



Understanding

Food Security in Sikkim

A Case Study of Tathanchen Shyari Ward

Bitu Subba



The Author



Bitu Subba has completed M.Phil. and currently undergoing Ph.D. at Sikkim University in the Deptt. of Peace and Conflict Studies and Management. An UGC/NET JRF awardee first male from the State of Sikkim from Sikkim University in International and Area Studies. Also working as an Associate Director in the ICSSR funded project on The Role of Public Distribution System in ensuring food security in Sikkim.

UNDERSTANDING FOOD SECURITY IN SIKKIM

A Case Study of Tathanchen Shyari Ward



-Author-

Bitu Subba

Department of Peace and Conflict Studies and Management

School of Social Sciences

SIKKIM UNIVERSITY

Gangtok 737101

2015

Scholars World

A Division of

Astral International Pvt. Ltd.

New Delhi – 110 002

ACKNOWLEDGEMENTS

I am most grateful to my supervisor Dr. Nawal K. Paswan (Associate Professor) for providing the all necessary help and support which is immeasurable and priceless. Though he arrived late his wealth of knowledge and experiences in this field and in research methodology has provided a boost in the study and blessing in disguise. I would also like to thank Dr. Suman Negi for her valuable support, advice and guidance. I idolized her as my elder sister who guided me throughout my research helped me whenever I was stuck in difficulties. I would thank my supervisor and Suman Mam for introducing me to the "world of excel" which is an important tool for researchers.

I'm thankful to Prof. Mahindra P. Lama (*Founding Vice Chancellor (VC), Sikkim University*) on his valuable comments and suggestions made on 1st open presentation held on library conference hall which has indeed enrich my work. I would also like to thank the present VC Prof. Tanka B. Subba for encouraging to come forward and to express ideas and never to be afraid of failures. I would like to thank my former supervisor and Assistant Professor P.M. Sorel for guiding me in the initial stage of my research, and also to Dr. Satyabrat Sinha who always asked me to finish the work at earliest.

I would like to express my deepest gratitude towards (both former and present) faculty members of Department of Peace and Conflict Studies and Management Dr. Salvin Paul and Dr. Sangamitra Chaudhary, Assistant Professor Rajendra Prasad and Assitant Professor Bidhan Golay. I would like to thank officials of various departments i.e. FCI District Office Gangtok, FCI Rangpo, Food and Civil Supplies and Consumer Affair Department, Gangtok, DESME, Food Security and Agriculture Development Department, Block Administrative Centre, Gangtok for providing the data, reports and information. Similarly I would also like to thank Panchayat Presidents and various wards Panchayat. FPS owner, APL and BPL beneficiaries of Tathanchen Shyari ward for their cooperation and sharing their experiences.

I would like to especially thank individually to *Mrs. M.L. Pulger* (Horticulture and Cash Crops Development Dept.), *Mr. Tara Gurung*, *Mr. D. L. Sharma* (Food Dept.), *Mrs. Kaushi Kapil* (BDO East), *Ms. Geeta Tamang* (FPS owner, Lower Shyari), *Mr. Pema Chewang* (Zilla Panchayat) and *Mr. Pema Wanchuk* (Editor, Sikkim Now!) for their

valuable suggestion. Similarly I would also like to thank my friends *Phurbha Lepcha, Pempa Tshering Lepcha, Passang (Alu) Lepcha, Binay Gurung, Passang Lepcha, Nima Lepcha, and Pintso Doma Sherpa* their concern about the research and without them the field study would not have been completed on time. I would also like to thank my colleague Aswant Katwal, Diki Bhutia, Jayanta M. Tamuly and Sanita Rai whose presence and their individual quality has made environment cordial for study.

I'm grateful to the staffs of Sikkim University Library for keeping the library always open irrespective of holidays, Finance Office for providing UGC-NET/JRF on time which has provided a significant help in my research. Lastly and most important I would to thank Sikkim University, University Grants Commission (UGC), and Indian Council of Social Science Research (ICSSR) for providing the platform of higher studies in the field of research. I wish all of the mentioned name and institution success in their respective fields.

Contents

<i>Acknowledgements</i>	<i>vii</i>
<i>Abbreviations</i>	<i>xi</i>
<i>List of Tables</i>	<i>xiii</i>
<i>List of Figures</i>	<i>xv</i>
Chapter-1 Introduction	1-11
1.1 Review of Literature	
1.2 Rationale and Scope of Study	
1.3 Research Questions	
1.4 Objectives of the Study	
1.5 Hypothesis	
1.6 Methodology	
Chapter-2 Food Matrixes: Production and Consumption in India and Sikkim	12-27
2.1 Overview of Green Revolution in India	
2.1.1 Challenges in sustaining Green Revolution	
2.1.2 India's Agricultural Position in the World	
2.1.3 Food Production in India and Sikkim	
2.2 All India and Sikkim Food Consumption	
2.2.1 Pattern of Consumption on Food and Non-Food items	
Chapter-3 Central and State's Schemes	28-43
3.1 Major Central Schemes for Food Security	
3.2 Implementation of Central and State schemes to ensure Food Security	43
3.2.1 Public Distribution System/ Targeted Public Distribution System	
3.2.2 Mahatma Gandhi National Rural Employment Guarantee Act	

3.2.3	Integrated Rural Development Programme / Swarnjayanti Gram Swarozgar Yojana	
3.2.4	Integrated Child Development Scheme/Anganwadi Centres: Providing Health Care for Women and Children	
3.2.5	Sikkim Organic Mission	
3.3	Poverty in Sikkim	
3.4	Problems and Challenges of State and Central Schemes	
Chapter-4 PDS in Tathanchen Shyari Ward: Central/State Schemes		44-73
4.1	Socio Economic Profile of the Study Area	
4.1.1	Male and Female Population	
4.1.2	Caste Composition	
4.1.3	Employment Status	
4.1.4	Household Structure	
4.2	Area covered under Field Study	
4.2.1	Household Surveyed	
4.2.2	APL and BPL categories: Average Income	
4.2.3	Landholdings	
4.2.4	Lifting details of FPS	
4.2.5	Lifting details of commodities by beneficiaries	
4.2.6	APL and BPL households: Consumption and Expenditure Pattern	
4.2.7	Employment through MGNREGA	
4.2.8	Credit crisis	
4.2.9	Quality and Quantity of PDS rations	
4.3	Some key finding from the field Study	
4.3.1	Problem of Underdevelopment and Poverty	
4.3.2	Food Security at the grass roots level	
Chapter-5 Conclusion		74-80
References		81-84

Abbreviations

AAY	Antodaya Annadan Yojana
APL	Above Poverty Line
AWC	Angan Wadi Centre
BPL	Below Poverty Line
CC	Connectivity path
DESME	Department of Economics, Statistics, Monitoring and Evaluation
DONER	Ministry of Development of North-Eastern Region
DWCRA	Development of Women and Children in Rural Areas
EGS	Employment Guarantee Scheme
FAO	Food and Agricultural Organisation
FCI	Food Corporation of India
FPS	Fair price shop
GDP	Gross Domestic Product
GHI	Global hunger index
GPUs	Gram Panchayat Units
HDI	Human Development Index
HDR	Human development report
HYV	High Yielding Varieties
ICDS	Integrated Child Development Scheme
IFPRI	International Food Policy Research Institute
IRDP	Integrated Rural Development Programme
LPG	Liberalisation, Globalisation and Privatisation
MBC	Most Backward Class

MDM	Mid day Meal
MGNREGA	Mahatma Gandhi National Rural Employment Guarantee Act
MMAAY	Mukhya Mantri Antodaya Anadan Yojana
MMKSA	Mukhya Mantri Khadya Suraksha Abhiyan
MSP	Minimum Support Price
NAM	Non Aligned Movement
NFWP	National Food for Work Programme
NGO	Non Governmental Organisation
NSSO	National Sample Survey Organisation
OBC	Other Backward Class
PDS	Public Distribution System
PRI	Panchayati Raj Institutions
RISAT	All Radar Imaging Satellite
RTI	Right to Information Act
SC	Schedule Caste
SCS	Special Category States
SGRY	Sampoorna Grameen Rozgar Yojana
SGSY	Swarnjayanti Gram Swarozgar Yojana
SHGs	Self Help Groups
SITRA	Supply of Tool Kits in Rural Areas
SNP	Supplementary Nutrition Programme
SOM	Sikkim Organic Mission
SSRY	Swarnajayanti Sahari Rozgar Yojana
ST	Schedule Tribe
TPDS	Targeted Public Distribution System
TRIPS	Trade Related Intellectual Property Rights
TRYSEM	Training of Rural Youth for Self Employment
UNDP	United Nations Development Programme

List of Tables

Tbls	Titles	Page no.
2.1	Increase in Area (Million Ha), Production (Million tons) and Productivity (Kgs Ha) due to Green revolution	14
2.2	India's position in world agriculture during the period of 1997-2011 in the Food and Agricultural Organizations (FAO) Report	16
2.3	Production of Major Crops: 1950-51 to 2010-11	18
2.4	Growth of Population and Food Production in India 1950 – 2011	18
2.5	Showing agricultural production of foodgrains of India from 2000-2012	19
2.6	State wise percentage Share of total production of foodgrains	20
2.7	Agricultural production of foodgrains of Sikkim 2000-2011	21
2.8	District-wise foodgrains production in Sikkim 2000 -2011	21
2.9	State Monthly Allocation and Off-Take of foodgrains	23
2.10	Per capita Income of Sikkim and India 1993-2010	24
2.11	Monthly per capita Consumption Expenditure	25
2.12	Rural and Urban Monthly per capita Consumption Expenditure in Sikkim and All India	25
2.13	The share of Food and Non-Food items in consumption Expenditure in Sikkim and All India	26
3.1	Government of India/Central initiatives to ensure food security	30
3.2	Scheme wise rate and scale of Essential Commodities under PDS/TPDS	34
3.3	Status of MGNREGA in Rural Sikkim	34
3.4	Immunisation Coverage of Sikkim and All India	37
3.5	Malnutrition Rate of Children in Various Age Groups	37
3.6	Total no of subdivisions and villages in Sikkim	38-39
3.7	Percentage of Population living Below Poverty Line	39

3.8	Percentage of People living Below Poverty Line 1999-2000	40
4.1	Gender wise Total Population	45
4.2	Percentage of caste wise distribution of population	46
4.3	Percentage of Employment Status	47
4.4	Percentage of Household Structure	47
4.5	Total Household Surveyed	49
4.6	Area wise distribution of Respondents in Gender	49
4.7	Respondents belonging to APL and BPL categories	50
4.8	Lifting details of Commodities by 12 Fair Price Shop Tathanchen Shyari Ward	52-54
4.9	Lifting details of PDS commodities by the APL, BPL and AAY beneficiaries	56-58
4.10	Lifting details of PDS commodities by the APL and BPL respondents	59

List of Figures

Fig. No.	Title	Page no.
3.1	Major factors of Rural Insecurity Psychosis	28
3.2	District wise distribution of APL and BPL ration card holders	33
3.3	Percentage of Women Participation in Wage Employment Scheme	35
4.1	Proportion of Male and Female	46
4.2	Average Monthly Income of BPL and APL Households	50
4.3	Proportion of Landholdings	51
4.4	Weekly Availability of PDS rations from FPS in percentage	59
4.5	Quantity of Commodities purchased by APL and BPL households	60
4.6	Average monthly Consumption and Expenditure of APL and BPL households	61
4.7	Percentage of People engage in MGNREGA for employment	62
4.8	Regularity of payment done in MGNREGA	63
4.9	Percentage of beneficiaries having money to access rations of PDS	63
4.10	Credit for accessing PDS rations	64
4.11	Authority of Redressal	65
4.12	The seriousness of problem looked by various institutions	66
4.13	The Four elements in ensuring food security	67
4.14	Problem faced by rural population especially by BPL categories	69
4.15	Food Security at Grass root level	72

CHAPTER 1

INTRODUCTION

Some of the major security issues of the 21st century are human security, environmental security, food security, health security and so on which were previously overshadowed by state security. "The concept of human security is anything but neutral from a political or an intellectual point of view, as it implies a renewed look at existing paradigms and responsibilities" (Tadjbaksh and Chenoy, 2007) which is a shift from traditional notion of security that is from military, borders, sovereignty etc. towards more human centric approach for human development (physical and psychological) and progress towards a more suitable living condition (free from violence, hunger, exploitation etc.)

Human Development Report is one of the significant reports which emphasizes on Human Security and how it varies from country to country (UNDP, 1994). For United States human security after 9/11 has focused on terrorism whereas for African and Asian countries. Human security stands for basic needs like adequate amount of food, health and eradication of poverty. However, one common factor that binds these issues is the central focus upon human being. It identifies seven categories for ensuring human security in the form of Economic Security, Environmental Security, Food Security, Political Security, Community Security, Personal Security and Cultural Security.

Food security is considered as an important aspect of human security. The World Food Conference of 1974 emphasized on the "global food security is a responsibility for all nations" and World Food Summit, Rome of 1996 headed by Food and Agricultural Organisation defines food security as "when all people, at all times, have physical and economic access to sufficient, safe and nutritious food that meets their dietary needs and food preferences for an active and healthy life." (FAO, 2008) This also recommended for Economic, Social and Political leadership for providing basic requirements of food to all Individuals.

In order to achieve food security in the new millennium coordination and cooperation among International organizations, countries (develop, developing and underdeveloped), NGO's/Civil Societies (Self Help Groups), Individuals especially focusing on women were found to be inevitable. Thus inclusion of women, traditional agricultural practices at International forum was the major focus "Food security is the people's right to define their own policies and strategies for the sustainable production, distribution and consumption of food that guarantees the right to food for the entire population, on the basis of small and medium-sized production, respecting their own cultures and the diversity of peasant, fishing and indigenous forms of agricultural production, marketing and management of rural areas, in which women play a fundamental role." (Final Declaration of World Forum on Food Sovereignty, 2001)

There requires a strong revival of the next Green Revolution which could sustain the farmers and vulnerable section of society by strengthening it through major policies and strategies by private public partnership and civil societies and which should be implemented in the grass root level. Strong coordination is required from agricultural scientist in the research institute to the farmers at the field accompanied by the women to ensure food security.

In Indian agriculture system and its impact by Green Revolution in past during 1960's had brought tremendous impact it made India form food deficient state to food self-sufficient state i.e. from food importer to food exporter in International level where it exported to countries like West Asia, Africa, South east Asia etc., all such development was a major milestone in technological advancement in the field of agricultural sciences.

Indian state strongly needs once again a next Green Revolution which should be more indigenous in its approach that is having clear picture of the ground realities and the emerging problems especially in agricultural production and productivity to the sustenance of foodgrains for longer duration. Such development is important because the production in past ten years has remained stagnant compared to its production during 70's and 80's adding serious problems to its food insecurity.

Millions of people in India suffer from chronic poverty¹ and inequality leading to deprivation in availing proper nutritious food and moreover an absence in systematic distribution of Central and State schemes worsen the situation. One of the major concerns for this region has been its growing population where issues like food insecurity proving to be one the upcoming challenges. The present functioning of Public Distribution System has left large dents in the form of irregularities, errors of Inclusion and Exclusion, leakages etc. These further affecting the people at the grass root level the most. These loopholes raise strong questions on the policies of the government framed by the Central Government and its execution by the various State Governments.

About 1.75 billion people across 160 countries suffer from deprivation like health, education and average standard of living which are the three dimensions of

¹ In 2011 World Bank Report estimated 40% people of India comprising of Below Poverty Line, World Bank Development report <http://vivekitam.wordpress.com/2011/01/14/a-paperback-analysis-of-nacsfood-security-proposal-part-2/>.

Multidimensional Poverty Index (HDR, 2010) There are 920 million people living under 1.25 dollar per day (World Bank 2008) and estimated 925 million people suffering from chronic hunger (MDR, 2010) Developing countries account for 98 percent of the world's undernourished people. Two-thirds live in just seven countries (Bangladesh, China, the Democratic Republic of the Congo, Ethiopia, India, Indonesia and Pakistan) and over 40 percent live in China and India alone (FAO, 2010)². Nearly half of the world population belonging to undernourished children under age five belongs to South Asia. (MDR, 2010).

According to Prof. Lama "elements like availability, accessibility, affordability and acceptability" in a sustained manner are underlying factors in ensuring food security to the common people in general and poor people in particular which also shows a balancing act between supply and demand sides (Lama, 2010). India ranks 67th among 81 countries in Food Security one of the major challenges for a food self sufficient state (GHI, 2011), ranks 122nd among 138 countries in Gender Inequality Index (HDR, 2010) equality of women plays an important role in minimizing food insecurity, ranks 66th among 88 countries in 'alarming hunger' and it accounts for 40% of total malnourished children in the World (IFPRI, 2008) which shows that serious limitations in balancing act. In India, states like Bihar, Madhya Pradesh, Rajasthan Jharkhand, Orissa, Karnataka, Uttar Pradesh, West Bengal and Chattisgarh are most affected by poverty, hunger, malnutrition and unemployment primarily due to corruption and lack of effective governance.

To ensure Availability, Affordability and Accessibility for food production and consumption, the Government of India initiated Public Distribution System (PDS) in 1939, Green Revolution in 1960's which made India a self sufficient state in food production and distribution making it to "Universalize the PDS"³ to the Indian population. Targeted Public Distribution System (TPDS) in 1997 for food security and Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) in 2005 for providing work in rural with minimum wage, for the poorer sections of rural and urban areas.

Sikkim was the third state in the Indian Union to come up with its own Human Development Report in the year 2001 which centered on peoples' development. The report overall highlighted sustainable development in Sikkim focusing upon issues like improvement in gender equality, women empowerment, organic farming, strengthening of various small scale industries and so on.

It is one of the small state of Indian Union comprising total area of 7096 sq. km, its total population consist of 6,07,688 persons and about 75.03% of the population resides in rural areas⁴ (Census, 2011). Agricultural enterprises constitute 11.6 percent

² www.fao.org/hunger: ESA-Publications@fao.org or write to: Agricultural Development Economics, Food and Agriculture

³ Indian Union after being successful in Green Revolution adopted Universal PDS to cover the entire population to give food grains at subsidized rate. However the state abandoned the policy of universalisation as it was taking a heavy toll on government budgets according to planning commission officials making them to switch to TPDS in 1997 aimed to provide food for the BPL families of the state.

⁴ In 2001 total population of Sikkim stood at 5, 40,851 where 88.93% constituted the rural areas.

and non-agricultural enterprises account for 88.4 percent of total enterprises where 23.2 percent from latter are engaged in public administration and defence (DESME, 2005). It Ranks 4th among 28 states for percentage of people living Below Poverty Line (BPL) and 40.04 % of state population lives in Below Poverty Line (Percentage of People Below Poverty Line: 1999-2000 Planning Commission Government of India), therefore making it the highest ranking state of percentage share of BPL population among North eastern states (Lama, 2001). Therefore the Government in order to alleviate people from poverty has initiated many plans focusing on food security, education, rural development, communications etc.

The History of Sikkim, its geographical location and its settlement (majority rural) makes its population to heavily depend on state government where mass awareness of centre and state initiated schemes and human empowerment are basic requirements which needs to be critically looked into. Sikkim like most of India also has a huge share of educated unemployed young population looking for jobs. Government though has invested huge amounts in education but has failed to create required employment opportunities.

In Agriculture sector the state due to its difficult terrain it practices terrace arming for food security where crops like paddy, maize, wheat, millets etc are cultivated. Rice constitutes the staple of diet for the people living in this region but maize has been state major production. In the past crops were sufficient to use within the state for domestic consumption but due to rise in population⁵, unequal land distribution/ inadequate land reform and low investment in Agriculture sector is being a major obstacles for state in being food sufficient state (Chakrabarti, 2010).

In terms of food security the state is not self-sufficient in food production in two ways first of all due to limited land availability for agricultural practices and secondly due its terrain (inaccessibility, fragility and marginality etc) which makes it to be poor in agricultural sphere (Subba, 2011). Thus all such limitations has made Sikkim to be declared as a 'Food Deficit State' one of the major concern which makes the "state to rely heavily on import of PDS" (Lama, 2001) and at the same time over the years the state government investment on agricultural activities has been low accompanied with low production.

PDS in Sikkim is one of the important schemes for people to get ration at minimum prices at a subsidized rate and to enable food security. TDPS in 1997 was launched by the government of India which was simultaneously also introduced in Sikkim which is meant for BPL families. For the poorest among poor families, there is a scheme called *Antodaya Annadan Yojna* (AAY). Under these schemes people get rice, at subsidized rates.

The government of Sikkim has initiated self sponsored scheme of giving 35kgs of rice at the rate of Rs. 4per kg under *Mukhya Mantri Khadya Suraksha Abhiyan* (MMKSA). Under free of cost rice is distributed to 9,914 families coming under *Mukhya Mantri*

⁵ Distribution of cultivable lands within the family members has also effected the agricultural production as some of the family members are not willing to engage oneself into farming occupation they sell it to access easy money and in some cases the individual gets govt. jobs which makes them to sell their land to build pucca house or move into urban areas.

Antodaya Yojana (MMAAY). The State of Sikkim has issued 430547 'Above Poverty Line' (APL) ration cards and 43428 BPL ration cards. Allotments of these cards have been highest in East Sikkim and lowest in North Sikkim. (Food and Civil Supplies and Consumer Affairs Dept, 2011).

Apart from PDS, the state government has also implemented MGNREGA⁶ (Mahatma Gandhi National Rural Employment Guarantee Act) in rural areas which can support the people to fetch their basic needs. The living conditions of many BPL households are very much unsatisfactory throughout the country. Many initiatives were taken by the Government which is mostly top-bottom approach but there is a serious need for bottom-top approach where one can really try to bring some sort of homogeneity and every poorer section would be accounted and their grievances could be absorbed.

1.1 Review of Literature

The literature on food security covers a wide variety of theories and issues providing a sound background study, this review will focus upon four major themes. These themes are human security, food security, agrarian reforms and government policy implementation in India in general and Sikkim in particular. Although the literature engages these themes in different purposes and contexts, this research will use the theoretical and practical orientations of these themes in the context of food security in Sikkim.

Food security is considered to be an important aspect of human security. The World Food Conference of 1974 emphasized on the "global food security is a responsibility for all nations" and World Food Summit, Rome of 1996 headed by Food and Agricultural Organization defines food security as "when all people, at all times, have physical and economic access to sufficient, safe and nutritious food that meets their dietary needs and food preferences for an active and healthy life." (FAO, 2008) This also recommended for Economic, Social and Political leadership for providing basic requirements of food to all individuals.

In order to achieve food security in the new millennium coordination and cooperation among International organizations, countries (developed, developing and underdeveloped), NGO's/Civil Societies (Self Help Groups), Individuals especially focusing on women were found to be inevitable. Thus inclusion of women, traditional agricultural practices at International forum was the major focus "Food security is the people's right to define their own policies and strategies for the sustainable production, distribution and consumption of food that guarantees the right to food for the entire population, on the basis of small and medium-sized production, respecting their own cultures and the diversity of peasant, fishing and indigenous forms of agricultural production, marketing and management of rural areas, in which women play a fundamental role." (Final Declaration of World Forum on Food Sovereignty, 2001)

⁶ MGNREGA was brought by the coalition government of UPA headed by Congress Party in 2005 which aims to provide 100 days of guaranteed work for the people living in rural areas only in order to provide money and work for the people during off season of agricultural activities.

i. Food Matrixes: Production and Consumption

Social scientist and researches have made significant contributions to examine the food security and its management in India but very little literature is available on food security and management in Sikkim. A thematic review of the available literature covering important books and articles has been made in this following section.

Agriculture is the backbone of Indian economy as it provides formidable share in a country Gross Domestic Product (GDP) and also it provides major support to agricultural based Industries (Paswan, 2003). India as a state has been widely dependent on primary activity in the form of agriculture and allied activities where majority of its population is engaged in such activities. It provides support in the form of employment to 67% of total workforce and provides material to several industries (Planning Commission, Govt. of India; 2002-07).

The major breakthrough in agriculture was provided in the third five year plan (1961-66), although the initial three year plans provided a base for upcoming reforms, where it aimed to increase the agriculture production in order to make a self sufficient state. Land reforms were taking place and more area was being included under agricultural utilization accompanied by High Yielding Varieties (HYV) seeds, fertilizers, pesticides etc, and the traditional method of cultivating crops were replaced by the new methods in order to boost the production which was the major thrust of the Green Revolution (Planning Commission, Govt. of India, 2002-07).

The impact of Green Revolution (1960's) had brought tremendous growth in food production, it made the state from food deficient state to food self-sufficient state i.e. from food importer to food exporter in International level. It exported to countries like West Asia, Africa, South East Asia etc., (Paswan, 2003). All such development was a major milestone in technological advancement in the field of agricultural sciences.

Like India, the state of Sikkim also has an agrarian economy, where a majority of its population (64%) is engaged in agricultural activities. The overall contribution of foodgrain production by Sikkim when compared to other states is negligible (Ministry of Agriculture, 2011). Though in terms of food security Sikkim does not contribute to the national food stockpile, but rather is dependent on the Central Government for a major stock of foodgrain.

Over the years agriculture in Sikkim has remained stagnant especially when it comes to major foodgrain like rice and wheat. Some of the major problems identified for this low production were its steep and slope lands, content of high acidic brown soil, high/heavy rainfall leading to washing of valuable nutrients required by crops, limited irrigation facilities, traditional method of farming, low use of high agricultural inputs, lack of adequate seed storage facilities for entire state, low public investment in agriculture sector, Insufficient post production storage, market and transport for farmers (Sikkim Development Report, 2008).

However in the post reform period (1991) agriculture production has shown deceleration due to factors like low production of foodgrain, diversion of agricultural cultivable lands for non agricultural uses and reduction of public spending in the agriculture sector excessive use of chemicals in form of fertilizers and pesticides

(Shiva, 1991 and Behera, 2012) in comparison to 1970's and 80's. It posed a challenge for the majority of people (over 60%), who were directly dependent on agriculture sector as a producers and consumers (Swaminathan, 2012).

Such developments added pressure to the existing crisis, in which millions of people in India suffered from chronic poverty and inequality leading to deprivation in availing proper nutritious food and moreover an absence in systematic distribution of Central and State schemes worsen the situation.

ii. Implementation of PDS and MGNREGA

In context of India, food intervention programmes have their origin in Bengal Famine of 1943, its rising population (Kumar et al., 2012) and seasonal droughts and floods, which made the state to seriously look at the agriculture system to handle famine in specific and the food insecurity in general. State policies towards strengthening agriculture were done through development of infrastructure like for e.g. establishment of pesticide factories, national extension programme, irrigation projects, agriculture universities etc., at the end of 1940's and Green Revolution in 1960's which was made possible through strong political will, technology and enthusiast Indian farmers (Swaminathan, 2012).

To ensure Availability, Affordability and Accessibility for food production and consumption, the Government of India initiated Universal Public Distribution System (PDS) in 1970's which covered both rural and urban Indian population (as compared to British Raj PDS of 1939 which was mostly centered towards urban areas), it was possible due to Green Revolution in 1960's which made India a self sufficient state in food production and distribution. Targeted Public Distribution System (TPDS) in 1997 for food security and Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) in 2005 for providing work in rural with minimum wage, for the poorer sections of rural and urban areas (Yesudian, 2007 and Right to Food Campaign, 2007).

An exceptional food situation can have a direct effect on political changes and people's mobilization. 'The 1970-3 drought in Maharashtra led to growing social awareness of the right to work, later enshrined in the state's pioneering "employment guarantee scheme". The 1987 drought in Rajasthan gave birth to powerful movement for the "people's right to information" (Dreze, 2001 in Landy, 2009)

Sikkim is one of the small state of Indian Union comprising total area of 7096 sq. km, its total population consist of 6,07,688 persons and about 75.03% of the population resides in rural areas (Census, 2011). Agricultural enterprises constitute 11.6 percent and non-agricultural enterprises account for 88.4 percent of total enterprises where 23.2 percent from latter are engaged in public administration and defense (DESME, 2005).

It is one of the food deficient states of the Indian Republic, it has been declared a "food deficit" state (Subba, 1984; Lama, 2001 and Chakrabarti, 2010). The per capita availability of rice in the state is 158 gms/ day which is far below the National average of 417 gm during 2001-02 (Economic Survey, 2006-07). In order to secure the state from food insecurity, it is heavily dependent in Public Distribution System (PDS)

(Lama; 2010) and private agency / traders for the import of rice, wheat / grinded wheat (Atta), sugar and pulses / dhal.

Thus in terms of food security the state is not self-sufficient in food production in two ways first of all due to limited land availability for agricultural practices and secondly due to its hilly terrain (inaccessibility, fragility and marginality) which makes it to be poor in agricultural sphere (Subba, 2011). Thus all such limitations have made state to be declared as a 'Food Deficit State' one of the major concern which makes the "state to rely heavily on import of PDS" (Lama, 2001).

The present functioning of Public Distribution System has left large dents in the form of irregularities (delay in lift off and distribution), errors of Inclusion and Exclusion, leakages and diversion. At the rural employment level (MGNREGA) where ghost cards are made for the job card holders, in white paper the work has stated to be completed whereas in reality little or no work is done in the ground level, involvement of private contractors, delay in wage, low class materials etc., which seriously raises question against corruption in specific and governance in general (Bhatia and Dreze, 2006). This virtually questions the objectivity of the scheme, which affects the vulnerable people at the grass root level in the urban levels in general and rural areas in specific. These loopholes raise strong questions on the policies of the government framed by the Central Government and its execution by the State Governments and various agencies. One of the major concerns for this region has been its growing population and a rampant corruption in various government sectors. In such circumstances providing food security proved to be one of the major challenges.

In such scenario where there is lapses in system and creating a serious challenge for implementation. Thus the necessity of "public action" becomes more prominent and relevant which is a joint effort of public (common people), state (both opposition and ruling parties), non state actors (civil societies, association etc.) by coming together and solving problem of a society through "collaborative" civic cooperation and by "adversarial" social criticism and political opposition. Thus vigilance and activism are the significant activity of the effective public action (Sen and Dreze, 1999) including awareness. In Indian context Right to Information (RTI) is one of the major tool which would provide adequate government information regarding its policies framing and implementation, serving both "collaborative" and "adversarial" public action.

iii. Effectiveness of PDS and MGNREGA

PDS in Sikkim is one of the important schemes for people to get ration at minimum prices at a subsidized rate and to enable food security. TDPS in 1997 was launched by the government of India which was simultaneously also introduced in Sikkim which is meant for BPL families. The government of Sikkim has initiated self sponsored scheme of giving 35kgs of rice at the rate of Rs. 4per kg under Mukhya Mantri Khadya Suraksha Abhiyan (MMKSA). Under free of cost rice is distributed to 9,914 families coming under Mukhya Mantri Antodaya Yojana (MMAAY).

The State of Sikkim has issued 430547 Above Poverty Line (APL) ration cards and 43428 BPL ration cards. Allotments of these cards have been highest in East Sikkim and lowest in North Sikkim. (Food and Civil Supplies and Consumer Affairs Dept, 2011). Apart from PDS, the state government has also implemented MGNREGA

(Mahatma Gandhi National Rural Employment Guarantee Act of 2005) in rural areas which can support the people to fetch their basic needs.

MGNREGA was first implemented in North Sikkim in 2006 and later implemented in East, South and West districts from 2007-2008 onwards (RMDD, 2010). It is one of the major source of income for the people of rural areas. It provides income security in form of adequate wage, employment in off season, development of village (constructing all weather connectivity path, model houses, spring water preservation, cash crop plantation etc.) and moreover helping rural people to fetch their subsidized PDS rations.

It has made women of majority household to come together and take part in rural development scheme. There have been active women participation stood at 51% in 2009-2010 MGNREGS district wise performance evaluation done by the Dept. of RMDD. This is one of the positive sign of women representation in wage employment scheme. It is one of the major social security measure taken by the Govt. of India towards its Union. Many available reports stress MGNREGA being widely helpful for the financial support in the form of income security.

Panchayati Raj Institution (PRI) gives immense significance to the local leader in the form of Panchayats or village headmen to exercise grassroot democracy (Mathur, 2006 and Siddartha, 2007). In spite of such step towards expanding democracy at the lowest level still majority problem persist in form of corruption and ignorance especially in context of PDMRE. There has been serious challenge in the form of wage delay, unavailability of foodgrain, delay of foodgrain, transaction incurred, irregularities in work, coming of private contractors, low quality material used in construction sites which severely effects the better scheme implementation and the women employed in MGNREGA works are working in the job cards of their husband name.

In such circumstances strong management system is required for better governance and public action in the grassroot level. It would make the person in charge more accountable to the people. Thus written records in the form of reports from each and every Panchayats should be made available for the public scrutiny which would provide "checks and balance". It should be ultimate goal for the grass root development in general and food security in specific.

The literatures available in the field of food security and its management indicate that although a lot is available in print on the subject, but it falls short in highlighting the role and effectiveness of PDS and MGNREGA in providing food security in remote areas of Sikkim. In some of the available literature one or two aspects of the food security are touched upon but all the issues are not studies in depth. The present research work seeks to study the socio economic profile of Sikkim, status of PDS and MGNREGA and role of women in facilitating the food security schemes and programmes of Central and State government. The proposed research work, thus, is an endeavour to fill these gap by studying the impact of food security schemes and programme of the government (Central and State) in Sikkim its management in the larger interest and benefits of people of Sikkim which would facilitate further economic development of the State.

1.2 Rationale and Scope of Study

Sikkim in its agricultural sector over the years has low public investment and reforms in conventional crops like paddy cultivation due to geographical constraints and less expansion of land under cultivation. Due to such constraints it is heavily dependent on the PDS/TPDS and imported rice from the open market and for other essential commodities. The state ranks 4th among 28 states for percentage (40.04 %) of people living Below Poverty Line (Planning Commission, 1999-2000) and most of its population i.e. 4,55,962 resides in rural areas. Thus it is one of the states where Targeted welfare schemes like TPDS and MGNREGA are implemented.

Its indigenous food habits are slowly dying out which may have substantial impact upon food security in the state. East Sikkim has the highest number of BPL households in the entire state and most of them belong to ST category (State Socio Economic Census 2006). In which Tathanchen Shyari Ward in Sikkim has 54.63 per cent of ST population (ibid, Ward Profile 2005-06).

Such research would help in understanding of human security and related issues in the state. It would not only help to analyse the socio economic situation of BPL families. But it would also help to highlight the nature of food security in relation to gender and children in the study area vis a vis learning about the merits of indigenous food habits.

1.3 Research Questions

- ☆ Is there a lack of Government initiative in providing effective food security measures?
- ☆ Does lack of effective PDS policy increase food insecurity in Sikkim?
- ☆ What are the major outcomes of lack of access to food upon livelihood and well-being of people?
- ☆ Would reviving indigenous food habit be a solution for the state in times of food insecurity?

1.4 Objectives of the Study

- ☆ To study the socio-economic profile of BPL families in the Tathanchen Shyari Ward of Sikkim.
- ☆ To analyse major obstacles regarding availability, accessibility and affordability of food amongst the BPL households.
- ☆ To study the socio-economic criteria of the beneficiaries availing PDS/TPDS facilities and find out which section of society is most effected by food insecurity.
- ☆ To analyse the impact of TPDS/MGNREGA schemes on women within BPL households.
- ☆ To analyse the policies of state intervention towards food insecurity issues.

1.5 Hypothesis

- ☆ Overdependence on PDS/TPDS decreases investment on paddy cultivation.
- ☆ Delays in TPDS ration generate credit crisis in BPL families.
- ☆ MGNREGA facilitates purchasing capacity of PDS rations.

1.6 Methodology

- ☆ Both quantitative and qualitative methods will be used for the proposed study.
- ☆ Study would be based on both Primary and Secondary sources.
- ☆ Secondary source will include available literature, publications, documents (Govt. and NGO's) etc. on issues related to food security, poverty and hunger which will help in dealing with the objectives of the study. Relevant information from various sources related with the topic would be extracted.
- ☆ **Primary source:** The area of study selected is *Tathanchen Shyari Administrative Ward of East Sikkim*. Questionnaires (Close Ended and Open Ended) based on the availability, accessibility, affordability and applicability of food will be used to interview BPL households, Panchayat members, Fair Price Shop dealers, and Government officials within the study area.

The purpose of such a study is to identify critical issues relating to food security in Sikkim by conducting a case study of *Shyari Block* in the East District of the state as the research area fulfills most of the criteria for study as the place has a both mixture of urban and rural settlement, due to its sloping hills terrace farming is practiced where maize, ginger, potato are grown with minimum paddy cultivation due to shortage of water, most of the study area is populated by Schedule Tribe (ST) belonging to Bhutia, Lepcha and Tamang community along with few numbers of Chettri, Bahun and Limboo community where most of the people are engaged in dairy farming who supplies their milk and vegetables products in nearby towns and bazaars of Deorali, Tadong and Gangtok.

Most of the people who are settled in these¹ areas have been living on a land which has been leased by the land owners for them to look after the land and if possible cultivate the lands and give 50 percent of whatever the farmer has cultivated from crops to vegetables etc., to the land owner or give minimum annual rent which ranges between Rs. 500 – 1500.