants and at the same time promotes tourism and protects the environment. Conceptually ecotourism encapsulates a type of tourism that involves travelling to relatively undisturbed or uncontaminated natural areas with the specific objective of studying, admiring and enjoying the scenery, wild plants and animals as well as the existing cultural aspects found in those areas.

The Namphake village which is the researcher's study concern can be identified as an eco-

tourism destination. This village has great diversity of culture, tradition and natural resources which makes it very attractive tourist destination. It is a home to about 150 Phakial families who are keeping alive their unique identity, customs and traditions in this village.

Significance of the Problem : Eco-Tourism is an emerging concept of Tourism and North-East has ample scope for its growth. The present study area though it has ample scope for the development of Eco-Tourism but it has not developed to that extent. The significance of such a study lies in the fact that it may help the planners of tourism and Government in chalking out strategies of proper tourism and conservation of the traditional arts and crafts, customs, fairs and festivals, performing arts, paintings and culture of the villagers in their original and authentic forms which generally can attract tourist from different parts of the world.

OBJECTIVES:

To understand the potentialities of Eco-Tourism in the study area. To prove further prospects of Eco-Tourism in the region.

METHODOLOGY:

The required information are collected from both primary and secondary data sources. Primary data and informations were collected by visiting the tourist spot and then participant observation and indepth interview of the respondents were done accordingly. An Interview schedule was also prepared accordingly. Secondary data were collected from various relevant books, journals and websites etc.

Study Area : The present study area i.e. Namphake Village is situated about 6 kms from the upper Assam town of Naharkatia.

It is situated in the riverine area of Burdening. The Tai phakey is the branch of the great Tai race that entered Assam in the later half of the 18th century. The word Phakey has been derived from the Tai word pha meaning wall and ke meaning old. It Forms a small microscopic community in Assam, presently residing in nine villages of Dibrugarh and Tinsukia district of Upper Assam. The present study area is the Nam Phake village, which is situated on the bank of the river Burhidihing of Naharkatia subdivision of Dibrugarh. This village was established in the year 1850 and main person in establishing the village was Pu thot Nong. The village folk speak a dialect similar to the language in Thailand and still follow the traditional customs and dress code of the great Tai race. The word Phake has been derived from the Tai words 'Pha' meaning wall and 'Ke' meaning ancient or old. People living near and around the stoned walls in due course came to be kneown as Kunphake, i.e., people residing near Phake part of the country. In The Tai and the Tai Kingdom, Padmeswar Gogoi writes, "The Tai people are now mainly concentrated in the Indo-Chinese peninsula. The present habitat of the Tai people extends from Assam in the west to Kwangsi and Hainan in the east and from the interior of Yunnan in the north to the southern-most extremity of Thailand (Siam) in the south."

Findings : Tourism in the area : Eco-Tourism has a great potential in the area. The village

in itself appears to be a living museum with its salient features such as the Buddhist monastery, the typical bamboo stilt houses, the festivals, their food habit, rituals and practices. The ecology of Burhidihing River flowing through the heart of the village has influenced the life style of the people through time immemorial. Infact the most interesting fact about this village is that the tourist can explore the tangible and intangible cultural properties of Tai-Phake community in their natural environment. The charming and alluring beauty of the village has an age old charm. Amidst Namphake village is the magnificent and delightful Buddhist monastery, which serves as a major tourist attraction in Assam. Because of its exclusive natural surroundings and traquil ambience, the monastery can serve as a centre of meditation. The monks and their disciples reside in this monastery. The monastery has a Mahabharata written in Tai-Phake language which is more than 100 years old. This awe-inspiring Tai-Buddhist religious citadel includes several stupendous monuments within its premises. There is a Buddhist pagoda (a pyramidal tower with an upward curving roof) which was built in the late 30's of the last century. A symbolic Ashok Pillar stands tall amidst all other monuments nearby. Ashok was a legendary king of the Mauryan Empire in India and contributed immensely in the rapid spread of Buddhism during his reign in 3rd century B.C. Near a pillar, a still house called "Chaitya Griha" was constructed. It is a double entrance hall for religious offering with the Buddha Stupa or Pagoda near its rear entrance. A distinctive water tank known as the "Mucalinda" tank or "Nong Mungchiringta" is worth a view inside the monastery. The water tank has a statue of meditating Buddha at its centre protected by a snake at its hood. There is a myth that the king of all serpents "Mucalinda" came from beneath the earth to protect Lord Buddha from a prodigious rain after he attained enlightenment. The tanks architecture is a beautiful depiction of that sacred myth. The Buddha Vihara in the Namphake village treasures some of the ancient manuscript and books which narrate the story of their journey, struggle and settlement. The monastery is basically run by the Buddhist monks and the villagers of Namphake help them out in every manner including supply of food and traditional attires of the monks. The concept of Habermas's public sphere can be applied here as this sphere is realm of social life where people can bring up matters of general interest; where they can discuss and debate these issues without recourse to custom, dogma, and force and where they can resolve differences of opinion by rational argument and interestingly due to this fact, the village has zero percent crime rate, till date police have never entered this village and the villagers feel proud to declare this.

The beautiful handicraft and colourful handloom items of the Tai Phakes are another point of attraction which showcases their finest skills. Women wear colourful handwoven dresses. An ankle length skirt called "Chin" tightened around the waist by a belt shaped cloth piece called "Chai Chin" and a blouse top called "Nang Wat" fastened under and around the arms are traditional attires for the ladies. A head gear called "phahu" provides a touch of grace to the already unique attires of the women folk. Though these phakial people time and now displays their traditional handwoven clothes for sale in small temporary stalls in the village but they don't do it permanently. On being questioned they told the researcher that as the inflow

of tourist is not so high so they often don't get encouraged to do so. But it is a sad note on the part that these handwoven items are not getting so much focus.

The Tai Khamptis have varied cuisine whose some of the names of the food for the visitors might be nonplussed but are delectable delights and mouth savouring such a **Khau ho** a rice cooked in steam rice cooker and made into balls wrapped in a leaf known locally as tong and people of Assam called it Ko-pat, **Tongtep** which is a steamed pancake wrapped in leaf, **Khautek** is roasted sticky rice mixed with molasses and made into balls, **Khauptuk** a steamed sitcky rice pounded with sesame and fried in oil, **Khautoum** is a sticky rice roll, **Khau mouning** is a steamed rice cookie, **Paa-Ping** fish roasted using bamboo skewer, **Paa-Laam** a fish cooked in bamboo with traditional spices, **Paa-Chaw** fermented fish freid in mustard oil, **Paa-Saa** fish soup traditonally served cold, **Paa-Pho** fish blended with traditional spices wrapped in a leaf known locally as tong and roasted, Thonenboiled lentils (mug dal), **Munkala Sen** dry fried baby potatoes, **Munkala Phun** mashed potato, **Muokhuo Phun** mashed eggplants (brinjal) **Muokhuo Toum** boiled eggplant soup, **Phak Kho** mixed green leafy vegetable.

The Tai Khampti most popular fish soup, **Paa-Saa** is of a fresh green colour and in taste the soup in a masterpiece of subtle flavours and elegant seasoning. This soup is laboriously prepared using all parts of the fish and seasoning the stock with a variety of special herbs. It is also interesting in that it is generally prepared by men and involves all hands a bustle of activity that highlights the tribal's inclination for community activity.

The fish is raw, so it is imperative that the freshest river fish is used. Sometimes dried fish is used following the same laborious method. A key ingredient of the fish soup is the **uriam** leaf (khum-phat). **Uiriam** leaves are pounded and steeped in water to produce an extract that cancels out the raw taste of the fish. Salt added to the fish is also steeped in water first and carefully added to the soup is required. The cooking time for paa Saa is approximately one hour. It is served with rice and Paa-Saa chutney.

The **Khau-Laam** or **bamboo rice** steamed in bamboo tubes is another popular mouth watering delight of the Tai Khampti people. Ingredients required for the preparation of bamboo rice and water. It is difficult to give absolute measures for the preparation of bamboo rice. The rice used is of the sitcky, local variety and the amount of rice depends on the size and quantity of bamboo tubes in which the rice is cooked. The variety of bamboo used is known locally as **khaulam-ba**. It is soft bamboo with a thin membrane that coats the rice during cooking allowing the cooked rice to be removed easily in one cylindrical piece. The rice is soaked overnight and filled into bamboo tubes allowing enough space for expansion. A little water is poured in and the bamboo is sealed withotko-pat leaf. The rice filled tubes is then placed on an open fire. Great care and good deal of attention are required to ensure that the rice is thoroughly cooked and not burnt. Bamboo rice can be eaten by simply pulling back the soft bamboo or sliced by cutting the bamboo into pieces. It has unique flavor and offers a clean, convenient, hygienic way of packaging cooked rice that can be carried easily.

In Namphake village the villgers live in traditional **Chang-Ghars** (houses made of bamboo and dried took leaves) lining both sides of the village's narrow roads. Built on piles of wood

above the ground locally known as "haun hang" these Chang-Ghars are specially designed to resist the flood waters from the Buridihing river during the rainy season.

In Durkheim's language this village is still in the state of Mechanical Solidarity. It is rooted in the similarity of the individual members of the society. They are the members of the same collectivity and resemble one another because "they feel the same emotions, cherish the same values and hold the same things sacred". Same is the case with the Phakial's. The Phakial society is coherent because the individuals are not yet differentiated.

Starting from the beautiful Buddhist monastery, the unique architectural structure of the bamboo made stilt houses accompanied by the living cultural practices, colourful festivals, beliefs, traditions and customs to the never ending flow of the majestic Burhidihing river amidst the serene landscape of the village, an integral part of their socio-economic life, make a centre point of attraction to locals as well as international tourists.

Though this village has great scope of tourism, but still this village has not come to the focus so much. On basis of the respondents view in regarding slack growth of tourist the following barriers can be identified :

- **Insufficient Financial Support** : Proper financial support can enhance the tourism potential of the region, which would help the folks to preserve the local culture, traditions, heritage, art forms etc, because according to mass thinking, maintaining culture is not commercially viable. Tourism can showcase the uniqueness of the place in the proper manner.
- **Lack of Trained Tourist Guide** : The whole tourism concept is very indigenous in the region. Though initiative attempt have been taken by the local youths, yet the professionalism is lacking. They are lacking proper training to project in the manner from tourism perspective.
- **Lack of Business Planning Skill** : The region has great potential as an upcoming tourist spot. But, in order to bring it to a greater platform, sound business planning has to be made. The region needs proper enhancement of its beauty and resources skillfully.
- **Lack of Advertisement** : Advertisement is another essential point. A proper advertisement is necessary and in this matter the Government has a great role to play. Even in the Assam Tourism Development Site now where it is mentioned about the village, even most of people of Assam are unaware of the existence of this tourist site.ss
- **Prospect** : Thus there is an ample scope of Eco-Tourism in the study area. The village if properly organized can contribute in great deal to the tourism sector in Assam. Infact the pristine beauty and the rich cultural fabric of the village can attract a lot of tourist to this region. Like the Mawlyong village of Meghalaya has attained wide acclaim. From food to dress to religion to local artifacts this village has every prospect to grow in the field of tourism. After visiting the village and interacting with the community, understanding their way of life, culture, living tradition, practicing

customs and rituals, the Namphake village can be conceptualized as a living museum where it has the possibility to offer different taste of their culture, both tangible and intangible, to the visitors. The village has diverse products to offer the visitors in the form of its pristine cultural heritage. The village attracts visitors from different parts of the state, from the country as well from other countries; it becomes an ideal place for the tourists who want to know about the ethnic cultural heritage of the Tai Phake community. The different ideas of museums beyond walls which got birth after the New Museology movement in the 1970's are now widely established around the world. Infact the concept of living museum can be applied here for example in China ecomuseums have been constructed in a number of villages of ethnic minorities to help conserve minority culture. Infact not only eco tourism, but this village has a great potentiality for different other growing segments of tourism like Cultural tourism, agrotourism, religious tourism etc.

CONCLUSION:

The village can thus rightly be portrayed as an eco tourist spot. Starting from the beautiful Buddhist monastery, the unique architectural structure of the bamboo made stilt houses accompanied by the living cultural practices, colourful festivals, beliefs, traditions and customs to the never ending flow of the majestic Burhidihing river amidst the serene landscape of the village, an integral part of their socio-economic life, can make it a centre point of attraction to locals as well as international tourist.

REFERENCES:

- Bhattacharya P. (2004), 'Tourism in Assam : trends and potentialities' (book), Bani Mandir.
- Phukan, S. (2005), 'The phakes' (book), students' stores.
- Thakur Sarma G.C, (1982), 'The Tai phakes of Assam' (book), B.R. Pub. Corp.
- The Tai Phake community of Assam | Assam Portal
www.assam.org/node/2354 accessed on 20/02/18
- Namephake Village | The North-East Tourism Portal
Netourism.shillon.com/assam-dibrugarh/namphake-village accessed on 20/02/18

REGIONAL PLANNING AND INDUSTRIAL SECTOR IN NORTH EASTERN REGION OF INDIA

Malabika Kalita
M.Phil Scholar

Department of Economics, Gauhati University
Bhooteachang T.E., Udalguri (BTAD), Assam

ABSTRACT:

The North Eastern Region with a land of 2.6 million sq km located in the eastern part of the country comprises eight states namely Arunachal Pradesh, Assam, Meghalaya, Mizoram, Manipur, Nagaland, Tripura and Sikkim. At independence, the North Eastern Region was among the most prosperous regions of India. Seventy years in the region as a whole, and the States that comprises it are lagging far behind the rest of the country in most important parameters of growth. One such factor is the underdeveloped industrial sector. With considerable abundance of Natural Resources, there is a great potentiality of development of this sector. There are possibilities in developing industries based essentially on local markets. Forest wealth of the region along with abundance of oil, coal and limestone are the most promising resources for the establishment of different medium large scale industries in this Region. This paper mainly highlights the factors behind the poor performance of industrial sector in North Eastern Region and different policies or strategies that has been taken for the development of industrial sector in this region. This paper also gives idea about the ongoing industrial policies in the eight states of this region.

Key Words : Industrial Development, Abundance, Potentiality.

INTRODUCTION:

North-East Region (NER) is known for its peculiar characteristics of physical, economic and socio-cultural characteristics. The region is mainly consisting of eight states viz Arunachal Pradesh, Assam, Meghalaya, Mizoram, Manipur, Nagaland, Tripura and Sikkim. The NER of India covers an area of 2.62 lakhs sq. km. It accounts for 7.9% of total geographical area of the country. With a total population of 45 million (2011), it accounts for 3.8% of total population of India. The states of North Eastern Region are officially recognized under the North-Eastern Council (NEC) constituted as the acting agency for the development of this region in 1971. There are differences among the eight States in the North Eastern region with respect to their resource endowments, level of industrialization as well as infrastructural facilities. The north-

eastern region has a rich natural resources base for agricultural and industrial development. But till now the region is not able to show notable progress in industrial development. But till now the region is not able to show notable progress in industrial sector. The problems of development lie not in the lack of natural resources but in the large investments required for infrastructure and manpower development. Due to the industrial backwardness of North-East Region, the whole region is categorized as industrially backward as per the National Committee's Report on Industrial Dispersal in 1981.

OBJECTIVES:

Main objectives of this study are

- To give an overview of industrial sector and its present status of North-East Region.
- To see the factors behind the lack of industrial sector of this region.
- To see policies that has been taken by the government for this sector and ongoing industrial policies in this region.

METHODOLOGY:

The nature of the study is descriptive. Data collected for the study are mainly secondary data from different issues of Annual survey of Industries, Reserve Bank of India Bulletin, online published journals, etc.

REGIONAL PLANNING AND NORTH-EAST REGION:

After fourth five year plan and three annual plans in India, it was noticed that the considerable portions of the country deprived of the benefits of overall growth attained by the country or had obtained them only marginally. As a result of which regional imbalances took place (Chaube, et. al., 1975). Special emphasis has therefore been made on removing regional imbalances from fifth five year plan and thus leading to the development of the concept of 'Regional Planning' in India.

Three main goals of regional planning are-

- Rational spatial (geographical) Pattern of production-rational in the sense that it fully conforms to the general economic and social goals of a country.
- Development of every region in a country in accordance with its natural, economic and social conditions.
- Securing of a harmonious territorial balance between sectoral activities and the development of every region all within the framework of a unified national economic complex.

As a region North-East came to be known as the passing of North-Eastern (Reorganization) Act, 1971 and establishment of North-Eastern Council (NEC) in 1972.

INDUSTRIAL SECTOR OF NORTH-EAST REGION - AN OVERVIEW:

There are differences among the eight States in the North Eastern region with respect to their resource endowments, level of industrialization as well as infrastructural facilities. The industrial sector has mainly grown around tea, petroleum (crude), natural gas etc. in Assam, and mining, saw mills and steel fabrication units in other parts of the region. The full potential of the

region is yet to be exploited. With considerable abundance of Natural Resources, there is a great potentiality of development of this sector. There are possibilities in developing industries based essentially on local markets. Forest wealth of the region along with abundance of oil, coal and limestone are the most promising resources for the establishment of different medium large scale industries in this Region.

Industrial sector includes Mining and Quarrying, Manufacturing, Electricity, Gas, water Supply and Construction.

The industries of this region can be broadly classified as under:

Agro based industries : It includes tea industry, sugar industry, grain mill products industry (rice, oil and flour mills), food processing industry and the textile industry.

Mineral-based industries : Mineral-based industries of the north eastern region include railway workshops, engineering industry, and re-Rolling Mills, steelworks, motor-vehicle workshops, cycle factories, aluminum utensils industry, cycle spare parts, steel wire net, barbed wire, cement industry etc. Moreover, the non-metal based industries include petroleum oil industry and natural gas-based industry.

Forest-based industries : It includes plywood industry, saw-mill industry, paper and paper pulp industry, match industry, letter industry, hard board industry etc.

Other industries: It includes power generation industry, fertilizer industry, printing press, brick and tiles industry, Ice industry, chemical industry etc. The industries of the north eastern region can also be classified into (a) organized industries and (b) unorganized industries. The organized industries of the north eastern region include tea, petroleum, paper, cement, plywood, coal, jute, sugar, fertilizer etc. According to National Committee on Development of Backward Areas (NCBDA) the types of industries that can be promoted in the north-eastern region fall broadly within the following categories-

- (i) Major raw material based industries, which in the North-East would be mainly paper, cement and petro-chemicals.
- (ii) Industries to supply local demands, where the scale of local requirements is large enough to sustain an economically viable unit.
- (iii) A variety of small industries falling in category (ii) above or based on agro-processing e.g., fruit canning, meat processing, timber processing etc.

Table: 1 reveals state wise Medium and Small scale industries.

Table 1 : State-wise Medium & Small Scale Industries-Total Number of Units (in lakh)

States	First Census (1972-73)	Second Census (1987-88)	Third Census (2001-02)	Fourth Census (2006-07)
Arunachal Pradesh	0.00	0.00	0.01	0.41
Assam	0.02	0.04	1.94	6.62
Manipur	0.00	0.02	0.48	0.91
Mizoram	0.00	0.01	0.11	0.29
Meghalaya	0.00	0.01	0.23	0.88

Nagaland	0.00	0.00	0.14	0.39
Sikkim	0.00	0.00	0.00	0.17
Tripura	0.00	0.01	0.24	0.98

Source : Office of the Deelopment Commissioner, Ministry of Micro, Small and Medium Enterprises (MSME), Government of India, New Delhi.

In Table 1, it is seen that during first census except Assam rest of the states have zero units of medium and small sector industries. During the second census five states have shown a slight increase in the number of units. Presently there are three non-operational Special Economic Zones (SEZ) in NE region of which one is situated in Manipur and the other two are situated in Nagaland. There are 420 operational and non operational SEZ in the country as a whole. Table 2 shows state wise number of factories registered under Factories Act., 1948

Table 2 : State wise number of factories registered under Factories Act., 1948

States	No of Registered Factories
Arunachal Pradesh	NA
Assam	4877
Manipur	205
Meghalaya	42
Mizoram	247
Nagaland	NA
Sikkim	NA
Tripura	1001

Source: India Stat

Note : NA indicates Not Available

At the time of independence, there was a small but significant modern industrial sector in Assam developed and dominated almost entirely by clonial capitalists. This sector consisted of plantation and manufacturing of tea, mining of coal and oil, refining of oil manufacturing of plywood and other forest resources based products and railways developed to facilitate the transportation of output of these industries (Sarma 1993). The share of industries taken together is lower in each state of the region than the all India share, in case of manufacturing the share is even less than half of the all India share. Even for Assam, which has a long history of modern manufacturing, the share was below 10% in 2010-11.

REASON BEHIND THE LACK OF INDUSTRIAL GROWTH IN NORTH-EAST REGION:

- **Poor infrastructure:** Lack of proper Rail, Road infrastructure is not well developed which is preventing the entire region to connect with the rest of the world and other parts of the country itself. Moreover despite having potential for power generation

through the use of its vast water resources, the region is still suffering from power shortages.

- **Violence and extortion:** North-East India noticed different secessionist movement during different time period which also cause great loss in its potentiality to become a developed region. The region is still experiencing different ethnic conflict between different tribes.
- **Lack of entrepreneurial motivation on the part of the local people:** Local people are not business oriented. Deficiency of local entrepreneurship is also not contributing to growth of industrial sector.
- **Marketing and transport bottlenecks:** Lack of large local Market and poor connectivity with that of the world and lack of access to boarder countries are standing as barrier to the industrial growth of this region.
- **The unfortunate event of India's separation:** India during its independence, the region was turned into a landlocked territory with just 22 km connecting link through Siliguri with the rest of India thereby negatively impacting the connectivity of the region to mainland India.

GOVERNMENT'S INITIATIVES AND POLICIES REGARDING INDUSTRIAL SECTOR OF NORTH-EAST REGION:

The industrial backwardness of the northeast has been recognised in the Report on Industrial Deipersal of the National Committee on Development of Backward Areas (NCDBA), where the entire area has been made eligible for subsidy. The Government has taken several initiatives for development of industries in the North Eastern Region. Policies and programmes are directed towards development of infrastructure, entrepreneurship skills, markets and providing flow of credits to the entrepreneurs. The orientations of the programmes are focussed to a large extent on (i) Cluster-based approach to industry, (ii) Industries based on local resources within the Region, and (iii) encouraging the industries in the medium and small-scale sectors.

In the report of National Committee on Development of backward Areas in 1981 recommended a three tier approach for the development of industrial sector in this region. The first tier being provided by DIG, the second by the State level promotional agencies and the third by a regional centre to be set up by the Industrial Development Board of India (IDBI). The Ministry has through the North-Eastern Development Finance Corporation Ltd. (NEDFi), undertaken techno-economic studies and resources mapping for the development of industries in the North-Eastern Region. It is a public limited company registered under the Companies Act. 1956. It provides financial assistance to micro, small, medium and large enterprise for setting up industrial, infrastructure and agri allied projects in NER of India.

In 1997 Government of India announced a package of incentives in 1997 under the North-East Industrial Policy (NEIP) with the objective of encouraging settings up of industries in North-East Region. The policy was in operation for 10 years from 1997 to 2007, benefitted a large no of industries in this Region.

This policy has recently been replaced by the North-East Industrial and Investment Promotion Policy, 2007 with a view to give further boost to industrialization in the North-East region. The

budget allocation for this policy under twelve five year plan was Rupees 700 cr. As per the information provided by the state governments of NER, the achievements in terms of industrial units set up is 27644 units, investment made is Rupees 11466.22 crores and Employment generated (in no) is 228224.

Government is implementing various schemes/programmes for promotion, upgradation and development of Micro, Small and Medium Enterprises throughout the country including NER region. The major schemes/programmes include Prime Minister's Employment Generation Programme (PMEGP), Credit Guarantee scheme, Credit Linked Capital Subsidy Scheme (CLCSS), National Manufacturing Competitiveness Programme, Cluster Development Programme, International Cooperation Scheme etc.

Table: 1 Shows the ongoing industrial policies and aims in Eight States of North-East Region.

Table: 3 Ongoing industrial policies and aims in Eight States of North-East Region.

States	Industrial Policy
Assam	Industrial policy of Assam (2008) Aim-New capital formation through the creation of ecologically complaint assets in a sustainable manner.
Arunachal Pradesh	Industrial policy of Arunachal Pradesh (2008) Aim - To create an investment-friendly environment in the State for industrial growth in the private/joint venture/cooperative sectors for sustainable economic development of Arunachal Pradesh.
Manipur	Industrial policy of Manipur (1996) Aim- Optimal use of natural resources for the development of small, medium or large scale industries whether public or private or joint.
Meghalaya	Industrial policy of Meghalaya (1997) Aim - Achieve a balanced and growth oriented development covering the entire state through promotion of village and small scale industries.
Mizoram	Industrial policy of Mizoram (2002) Aim - To engineer rapid growth by industrialization to a sustainable extent.
Nagaland	Industrial policy of Nagaland (2000) Aim - To facilitate rapid and sustained industrialization through optimum utilization of resources.
Sikkim	Industrial policy of Sikkim (2003) Aim - Rapid industrial development and generation of adequate employment opportunities in this sector.

Tripura

Industrial policy of Tripura (2012)

Aim - Speedy industrial development and provided employment opportunities to local people.

Source: Respective Industries department of the NE Region

Recently after the suspension of NEIIP in 2017 the Department of Industrial Policy and Promotion (DIPP) along with NITI Ayog is redrafting the policy— new North-East Industrial and investment Promotion Policy (NEIIP). Industries which are environmentally sustainable are likely to figure in the list of special sectors which will be the focus of the new policy. Moreover in recent years the 'Look East Policy' of Government of India has made North-East more important and strategic.

CONCLUSION:

We can thus conclude that the North-East Region with its eight states is fully endowed with vast natural resources which can be used in an optimum way to industrialize this region for the sustainable development. The region has not been lacking in policy attention and programmes. With the help of proper implementation of policy the industrial sector of this region have a great potentiality to grow. It is essential that industrial development in this region should involve local people, to the maximum possible extent. In the field of small and medium industries, local entrepreneurs should be promoted. This will require an effective programme of entrepreneurial development and a support system for a small industry. Lastly we can say that the North-Eastern Region is exceptionally rich in natural resources. The primary objective of development strategy must be to utilise these optimally and in a manner that maximises the benefits accruing to local people.

REFERENCES:

- Chaube, K.S., Munsu, S., Guha, A. (1975), 'Regional Development and the National Question in North-East India', *Economic & Political Weekly*, vol. 4, No. 1, pp 40-60.
- Singh S.N. (2006), 'Integration and Development in North-East India : An Assessment', *The Indian Journal of Political Science*, vol. 67 No. 2, pp 329-342.
- Handbook of Statistics on Indian States (2015-16). Mumbai: Reserve Bank of India.
- Krishna, K.L., (2004) 'Industrial Growth and Diversification', in Uma Kapila (ed), *Indian Economy since independence*, Academic Foundation, New Delhi
- Planning Commission (1981), *Report on Development of North-East Region*, New Delhi: Government of India.
- Sarma, B.K., (1993), *Industrial Landscape of North-East India*, Mittal publications, New Delhi
- Sarma, A., Bezborooah, M., (2009), 'Industry in the Development Perspective of North-East India', *Dialogue*, vol. 10, No. 3.

REGIONAL PLANNING AND AGRICULTURAL SECTOR IN NORTH-EAST OF INDIA : HILLS VS PLAINS

Krishna Saikia
Research Scholar

Department of Economics, Gauhati University

INTRODUCTION:

North-East of India is the area of full of lush green valleys, mountains, springs and green vegetation. North-East region is a land of magnificent beauty, possessing undulating hills, rolling grasslands, cascading waterfalls, snaking rivers, terraced slopes and thrilling flora and fauna. North-East region of India comprising of eight Aruanachal Pradesh, Assam, Nagaland, Meghalaya, Mizoram, Manipur, Tripura, Sikkim. The region covers a total geographical area of 262180 lakh sq. km. having a population of 47.9 million (According to 2011 census). The region has several unique features; such as fertile land, abundant water, resources, evergreen dense forest, high and dependable rainfall, mega diversity and agriculture-friendly climate with more than 96 percent international border sharing with Bhutan, China, Myanmar in the east and Bangladesh in the South West.

The Agricultural sector occupies the most prominent place in the economy of More than 76 percent population of this region lives in rural areas and majority of them are dependent on agriculture for their livelihood, with its share in domestic product (SDP) ranging from 19 percent to 37 percent in different states. This is though considered a sign of development, declined during the past three decades. This is high. As a result, agriculture in the region has not been able to generate surpluses for investment and augment purchasing power, not to speak of employment generation. Moreover, factors like natural calamities, large number of smallholders, low intensity agri-inputs and negligible seed/variety replacement are also threatening the livelihood-sustainability in the region.

Characteristics of Agriculture in the NER is given by -

- The NER is extremely diverse: uneven land, high and variable rainfall pattern and ethnicity. Inter-state disparity in most economic indicators is highly conspicuous. Although the growth of output in the major states is at a snail pace, others perform better.
- Rice dominates agriculture, but the productivity is low and production risky.

- Further expansion of cultivable land is constrained by geo-physical limitation. The percentage of cultivated area is around a tenth of total geographical area in 5 out of 7 states.
- Various combinations of crop-livestock-fish-silk are followed in the region, but such diversification contributed negligibly.
- Preponderance of small and marginal (S&M) farmers is an important feature of the region. As against the proportion of S&M farmers of 59 percent at All India, the same varies from 65 percent in Arunachal Pradesh to 84 percent in Manipur and Nagaland.
- On account of complete dependence of agriculture, its vulnerability to natural calamities such as floods, submergence as well as droughts has deteriorated the rural life and rural poverty has become rampant...

OBJECTIVES OF THE STUDY:

1. To study the various problems suffered by hilly and plain area with respect of agricultural activities in North-East India.
2. To analyse future prospect and suggest innovative people-centric policy interventions for agricultural development.

METHODOLOGY:

The study is an exploratory research to discover insights on the process of regional planning and agricultural sector in North-East India : Hills vs. plain. It is a vast field to explore and we had to be flexible to grasp the necessary information. So far methodology is concerned this paper is based on secondary source of data. The secondary information has been obtained from the magazines, journals, newspaper books and various reports.

1. To study the various problems suffered by hilly and plain area with respect to agricultural activities in North-East India :

In spite of high priority given to agricultural production in successive plans of various states in North-east India, the progress in this sector has been inadequate. Except for Assam which has a large plain area, most of other states are hilly. In the states of Arunachal Pradesh, Manipur, Mizoram, Meghalaya, Nagaland, Sikkim, Tripura most of the areas are hilly and alpine or tropical. Even in Assam there is a distinct hill zone comprising of two hill districts of Karbi Anglong and North Cachar. The plain areas of Assam consist of north bank plains, Brahmaputra Valley and Barak Valley.

AGRICULTURAL SCENARIO IN THE HILLS AREA:

There are six agro-climatic zones in the North-Eastern hill region consisting of the Arunachal Pradesh, Manipur, Mizoram, Meghalaya, Nagaland, Sikkim and Tripura besides Darjeeling district of West Bengal. The alpine zone consists of the states of Sikkim, Arunachal Pradesh and Darjeeling district of West Bengal. It has mostly Himalayan rocks which are mostly acidic.

The situation in the hilly areas of the region is worse than that in the plain areas. More than 70 percent of total geographical area of this region is covered by hills. Except the tiny river valleys between the ridges, shifting cultivation is the common practice of agricultural production in these hills.

Problem of Shifting Cultivation is an age-old crude method of crop production in the hilly areas throughout the globe to which northeast India is not an exception. Majority of the hill tribes of the region are even now shifting cultivator, they agree that shifting cultivation is not only unprofitable for practicing family but also it leads to the ecological imbalance, soil erosion, soil degradation, loss of valuable forest product. It is desirable that 60 percent of land surface in the hills be covered with forest and vegetation. But the continued deforestation for shifting cultivation and feeling of trees for fuel and timbers has caused heavy erosion of the top soils of the hilly areas.

Again, ever increasing population pressure even in the hilly areas of North-East India leads to shortening of Jhum cycle to even 2-3 years in some hills. As a result, the soils fail to recuperate fertility thereby lowering the yield rate of crops under shifting cultivation. Because of these, agricultural production in the hilly regions suffers casing adverse effect on the economic life of the people concerned.

The other parts of the region especially Manipur and Arunachal Pradesh are not free from the havoc of flood. Thus flood or drought may occur owing to uneven distribution of rain overcast sky during the period of monsoon and low temperature during winter limits productivity through reduced photosynthesis. Due to heavy rain in the month of May to August there is going to road block in the hilly areas. Such types of problems mis communicate with the people of plain and hills area. Government should take appropriate steps for overcome such types of problem.

AGRICULTURE SCENARIO IN THE PLAIN AREA:

In the North-East of India, 70 percent of the land area is hilly and the rest 30 percent comprising all districts of Assam except Karbi-Anglong and N.C. hills and a part of Tripura and Manipur is in the plains. The cultivators of Assam are heavily depending upon the Monsoon rain. They are facing drought problem that affected the production system drastically. One of the major constraints is the low level of irrigation facility. Only 25 percent of the total areas are irrigated in 2009. But the irrigation facilities utilized in the region is less than irrigation potential created because of defective irrigation management. Provision of adequate irrigation facilities through tanks, water harvesting and recycling is the most urgent need in North Bank plains and upper Brahmaputra valley. Irrigation potential already created has not been utilized to the optimal capacity either due to sociological problems or due to the technical defects.

Rice is a major staple crop in the region, its vulnerability to natural disasters like floods, submergence and even. The plain areas of Assam, Brahmaputra Valley and Barak Valley heavily depend on rice. In Assam, rice is grown in all the three seasons, viz., autumn (Ahu), winter (Kharif) and summer (Boro) rice. In each and every year the cultivation is prone to flood. Flood

and drainage systems are quite serious in the region. During the four monsoon months a vast portion of the Brahmaputra and Barak Valley are subjected to the fury of floods which take a heavy toll in life and property besides causing expensive damages to standing crops. For e.g. in Assam flood which used to affect about 4 lakh hectares in the yester-year has increased its devastations to around 9 lakhs hectares in recent times. The main flood affected area of Assam is Lakhimpur and Dhemaji district; the agricultural sectors are heavily damaged by flood. The flood left behind more sand than silt and taken away lands fertility. Due to this problem a huge amount of rural land less labor and unemployment is arisen in the agricultural sector.

This region are still deprived of using modern technology such like tractor, irrigation machine, harvesting machine etc., H.Y.V. seeds and use of fertilizer. In the plain area, most of the agricultural operations in larger parts are carried on by traditional human hand using simple and conventional tools and implements like wooden plough, sickle, etc. One of the reasons of this low rate of fertilizer consumption is that use of fertilizer under flood prone or drought prone conditions is found to be unprofitable. The use of H.Y.V seeds is also limited.

If we compare both the region, then we can see that both regions suffer from weaknesses such as subsistence agriculture with poor infrastructure like roads and markets. The high vulnerability to natural calamities like floods submergence, landslides, soil erosion, etc. has resulted in low and uncertain agricultural productivity. The low utilization of modern inputs in agriculture has further reduced the ability of the farm households to cope with high risks in production and income.

Land the basic agricultural resource, is of great importance to scheduled tribes in view of the importance of agriculture to the scheduled tribes' economy. In the plains areas particularly those of Assam, Manipur and Tripura the process of alienation of lands of scheduled tribes to non-scheduled tribes has been going on for decades, but has accelerated after independence. The main reason for alienation of land are -

1. Lack of transportation facility
2. Lack of marketing facilities and consequent indebtedness
3. Absence of institutional credit facilities
4. Lacunae in laws and faulty implementation
5. Pressure on land from non-scheduled tribes immigrants
6. Lack of comprehensive and up-to-date land records

2. **To analyse future prospect and suggest innovative people centric policy intervention for the agricultural development :**

The governments of the various states of North-East India are very much aware of the menace of shifting cultivation and they have taken various schemes for the control of shifting cultivation. Some of such schemes are implemented by the State Government while some others are executed under guidance of the central government. The primary aim of these jhum control schemes was to reclaim land, reduce soil erosion and reforest the demanded areas. In addition to soil conservation measures some state are attempting alternative programs for controlling the practice of shifting cultivation.

The Government of Assam proposed to resettle about 20,660 cultivator families in Karbi-Anglong and North Cachar Hills district and employ them on wages in rubber and coffee plantations under the schemes "The permanent settlement of jhumia cultivators through development of plantation crops."

The Mizoram Government proposes to launch two schemes under jhum control measure - (1) Pilot project in four selected villages and (2) Eight grouping centers. Both the schemes include land reclamation, minor irrigation, post-reclamation, land improvement, provision of machinery seeds, etc. and development of horticulture and cash crops.

The task of implementing the jhum control schemes have been entrusted to the concerned department by the states.

Now the question arises that is this enough for the development of the agriculture in the North-East. The NER needs development compatible with the comparable regions in the country and multidimensional problems are raised. Hence, there is an urgent need for appropriate policy interventions to break the vicious cycle of underdevelopment, food deficit, poverty and regional imbalance. In a situation of extreme diversities and geographically limited cultivable area in many parts of NER, vertical intensification rather than horizontal expansion is more relevant. To reap the benefits of the huge opportunities for societal welfare, the following strategies are suggested :

Improve Rice Productivity : To augment farm income and improve food security, the productivity of rice must be increased. Following strategies are suggested :
 (a) increase adoption of HYVs of rice specifically in Arunachal Pradesh, Nagaland and Mizoram; (b) increase agri-inputs in all the NER states ; (c) develop small farmers-oriented technologies; (d) expand area under boro rice in Assam, Manipur and other states as far as possible; (e) promote aromatic rice like kala joha or such varieties particularly in Assam, Manipur and Tripura; and (f) develop market incentives in the region.

Rain-Water Harvesting : The NER is endowed with high rainfall, but rain-water is neither conserved nor harvested to increase crop yields and intensify agriculture. Appropriate watershed programs with people's participation need to be encouraged to harness the untapped benefits.

Promote Agricultural Diversification : The NER has high potential for agricultural diversification and land type, following strategies are suggested for promoting agricultural diversification.

1. Rice-dominated states like Assam and Tripura should practice a synergized-mix of rice, pulses, oilseeds, horticulture, livestock and fishery. Boro rice grown in floodfree season is promising and should be accompanied by agricultural diversification. High-Value Crops such as patchouli, passion fruit, aromatic and medicinal plants have good potential in both domestic and international markets. These should be widely practiced.
2. Combination of food crops with livestock, fishery, piggery, forestry and horticulture are suggested for the states of Arunachal Pradesh and Mizoram, where the cultivable land is less than 10 percent of the total geographical area. The hilly terrains and slopes of these states may be used for plantation crops (such as fruits, rubber and forestry, flower and livestock to supplement food production and income generation.

Strengthen Public-Private Partnership Approach : Appropriate strategy required to be formulated for promoting public-private partnership both for market and infrastructure development and to attract private investment, including Foreign Direct Investment. Special Economic Zones (SEZs) may be established within the region to capture the economic advantage, especially for tea, coffee, aromatic and medicinal plants and horticulture products.

Streamline Credit Delivery System : The existing institutional credit system is severely hampered due to certain institutional problems in the region. Therefore, strategy should be evolved to promote community-based collaterals for the effective credit delivery. Revitalize rural institutions : Strengthening the rural institutions is yet another innovation suggested. Promoting high-value.

Appropriate Entrepreneurship Development : For efficient market system, entrepreneurship development is indispensable. Institutions like Krishi Vigyan Kendras, entrepreneurship development institutes such as Indian Institute of Entrepreneurship, Panchayati Raj Institution and other regional organizations can play a significant role in this venture.

Increase Investment in Agriculture R & D : A strong R & D support system is a sine qua non for generating demand-driven technologies, which are friendly to smallholders. Further, enhancing productivity of traditional jhum cultivation practiced in the states of Arunachal Pradesh, Manipur, Mizoram, Nagaland and Meghalaya needs location-specific R&D.

Strengthen Regional Database : Inadequate database is a serious constraint in the NER; it needs to be streamlined for an effective analysis of the agricultural economy.

CONCLUSION:

NER is multidimensional region along with the multidimensional problem. Therefore revitalizing economics by promoting growth and rebuilding the models for agricultural development is a great challenge. In view of the coexistence of diverse ethnicity, geo-physical, socio-economic and cultural factors, the issues of developmental deficiencies are more complicated and thus require more in-depth understanding and strategies for long term economic solution.

Finally, there is enough evidence indicating that several policy deficiencies have retarded the process of economic development in the NER. One Such prominent deficiency is the application of standard All India norm for gauging the resource requirements in many developmental schemes, by equating and extending the all India norms and patterns of administration and planning (say the common norm or per capita plan outlay and subventions as the basis of development plans have misled the planning process in the NER) into instead of helping development has proved futile. It is also generally felt that the mismatch of the problems and the solutions also further deprive the common people. Therefore, more emphasis is needed on regional friendly strategies to reach out to the common people recognize the potential and revitalize the development of the NER.

REFERENCES:

- Banerjee, A., (2004), 'Food Security and Public Distribution System Today : Failures and Successes', Kanisha Publishers, New Delhi
- Banerjee, A., (2006), "Economic Growth and Sustainability of North Eastern States", in P.M.

Passah (Ed.) (2006). In Defense of Regional Economic Development in India: A Case for the North-East. Akansha Publishing House, New Delhi.

Baishya, P., et al. (1997), 'Developmental Issues of North-East India', Prof. P.C Goswami Memorial Volume, Lawyers Book, Guwahati.

Barah, B.C. and H.P. Binswanger, (1980), 'Regional Effects of National Stabilization Policies : The Case Study of India', ICRISAT Economics Program Progress Report-37, Patancheru, A.P., India and reproduced in Millenium Volume No. 22, on State of India Farmer, Risk Management (Ed) (2004), Ramaswami etc. 2004, Academic Foundation, New Delhi.

Barah, B.C. and H.P. Binswanger (1982), "Decomposition of Components of Fluctuations in Indian Agriculture and Impact of Infrastructure on Risk Reduction", in R.E. Kalmon and J.Martinez Co., the Netherlands.

Barah. B.C. (1993), 'Constraints to Agricultural Development in Assam', Journal NEICCSR, Shillong.

Barah. B.C. (1996a), 'Traditional Water Harvesting Systems in India', New Age Publishers, New Delhi.

Barah. B.C. (1996b), 'Irrigation Development and Ecological Implication', Delta Publishers, Hyderabad.

Barah. B.C. (2005), 'Prioritization of Strategies for Agricultural Development in the North-Eastern India', Proceeding Series, No. NCAP, New Delhi.

Barha. B.C. (2005), 'Dynamics of Rice Economy in India', Occasional Paper Series No. 42, National Bank for Agriculture and Rural Development Mumbai.

LOOK/ACT EAST POLICY THE TAKE FOR NORTH-EAST INDIA

Neha Kar
M.phil, Gauhati University

ABSTRACT:

Look East Policy is one of the important strategies of India's foreign policy. The policy stressed on looking eastward for fostering newer ties with the immediate neighbours of South East Asia. Due to the NER's geographical proximity to South-East Asia, the region will act as the 'strategic catalyst' or 'game changer' in accomplishing the vision that the policy aspires to embolden. North-east is getting a platform where it can link with ASEAN. There are ample possibilities for North-east India to reap benefits from India's thriving relations with South-east Asia as the process of globalization provides the countries with the opportunities to grapple with cross-market accessibility and enabling them alleviate their poverty and economic backwardness. Given its geographical location, NE India needs to capture a much larger share of the growing trade between India and its eastern neighbours, but its contribution to total trade volume of India is very minimal. The present government has strengthened and enhanced India's foreign policy perspective on multiple fronts. This has lent India's Look East policy even greater momentum, unveiling an upgraded 'Act East Policy' (AEP). India's Look/Act East Policy gives an opportunity to India to improve its North-East region which is up till now somewhat ignored. It should be understandable that without significantly developing all the states in the North-East, realising the vision of the Act East policy from all dimensions remain to be a difficult proposition. It is through concentrated efforts in various thrust areas that North-East India will be able to stand not only the challenges of the Act East policy, but can also reap benefits from India's thriving relations with its eastern neighbours.

Keywords: Look/Act East Policy, Geographical Proximity, Benefits, ASEAN, Trade, Challenges and Concentrated Efforts

INTRODUCTION:

India's engagement with East and South East Asian countries since the 1980s has largely been phrased as "Look/Act East Policy" which subsumes within it India's economic, social and

strategic engagement with ASEAN and far Eastern countries. The "Look East" policy was largely conceptualized at New Delhi in the 1990s, primarily as a response to the vacuum created in Indian Foreign policy with the sudden demise of the Soviet Union. In that light, the policy was originally crafted more as a response by India to the systemic changes in international politics rather than a policy aimed primarily at uplifting its rather backward northeastern region. Programmatically, 'Look/Act East policy' meant looking eastward for fostering newer ties with the immediate neighbors of South East Asia 'What look east really means is that an outward looking India, is gathering all forces of dynamism, domestic and regional and is directly focusing on establishing synergies with a fast consolidating and progressive neighbourhood to its East in Mother Continent of Asia' (I.K. Gujral). The idea that the northeast could be the prop for the Southeast Asian-Indian economic linkage was pushed to the back stage in the early years. The present government has strengthened and enhanced India's foreign policy perspective on multiple fronts. This has lent India's Look East Policy even greater momentum, unveiling an upgraded 'Act East Policy' (AEP) during the India-ASEAN Summit in Myanmar and November 2014. The foundation, objective remains the same but to provide impetus that increase its importance and focus on it, the policy was upgraded. It is understandable that without significantly developing all the states in the North-East, realizing the vision of the Act East policy from all dimensions remain to be a difficult proposition. The link to Southeast Asia starts from North-East India and the following three key reasons (the three "Cs") account for this : culture, commerce and connectivity. The North Eastern region of India bears many similarities with South East Asian countries and that this can go a long way in the realization of opportunities for partnerships (Mr. M.P. Bezbaruah, member of NEC). Although the Government of India has recognized the importance of overland connectivity to South East Asia through North-East India, the region is yet to take center stage in the larger framework of the Policy. So far, it seems to be a dictated policy of the central government.

OBJECTIVES:

- What are the policy measures that have been undertaken under the aegis of the "Look East" or "Act East" policy concerning the northeast?
- Impact of the policy on the Border trade volume of NER.
- What are the challenges facing the Centre and especially the states towards implementing the "Act East" policy?
- What could be the best policy responses to these challenges?

DISCUSSION:

For many years now, since 1992, when it laid its seed and slowly gathered momentum in policy circles, the "Look East" policy visions to open up its economy for investment and trade with Southeast Asia. Increasingly now, the reference has changed from "Looking East" to "Acting East" by which one would expect that the policy is in its implementation phase.

In augmenting the "Act East" policy, the northeast of India emerges, by the criterion of geography, as the region which will act as the 'strategic catalyst' or 'game changer' in accomplishing the vision that the policy aspires to embolden. India's look-east/Act east policy renders ample relevance to the development of its North-Eastern region because, of its geographical proximity to South-East Asia, the region constitutes a unique narrow passageway connecting the Indian sub-continent to East and South-East Asia and acts as a crucial corridor for human migration between these areas. North-East is India to reap benefits from India's thriving relations with South-East Asia as the process of globalization provides the countries with the opportunities to grapple with cross-market accessibility and enabling them alleviate their poverty and economic backwardness. The ecstatic beauty of India's North-East serves as an attractive tourist spot and its infrastructure is a hub of immense business potential. The prospects of North-east of India with the implementation of Look/Act East Policy can be seen as follows. Firstly, there is considerable scope of improving trade in certain local products such as tea, spices, handloom and cane handicrafts. Secondly, Look/Act East Policy will help in legalising informal trade along the border and encourage the trading partners to expand their business. Thirdly, Look/Act East Policy is expected to usher in a new era of development for the North-east through network of pipelines, connectivity, communication and trade. Fourthly, another prospect of Look/Act East Policy is that policy is being embarked upon with the presupposition that the improving trade ties between India and ASEAN will certainly elevate North-east out of the menace of insurgency, poverty and economic backwardness.

India's Look East Policy gives an opportunity to India to improve its North-East region which is up till now somewhat ignored and there has been no solid strategy for inclusive growth and development of the region along with more people to people contact with the rest of India. North-East gets cramped between ASEAN and India in the corridor.

The Look/Act East policies are a double-edged sword, which would presumably generate employment through logistical and infrastructural expansions, while the restricted labour market would facilitate migration which might provoke the fragile peace situation in the northeast region. Migration could also see a rise in trafficking (Child labour, sex, human organs, weaponry), once again suggesting a different kind of connectivity – which runs parallel to the legal transits of capital and resources.

The perception of North-east about look/Act east policy and from look/act east policy side there is convergence because naturally India cannot look at the east without looking at the north-east because there is where both the regions meet. But the perception of North-East from the policy is that it will bring back the positions of economic eminence to the the place, which the place had before the partition when the N.E. states is much above the national average and today we are at the bottom.

LOOK EAST/ACT EAST AND NORTH-EAST : MEASURES UNDERWAY:

North-Eastern Region (NER) has the potential to develop into India's economic powerhouse,

being a vibrant source of energy, oil, natural gas, coal and limestone, besides being endowed with India's largest perennial water system in the river Brahmaputra and its tributaries. These positives can be harnessed by making appropriate policy interventions aimed at addressing the critical constraints that the region faces at the present juncture. Several measures have been undertaken under the aegis of the "Look East/Act East" policy to uplift northeast India.

MEASURES FOR INFRASTRUCTURE:

The potential of N.E. has been linked to ASEAN highway, need of air connectivity. Around 1 million tourist visit to Myanmar every year, that can be captured through air connectivity. First amongst these measures has been a proposal to build the Asian Highway and Asian Railway Link and the natural gas pipeline, as mentioned earlier. The Kaladan Multi-Modal Transit Transport Facility aimed at establishing connectivity between Indian ports on the eastern side and Sittwe port in Myanmar through a riverine transport corridor and road in Mizoram is envisaged as providing an alternate trade route to the northeast.

For purposes of Burmese gas transfer through the northeast, India is investing \$100 million in improving the old colonial Burmese port of Sittwe on the west Burmese coast. It is expected that with deeper ties between these countries, the largely illegal flow of goods through Moreh (Manipur) into other northeastern states from Southeast Asia will become legalised.

The Mekong-Ganga Cooperation and Kunming Initiative have been undertaken by India and China respectively to reach out to ASEAN. The Mekong-Ganga Cooperation was launched by India on November 10, 2000, at Vientiane, Laos, to boost cooperation in tourism, culture and education. The signatories were India, Thailand, Vietnam, Cambodia, Laos and Myanmar. These countries agreed to undertake joint transportation projects, including the northeast highway. The best part about the mekong initiative is that it has the potential of northeast between Guwahati - Ho Chi Minh City-Imphal-Hanoi. Water way development of northeast has not received as much importance under look/act east policy-Brahmaputra-Irrawadi linking to larger part of Mekong river connecting with sea ports can reduce costs flood, boost tourism, that need to be happen under the policy.

IMPACT OF THE POLICY ON THE BORDER TRADE VOLUME OF NER:

Border Trade is an important factor for NE. The region shares international borders with China in the north, Myanmar in the east, Bangladesh in the south west and Bhutan to the north-west. While the inadequate land connectivity with the rest of India has been a hurdle, the region's long international border of more than 4,500 km in length can be a great advantage and has the potential to transform the region. India and the countries that share borders with the North-East constitute a market of about 2.81 billion people which is roughly 40% of the world population. With 90% of north-east India's periphery as international borders, the region has the potential to transform into the Principal gateway to international borders and adjoining countries of Bangladesh, Bhutan and Nepal. Tripura, Meghalaya, Mizoram and Assam share an 1880-km long border with Bangladesh and a large number of people reside right beside the border. Bangladesh needs the North-East market to sell its products. Importing goods from Bangladesh will also be cheaper than products brought in to the region from other parts of the country. This will implicitly

impact the lives of the people of the region as the cost of living will come down substantially. NER's has the potential to utilise the substantial refining capacity in the north-east by importing crude from neighbouring countries such as Myanmar which have rich petroleum and gas reserves. There are four refineries in the state of Assam with a total refining capacity of 7 million tonnes of crude annually. The refined petroleum products could then be exported back to Myanmar, where energy needs are growing rapidly.

Table : 1 NER trade with its eastern neighbours (in crore INR)

Countries	2010	2011	2012	2013	2014	CAGR
Nepal	11,916	16,089	19,629	21,792	24,696	20%
Bhutan	1,632	2,266	2,594	2,383	2,927	16%
Bangladesh	16,131	22,138	26,250	34,706	39,599	25%
Cambodia	304	450	640	745	924	32%
Lao PDR	222	80	625	1,005	847	40%
Myanmar	8,987	8,030	11,559	11,744	13,082	10%
Thailand	28,030	39,278	49,469	54,515	54,407	18%
Vietnam	14,165	22,298	32,652	37,693	48,207	36%
Total	81,385	110,628	143,419	164,583	184,687	23%
North-east trade	1628	1154	1643	2118	2615	13%
Percentage of NE trade to the total potential	2%	1%	1%	1%	1%	1%

Source : Import-Export Databank, Ministry of Commerce, Government of India

India's trade with Nepal, Bhutan, Bangladesh, Cambodia, Lao PDR, Myanmar, Thailand and Vietnam has grown from ~81,385 crore INR in 2009-10 to ~184,687 crore INR in 2013-14 at a CAGR of 23%. On the contrary, the share of the North-East in this trade has been consistently hovering in the range of 1 to 2%; thereby suggesting the immense potential for augmentation of trade from the NE to these countries.

Given its geographical location, NE India needs to capture a much larger share of the growing trade between India and its eastern neighbours. The region needs to have larger influence in the trade with countries with which it shares its borders such as Bangladesh, Myanmar and Bhutan as these regions present a ready in the Indo-ASEAN trade is low and also going down because, ASEAN demand cannot be matched with what the north-east can supply. Therefore, a need to study the demand pattern of ASEAN region, so that the region can contribute to the demand pattern of ASEAN region.

As per the assessment of RIS, NEC, MoDONER is that trade creation can take place only if measures are taken, in particular to improve the quality of infrastructure at border viz.

integrate IT facilities in promoting infrastructure for trade with ASEAN countries, improvements in the supply capacities from the Indian side. The NER need to identify such products based on supply-demand balances in the region, and appropriate investment are to be made on activities that give rise to trade complementarities.

POLICY CHALLENGES:

Issues of Infrastructure and Lack of Local Support:

The idea that "Look East" policy was a viable way to develop the northeast, has not yet fired the imagination of the local people across the states since they were/are not briefed clearly about the policy by the state actors. Significantly, India's conceptualization of the "Act East" policy has no room for the unique local ways of doing trade. The trade envisioned is of a high order, which ethnic societies are ill equipped to handle. Even with regard to border trade, the Indo-Myanmar trade agreement of 1994 does not provide for trade in agricultural goods and hence it does not account for the needs of the northeast, which is heavily dependent on agriculture. Further, there are far too many administrative restriction on trade, with no motorised vehicles allowed for border trade, which is restricted to barter trade under the Reserve Bank of India barter mechanisms and subjected to strict customary documentation. Hence, trade can only be conducted by the border residents.

The state of roadways all across the northeast are in worse conditions. The road to Moreh and Champai, significant border towns for potentially huge border trade in the future, are in worse conditions. The railways face equally hazardous conditions and it has become a routine affair for railway bridges in the northeast to collapse during the rains (some of these bridges date back to the British colonial period).

The unavailability of skilled labour for infrastructural activities in the region poses a further problem. The inability to participate in 'developmental' activities, not with standing resistance or logic against them, has created groups of young men affiliated with political organizations, student bodies and underground groups, who indulge in active rent collection from different stages of the projects, especially from the tertiary sector.

THE CRISIS OF INSURGENCY:

Almost all the states in this geographical area, barring Sikkim, Mizoram and to a large extent, Meghalaya and Tripura, suffer from militant violence. Meghalaya is, however, infested by militants belonging to the National Socialist Council of Nagalim-Isak-Muivah (NSCN-IM) and United Liberation Front of Asom (ULFA) and Small arms are routed in through the Bangladesh-Meghalaya border into other states of the northeast. Manipur, where the United town of Moreh is situated is affected by nearly 32 insurgent groups, including the United National Liberation Front (UNLFF) of Manipur, the People's Liberation Army of Manipur etc.; these armed groups impose illegal taxes on local businesses and people and collect them by coercive methods. Across the border in Nagaland, the NSCN-IM, NSCN-Khaplang (NSCN-K) and NSCN Khole-Kitovi factions levy enormous taxes on business establishments and extort

money from the common people. There is a conflict along the border area among the states of North-East region. In such a situation, where the state is unable to provide basic security to the people, one should question the logic of the "Act East" policy being implemented based on such weak state foundations.

The States' Incapacities:

At the level of states, institutions like the North-Eastern Council (NEC) and the Ministry of Development of North-Eastern Region (DONER) have been given the responsibility to facilitate the opening of the northeastern states to Southeast Asia. However, the present functioning of both bodies is not optimal. People are forced to settle for sub-optimal results and lack luster development projects. Local industries rarely function in an efficient manner and have failed to empower the locally skilled people. An example is the Fruits Preservation Factory in Haflong, the headquarters of the Dima Hasau district in Assam. For nearly 19 years since 1996, this factory has not been functioning. Earlier, the factory used to make locally produced fruit juices and fruit preserves, providing a constant source of livelihood to the local people. However, neither could the district administration provide it with a stable flow of funds nor did the state government ever send an inspection team to find out why the factory had stopped functioning.

Financially, northeast India is in a dismal condition with regard to locally generated revenues in order to sustain a decent living for the locals. Perhaps the biggest impediment for any policy to bear fruit in the region is the non-reconciliation of issues involving identities and citizenships. Communities like the Bengali Muslims, Hindu Bengali 'Doubtful' voters, Chakmas, Adivasis and Brus have been facing antagonistic reactions from the local hierarchical power systems on the basis of arguments such as 'who came first' and varied notions of indigeneness.

BEST POLICY RESPONSES:

In the current age of economic interdependence and growing global connectivity, it is progressive to envision opening of borders for greater trade and transit facilities. Legalising border trade can bring about a great deal of thaw in neighbourly relations (India and China) as well as create convergence of ideas for common development. There are challenges at present, which are, however, not permanent conditions in the geographic space termed the northeast. It is, therefore, pertinent to start with a smaller set of policy ideas as effective interception points to overcome the challenges.

A few Policy Suggestions are as Follows:

1. The second population base (35-50), which is in their 20s and 30s now, should be inculcated with vocational, entrepreneurial and managerial skills so that the North-East's dependency on skilled population from other parts of India is decreased. The primary school educational system must be improved so that children are imparted the right educational skills in the beginning. The level of English education must be improved.

2. The roadways suffer due to precarious weather conditions. Given the nature of the terrain, the roads need to be maintained on a monthly basis. What could be done is to set up small village level bodies, which utilise local labour to keep the roads functioning.
3. At the rate insurgency is operating in the northeast, with the consequent extortion rackets, it is almost impossible to get local entrepreneurs started without giving insurgent groups a sizeable part of the income to guarantee security. The state authorities need to crack down on the parallel governments run by the insurgent groups by activating state institutions and ensuring basic security.
4. Border areas have to be made safe from violence, extortion, smuggling rackets, drugs and arms transfers. There is an urgent requirement to increase well trained and effective border policing. Moreh serves as a point of cross-border activities for the insurgent groups and drugs flows, unless the border areas are made secure by additional special units and trained drug control bodies, normal trade may remain a distant possibility.
5. The trade between Southeast Asia and the northeast is on the decline. The problem stems from the trading items on the list of goods to be traded. For instance, the Indo-Myanmar Border Traders' Union (IMBTU) had requested the inclusion of more trade items, especially those in demand in Myanmar's market. At present, under the Indo-Myanmar pact of 1994, the 22 items allowed do not enjoy local patronage. The union government needs to do a realistic assessment of the goods to be traded, especially those that are required across the border like locally made textiles and woven tribal items.
6. In order to facilitate easy movement of people and goods, the Inner Line Regulation of 1873 and the restricted Area Permit (RAP) required for foreigners to gain entry to states like Arunachal, Manipur, Nagaland, etc., must be revoked on a permanent basis. Such regulations contradict the grand vision of opening up via the "Act East" policy.

Some specific recommendations for consideration and possible inclusion in the Foreign Trade Policy (FTP) of policy i.e. look/Act east policy are as follows:

- i) As indicated above, NER needs to be developed as an export-hub that can link up with India's neighbourhood in South and South East Asia. Among the specific initiatives that the Central Government should take in this regard is setting up Special Economic Zones (SEZs). Till now, NER has only a nominal presence in the approved list of SEZs. Of the 579 SEZs that have been approved, only one is in NER in Dimapur, Nagaland (Agro-Food Processing SEZ in Dimapur by the Nagaland Industrial Development Corporation Ltd). By end 2009, 101 SEZs were operational, none of which were in the NER. In order to provide a fillip to the process of setting up of SEZs in the NER, the FTP needs to reorient the ASIDE scheme to reflect the specific requirements of the NER. In this regard, efforts should be made to involve every state in the NER.
- ii) NER is a living museum of heritage products, very few of which have been showcased to the rest of the world. A scheme similar to the existing Towns of Export Excellence (TEE) wherein towns having export potential have received support from the central government

needs to be designed for the NER to encourage village communities to produce and market unique products and handicrafts hand-made from locally available materials utilizing local wisdom and skills handed down from generation to generation. Support provided to the local artisans would therefore go a long way in promoting the products from the region that have large export potential.

- iii) Re-visit the contents of current border trade agreement between the two countries, in particular the list of commodities in which barter trade can take place, with a view to contemporize this list. In other words, the FTP should help NER to move from "restricted" trade at border to "MFN" trade at border.
- (iv) The present exchange rate environment for Indo-Myanmar trade is not supportive at all for trade from NER. Exchange rate has to be market determined so that it helps promote the trade at border. Government should explore the feasibility of using the Indian rupee as a currency of trade settlement, through commercial banks being set up at the border the same way the Thai and Chinese currencies are being used in Myanmar's border trade with Thailand and China respectively.
- (v) NER needs capacity building programmes that are needed for promoting trade and investment. To enhance employability of educated unemployed youth of the NER, skill development should be undertaken through reputed institutes in field of trade. NER needs institutions that can hone the skills of the local population, especially the youth. It also needs quality training for development of entrepreneurship. The Indian Institute of entrepreneurship in Guwahati, under the Ministry of MSME should develop itself into a quality center entrepreneurship development. North-East Development Finance Corporation (NEDFi)'s lending is still around Rs. 215 crore. It should be increased so as to display a real impact.
- (vi) To facilitate trade from NER, it is essential to modernize and optimize existing trade infrastructure land-customs stations (LCS).
- (vii) Connectivity issue e.g. promoting inland waterways, multi-modal transport and investment promotion. The planning for connectivity linkages should be done in a multi-modal manner in view of the terrain of the region.
- (ix) The North-East Industrial and Investment Promotion and Policy (NEIIPP), 2007 may be modified to encourage exports and investment to promote backward linkages. Special Economic Desks in the Indian Missions in South-East Asia and neighbouring countries for NER has been suggested.

CONCLUSION:

In conclusion, it can be argued that larger problem is with the nature of the conceptualisation itself, which sees India's northeast as a "land bridge" to connect the country's mainland with its Southeast Asian neighbours. The North-East has historically been considered a means to an end – the successful implementation of the LEP – and herein lies the problem.

The many problems identified with the North-East in the context of the Look/Act East Policy are symptomatic of the unequal focus on forward as well as backward integration and connectivity, which implies that internal developments must be concomitant to external developments. Towards this end, the resolution of all internal issues has become a prime imperative to prepare then region for its role as India's "Gateway to Asia in the 21st Asian Century." The immediate challenge is to provide a personal leadership to resolve the festering issues that have long plagued the region. What needs to be done now is a follow through, with binding political and administrative decisions to secure the region and ensure harmony amongst its multitude of ethnic groups and communities to truly becoming "India's gateway" to a share of prosperity in this "Asian Century". This would require a different conceptualisation than just state-driven approaches based on a "synthetic" sense of unity. It will require a sense of organic natural unity in diversity, not something forced down from Delhi, but something spontaneous, lively and inspiring. Regional cooperation, with special focus on people-to-people connectivity and inclusive growth, is required for the integration of the North-Eastern region in the country as well as for achieving cordial relations with neighbouring countries (Mr. H. K. Dua, Member of Parliament, President of Editors Guild). Improved bilateral ties and connectivity are definitely the high octaves of melody for the policy practitioners sitting in New Delhi. However, unless the terms of the policies are reconciled by the communities in the North-East, the agendas stare at a cul-de-sac, which has been the exact case with the Look/Act East policy that has till now been tentative rather than rooted in long-term strategy. It is through concentrated efforts in various thrust areas that North-East India will be able to stand not only the challenges of the Act East Policy but also to fully participate in the new milieu. India at first needs a genuine North-east policy, then look/act east policy for connecting with ASEAN. Seamless integration among the North-eastern states is first a necessity, only then, northeast can hope to be a part of the bridge connecting India and Southeast Asia.

REFERENCES:

- Banerjee. C. (2013), "Let's Flow Along with the Mekong", The Hindu business Line, at <http://www.thehindubusinessline.com/opinion/lets-flow-along-with-mekong/article5364665.ece>.
- Choudhury.S., Locating North-East India in the look (Act) East Policy of India [Online] Available: <https://link.springer.com>. Accessed: 23rd December, 2017.
- Dr. Sundaram. A: Look East Policy [Online] Available: <http://www.ijart.in>. Accessed: 20th, December, 2017.
- Dr. Kumar. R., speech on role of North-East India in India's look-east policy—Delhi Dialogue VI-Realizing the ASEAN-India Vision for Partnership and Prosperity.
- Dr. Bezbaruah. M.P., speech on role of north-east India in India's look-east policy – Delhi Dialogue VI-Realizing the ASEAN-India Vision for Partnership and Prosperity.
- Dr. Bhattacharjee. D., (2016): India's Vision on Act East policy [Online] Available at: <http://www.icwa.in> Accessed: 10th December, 2017.

FICCI, North-eastern Advisory Council (2014), Gateway to the ASEAN India's North-East frontier. [Online] Available, <http://www.pwc.in>. [Accessed 10th December, 2017]

Government of India, MODONER (2009), Look East Policy and North-eastern states, F.No.17/8/2009-Doner(LEP)

Goswami. N (2015), Act East Policy : North-East India as a strategic Catalyst [Online] Available: <http://www.idsa.in> [Accessed 10th December, 2017]

Goswami. N (2014), "Where Armed Insurgents Roam About Freely", The Hindu [Online] Accessed : 14th December, 2017

Haokip. T (2015), "India's look east policy : prospects and challenges for North-east India." [Online] Available: <http://www.journals.sagepub.com> [accessed 10th December, 2017]

India's Look East Policy : Prospects and challenges for North-East India [Online] Available at: <http://haokip.bandamp.com/blog/17831.html>. Accessed: 6th December, 2017.

Ministry of Development of the North-Eastern Region and North-Eastern Council : The North-East Vision document 2020.

Neog. R., (2017) India's North-East and the Look east policy : Challenging the Established Nations [Online] Available: http://www.ipcs.org/print_article-details.php. Accessed : 23rd December, 2017.

RIS, North-eastern Council, Ministry of DONER (2011), Expansion of North-East India's Trade and Investment with Bangladesh and Myanmar, An assessment of the opportunities and constraints.

**OTHER PUBLICATIONS FROM
DR. B.K.B. COLLEGE, PURANIGUDAM, NAGAON**

- ❖ Birinci Kumar Barua: Jeevanaru Karma – Edited by Somnath Bora
- ❖ Prabandha Kosh – Edited by Somnath Bora
- ❖ Bidyotsahi Bidyadhar Khaund – Edited by Phanindra Nath Gayan & Somnath Bora
- ❖ Human Resource Management and Socio-Economic Development in Assam – Edited by Akashee Bhuyan & Kamal Ch. Saikia
- ❖ Birinchikumar Barua : Adhyayan – Edited by Somnath Bora
- ❖ Changing Scenario of Higher Education System in India since 1986 and Its Relevance and Impact in Assam – Edited by Mamoni Saikia
- ❖ Human Rights: New Dimensions and Challenges – Edited by Lakhimee Kakoty
- ❖ Feminism, Poverty, and Globalization in the Context of Assam – Edited by Akashee Bhuyan and Mallika Bora
- ❖ Human Rights and Social Development – Edited by Lakhimee Kakoty and Abinash Bharali
- ❖ Glimpses of Research – Edited by Kamal Ch. Saikia
- ❖ Rural Sociology: Issues & Perspectives – Edited by Bishal Saikia & Kamal Ch. Saikia
- ❖ Journal of Historical Research – Edited by A. Zaman
- ❖ Modern Trends and Services of Libraries in Digital Era – Edited by Juli Thakuria
- ❖ Sonali Sophura, Souvenir of Celebration of Golden Jubilee Year – Edited by Somnath Bora
- ❖ Pradarshanir Abhashmulok Patrika – Edited by Chittaranjan Bora
- ❖ Regional Journal of Economic Issues, Vol I – Edited by Abinash Bharali



978-93-84679-59-0

₹ 500/-