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Food Security in India: Issues, Challenges and Prospects

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Abstract

Discussions about Food security started in mid-1970s, during the deliberations of international food tribulations at the time of global food calamity. The preliminary spotlight of consideration was principally on issues related to food supply. India today has arrived at a juncture where the country is not anymore exposed to real food shortage, despite that even now there still exists certain pockets within India in which people are challenged with critical situations for the want of food. The World Bank says that India has highest number of people living below poverty line. The Asian Development Bank in its Basic Statistics says that the share of population below the National Poverty Line is 21.9% in 2011. Government of India estimates says that poverty declined has from 37.2% in 2004-05 to 29.8% in 2009-10. Issues related to Food Security calls for discussion and continued search for solutions. This paper is focused on the comprehension of concepts, dimensions, measurements related to Food Security; present a historical perspective of Food Security, make an estimation of global Food Security scenario, decipher food security scene in India in consonance with the National Food Security Act 2013, look into issues and challenges in achieving food security in India and conclude by suggesting measures to ensure national food security.

Key Words: Challenges, Food Security, Global, India, Prospects.

Introduction: Food, clothing and shelter are our Primary Needs and food continue to be the focal point of our existence, central to the very survival of living beings ranging from infinitesimal insects and bacteria to the vegetation and animals to human beings on this globe. Devoid of food no human civilization will live to tell the tale. Hunger has been a driving force for human civilizations to develop and relocate and has also sustained the very purpose of creation by God, the creator of all beings. Hence food has always been the central point around which human beings have woven stories of continued existence on the face of this earth. However, food/foodstuff must be sufficient and wholesome for all the people of all age groups. Rapid multiplication of world population, diminishing land for agricultural purposes, the lack of sufficient available fresh water resources to meet water demand, insufficiency of resources and the lack of sufficient food for all the people on an

equitable basis has remained foremost issues in the realm of Food security. The predicament of food crisis has been aggravated by the change in average weather conditions as a result of modification of the environment to fit the needs of society in the name of development and industrialization. The issue of Food security has turned bad to worse over the years because now there is unequal distribution of food intra-country and inter-countries. There are affluent developed countries of the North whose food ingestion and consumption pattern in terms of quantity, quality, nourishment and resilience is a great deal superior to that of the 3rd world underprivileged developing countries. Food security is one of the key factors of social safety net. It guarantees that food is obtainable at all times; that all people have resources for and right to have it; that it is adequately wholesome, in terms of quantity, quality, and variety; and that it is agreeable within the culture in context. There are three elements in this definition: availability, access, and suitability. In 2007, India's National Development Council espoused a resolution to commence a '*Food Security Mission*' to augment the production of rice, wheat, and pulses by the end of the country's Eleventh Five Year Plan (2007-12). Accordingly, a centrally-sponsored scheme - the National Food Security Mission - was initiated to operationalize it.

Evolution of Food Security-A Historical Perspective¹:

A. 1930-1945: Post World War II and League of Nations: During the 1930's, and following World War one, world affairs were being dealt with by the League of Nations. In his "World Food Security", John Shaw reports Sir John Boyd Orr writings regarding what may be considered as the origin of modern food security.² In the early 1930s, Yugoslavia³, as a member of the League of Nations proposed that in view of the importance of food for health, the Health Division of the League of Nations should disseminate information about the food position in representative countries of the world.

A pioneering survey was conducted on "*Nutrition and Public Health*" by the Health Division of the League of Nations, a report to that effect was submitted in 1935, which showed that there was an acute food shortage in the poor countries. Reviewing the report, the Assembly of the League of Nations held discussions on nutrition, nutrition policies and the need for co-ordinated nutrition policies in a number of countries towards increasing food production. Increased food production would meet human needs and bring prosperity to agriculture, which would overflow into industry and bring the needed expansion of the world economy through what was described as the "*marriage of health and agriculture*".⁴ Over and above the origin of modern food security, this first period was conditioned by a number of factual events that happened were all connected to issues manipulating world food security.

¹ Simon, George-André, *Basic readings as an introduction to Food Security*, Rome: University of Roma Tre, 2012

² Shaw, D. John, *World Food Security: A History since 1945*, UK: Palgrave Macmillan, 2007

³ Yugoslavia was a country in Southeastern and Central Europe for most of the 20th century.

⁴ Boyd Orr, John, *As I recall: The 1880s to the 1960s*, London: MacGibbon & Kee, 1966

In the history of the United States these were times during which agricultural commodities were in superfluous. Going back in history, it seems to be in 1896 that the USDA (United States Department of Agriculture) really started to develop and implement policies to influence agricultural production using tools such as price control, credit control, export support, including programs that were familiar to early food aid programs such as with the first big scale food aid operation taking place after World War I in 1918 when the United States shipped more than 6 million tons of food commodities to Europe between 1919 and 1926.⁵

During the World War II, governments' attempts to control farm output were upturned; especially in North-America and every effort were made to increase the food production in order to reduce the dependency towards imports as, due to the war, steady supply of food was not guaranteed. This crash of the supply chain left strong trace in the popular conscience until the end of the century.

B. 1945 – 1970 Post World War II: In 1945, along with the United Nations Organization (UNO) the specialized agency FAO was set up with the objectives to increase agricultural production and improve nutrition. The FAO organized its first World Food Survey in 1946. The objective of the survey was to find out whether there was enough food, and more specifically enough energy or macronutrients (calories) for everybody on earth. The conclusions were that at least one third of the world population (in 1945) would not get sufficient amount of vigor. This data together with the trauma left by the lack of food in many European and North American countries as a postwar effect pushed governments in the world to care about the increase in food production with an aim to ensure that there would eventually be enough food for everybody on earth. Their policies all over Europe and North-America were so successful that quickly the production exceeded the consumption hence creating surpluses, which then had to be managed. In this respect one may recall that between 1948 and 1953 some 3 billion of US dollars worth of food (aid) were transferred from the US to Europe within the framework of the Marshall Plan. In 1949 the United States Government established what is known as “Section 416” an important source of funding to procure surplus commodities to be utilized, as far as food commodities are concerned, as food aid.⁶

In 1952 the FAO established a Committee on Commodity Problems (CCP) as Member Countries had realized that increasing agricultural production would generate surpluses in food commodities. On 27th October 1960, the United Nations General Assembly passed a resolution on “the provision of Food Surpluses to Food-Deficit people through the United Nations Systems” (UN, 1961) basically establishing the World Food Program (WFP). Because it was recognized that the ultimate solution to the problem of hunger laid in the economic development of developing countries it was agreed that large amount of surplus

⁵ Shaw, D. John, *World Food Security: A History since 1945*, UK: Palgrave Macmillan, 2007

⁶ Simon, George-André, *Basic readings as an introduction to Food Security*, Rome: University of Roma Tre, 2012.

food would be utilized for multilateral development purposes. At inception thus, WFP was mainly using surplus food commodities for development programs.⁷

The demand for food commodities, especially in the Indian sub-continent increased however the decrease of the world food stocks in the early 1960's consequenced in the increment of the prices of food supplies and shrunk the accessibility of food surpluses. As a result, the United States and Canada sought to contribute to ease the lumber of providing food aid to poor food-deficit countries along with other major industrialized grain importing and exporting countries, especially in Western Europe and Japan which had, until then, provided little or no food aid. Often, people that have a first serious look at food aid were quite shocked by the fact that food aid transactions, as defined by the Consultative Sub-Committee on Surplus Disposal (CSSD), included a number of operations that look more closely related to trade than to food security.

In 1967 an International Grains Agreement was approved at a conference called by the International Wheat Council and United Nations Conference on Trade and Development (UNCTAD) in Rome. This accord was made of two different Conventions: the International Wheat Agreement and the Food Aid Convention. Several "Food Aid Conventions" were approved since then but it was only the last one, signed in 1999 and still in force that officially acknowledged that the objective of the Convention is to "contribute to World Food Security"

C. 1970 – 1990 International Food Crisis: During the 1950's and the 1960's the world food production increased by more than 50 percent and the production per capita increased by more than 20 percent.⁸ This augment in food production had become an expected feature. By the end of the 1960's world cereal markets perpetually suffered from surpluses. The United States only had a program of concessional sales of more than 12 million tons of food aid. USA and Canada were implementing serious plans of supply management with the aim to reduce their output through a attenuation of the area planted and also a lessening of some of the supports offered to farmers. There was, however, an unexpected variation in 1972 with adverse climatic conditions in a number of regions of the world resulting in a striking drop in cereal production. The reduction in the cereal production was about 3 percent or 30 million tons thus resulting in the fact that the cereals available would represent 55 millions tons less than expected.⁹

Mainly due to climatic conditions, the Union of Soviet Socialist Republics (USSR) and a few other countries became food importers. Cereal exports from the US in 1974 were 66 percent higher than in 1973 which had been already much higher than 1972. To do this, it had been necessary to draw on the existing stocks bringing them at their lowest level since at least 20 years. Worldwide cereal carryover stocks, for example, fell from more than 200

⁷ Ibid

⁸ Ibid

⁹ Ibid

millions tons in 1970 to slightly more than 100 million tons in 1974.¹⁰

At the same time Organization of Petroleum Exporting Countries (OPEC) decided to raise the price of petroleum that influenced both the price of fertilizers and of the transport of the same cereals. Though many developing countries had genuinely improved their outputs, many of them were still reliant on imports which were getting more expensive for developing countries. In fact, food aid dropped from about 17 millions tons of cereals per year in the late 1960's to some 7 millions tons in the early 1970's.¹¹

Considering the international food crisis, numerous countries from both developed and developing world requested the UNO to arrange an international conference to appraise the situation and concur on doable measures. The United Nations World Food Conference took place in November 1974 in Rome with, as one of its objectives, to agree on measures to ensure that: "*within a decade nobody would suffer from food insecurity*". Therefore, the Conference permitted a number of recommendations dealing with what was referred to as "Food Security". The Conference accepted an International Undertaking on World Food Security which accepted that food security was a common concern of all nations. This period was a spectator to the founding of several institutions. International Fund for Agricultural Development (IFAD), World Food Council (WFC), Committee on World Food Security (CFS), Global Information and Early Warning System on Food and Agriculture (GIEWS), UN Comprehensive Framework for Action (CFA), International Emergency Food Reserve (IEFR) were set up during this period. In 1979-81 Amartya Sen came up with the *Theory of Entitlements*. Sen's most important line of reasoning was that during the previous famines the major crisis was not so much the shortage of food but to a certain extent the unfeasibility for poor people to gain access to it. Sen explicated that most cases of starvation and famines in the world effected not from people being destitute of what they were entitled but rather from people not being permitted to ample means of survival in the existing legal and social arrangement they were living in. For the period of famines, thus, poor people were much more affected than others, due to a collapse in their entitlements. This approach led to the dimension of access in the deliberations of food security. In 1986 Food Security was defined foundation of ease of use.

D. 1990 – 2007 Golden years of Food Security: During this period several major decisions to ease the scene of food security was taken. Following the 1980's and the fall of Berlin Wall, the 1990's happened with fifteen international conferences among which the following were noteworthy:

- ❖ 1992 International Conference on Nutrition: The 1992 International Conference on Nutrition, jointly organized by FAO and WHO, met in Rome and was a major milestone in the recent development of food security. The final declaration approved by participants Member States stated their: "*determination to eliminate hunger and to*

¹⁰ Ibid

¹¹ Ibid

reduce all forms of malnutrition. Hunger and malnutrition are unacceptable in a world that has both the knowledge and the resources to end this human catastrophe.” They further recognized that “*access to nutritionally adequate and safe food is a right of each individual*” and also that “*globally there is enough food for all*” and that “*inequitable access is the main problem*”. The declaration took note, with concern, of the “unacceptable fact that about 780 millions people in developing countries did not have access to enough food to meet their basic daily needs...” The Conference approved an ambitious Plan of Action which called, i.a., for inter-sectoral co-operation and co-ordination between all actors concerned.¹²

- ❖ 1994 Marrakech Conference and creation of World Trade Organization (WTO): The Marrakesh Agreement, manifested by the Marrakesh Declaration, was an agreement signed in Marrakesh, Morocco, by 124 nations on 15 April 1994, marking the culmination of the 8-year-long Uruguay Round and establishing the World Trade Organization, which officially came into being on 1 January 1995. The agreement developed out of the General Agreement on Tariffs and Trade (GATT), supplemented by a number of other agreements on issues including trade in services, sanitary and phyto-sanitary¹³ measures to trade.
- ❖ 1996 World Food Summit in Rome: The Summit is and remains a most important landmark in the history of food security. John Shaw reports that the conference was called mainly following the election of the new FAO Director General, Jacques Diouf.¹⁴ The report presented by FAO at its Committee on Food Security in 1994 described that striking progress had been made in aspiring to perk up food security.¹⁵
- ❖ The Plan of Action 1996: The 1992 International Conference on Nutrition conference agreed upon a Plan of Action which suggested to government that “each nation must adopt a strategy consistent with its resources and capacities to achieve its individual goals and, at the same time, cooperate regionally and internationally in order to organize collective solutions to global issues of food security”.¹⁶ This Plan of Action visualized an enduring endeavor to eliminate hunger in all countries, with an instantaneous vision to plummet the number of under-nourished population to half of their present level no later than 2015, and undertake a mid-term assessment to determine whether it is achievable by 2010.
- ❖ Food Security and Food Aid Regulation 1996: In 1996, the approval by the European Commission of a new Food Security and Food Aid Regulation substituting their preceding Food Aid Regulation and allocating, for the first time, financial resources to action particularly related to food security.

¹² FAO/WHO, 1992

¹³ Relates to the health of plants, especially with respect to the requirements of international trade.

¹⁴ Shaw, D. John, *World Food Security: A History since 1945*, UK: Palgrave Macmillan, 2007

¹⁵ FAO, 1994

¹⁶ FAO, 1996

❖ The 2000 Millenium Summit in NewYork: The Millennium Summit was a meeting among many world leaders lasting three days from 6 September to 8 September 2000 at the United Nations headquarters in New York City. Its purpose was to discuss the role of the United Nations at the turn of the 21st century. At this meeting, world leaders ratified the United Nations Millennium Declaration. This meeting was the largest gathering of world leaders in history as of the year 2000. It was followed by the World Summit five years later, which took place from 14 to 16 September 2005. The Summit approved 8 Millennium Development Goals (MDGs), the first of which was:

- Eradicate Hunger and Poverty with targets that were:
- Reduce by half between 1990 and 2015 the proportion of world's population that suffer from hunger;
- Reduce by half between 1990 and 2015 the proportion of the world's population whose income is less than one dollar a day.

❖ World Food Summit: Five Years Later/1996 + 5 Summit in 2002: In June 2002 FAO held a world meeting in order to examine the progress made in eliminating hunger. The purpose of the meeting, which was renamed World Food Summit: five years later, was to track progress made since the summit of 1996 and consider ways to speed up these efforts. This summit approved the creation of the International Alliance Against Hunger (IAAH) which groups many international, non-governmental and civil society organizations and has a mandate to deal with advocacy, accountability, resources mobilization and co-ordination in order to strengthen national and global commitments and actions to end hunger.

The 2005 food crisis in Niger that was principally reported by international media referring to famine and hence signifying number of deaths while many people were “*simply*” “*surviving*” and suffering, highlighted some very specific aspect of the economic access dimension of food security.

E. 2007 – Volatile Food Prices¹⁷ - End of Surpluses: Unanticipated raise in food commodities prices decrease access to food, resultant in an impossible access to food for many population in particular in developing countries. This persuaded many economists, development economists, agro-economists, etc. that they had a vigorous responsibility within a multidisciplinary food security scenario. This commodity prices crisis scenario led to certain landmark decisions to be taken in terms of securing food for the vulnerable.

The notable are the following:

- In 2008 the United Nations (UN) Chief Executives Board in April 2008 established a High-Level Task Force (HLTF) on the Global Food Security (GFS) Crisis. Under the leadership of the UN Secretary-General, the Task Force brought together the Heads of the UN specialized agencies, funds and programs, as well as relevant parts of the UN Secretariat, the World Bank, the International Monetary Fund (IMF), the Organization for Economic Cooperation and Development (OECD) and the WTO.

¹⁷ liable to change rapidly and unpredictably, especially for the worse
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The principal aim of the Task Force was to promote a all-inclusive and amalgamated reaction to the test of attaining global food security.

- In 2008 a High Level Conference on Climate Change was held in Rome: The aim was obtaining world food security in light of the outcome of climate change. At the beginning of June, world leaders and policymakers converged upon Rome to discuss these challenges and to devise ways in which to safeguard the world's most vulnerable populations.
- Again in 2008 a High-Level Conference on World Food Security: The Challenges of Climate Change and Bioenergy opened at FAO Headquarters in Rome, Italy. Throughout the three days of events, forty-two Heads of State and Government, one hundred high-level Ministers and sixty non-governmental and civil society organizations from one hundred eighty-one member countries discussed the challenges that climate change, bio-energy and high-ceilinged food prices posed to world food security. Following considerable dialogue and negotiations, the Conference finished with the adoption by acclamation of a declaration *calling on the international community to increase assistance for developing countries, in particular the least developed countries and those that are most negatively affected by high food prices*. In 2008, the surge of food prices has driven 110 million people into poverty and added 44 million more to the undernourished. 925 million people go hungry because they cannot afford to pay for it. In developing countries, rising food prices form a major threat to food security, particularly because people spend 50-80% of their income on food.
- In 2009, the World Food Program published the third report of the World Hunger Series entitled: "Hunger and Markets". This publication was another important step in the evolution of food security, offers access to most of the knowledge in terms of economic access to food as available today.
- In 2009 a High Level meeting on Food Security for all was held in Madrid. Stakeholders from more than 126 countries deliberated how to assure food security for all in developed and developing countries alike. The high level meeting carried forward the process launched by the June 2008 Rome food summit. Its purpose was to accelerate progress in meeting MDG 1 and address the effects of price fluctuations in vulnerable populations.
- 2009: G8 Summit in L'Aquila - On the G8 agenda were the following:
 - Climate change.
 - Energy; Nuclear energy.
 - Dialogue with emerging countries.
 - Achievement of millennium development goals.
 - Negotiations on climate change.
 - Development of Africa -- 4 issues (alimentation, global health, water, education) or education, water, food and agriculture, peace support.
 - Intellectual property.

- Heiligendamm Process.¹⁸
 - Outreach and expansion.
- In 2009/2010 increased food commodity prices instability, risk of a new prices crisis loomed large. World Dollar prices of major agricultural food commodities rose dramatically from late 2006 through to mid-2008. Prices buckled dramatically in the second half of 2008 with the onset of the financial crisis. This episode is often referred to as the '2008 price spike'. Prices partially recovered in the second half of 2009 to levels that generally exceed pre-spike values.
 - In 2009 World Summit on Food Security was held in Rome wherein world leaders convened at FAO Headquarters for the World Summit on Food Security collectively espoused a declaration guaranteeing a improved commitment to eliminate hunger from the face of the earth as soon as possible. Countries also settled to work to reverse the decline in domestic and international funding for agriculture and endorse new investment in the sector, to make better governance of global food issues in collaboration with relevant stakeholders from the public and private sector, and to proactively face the challenges of climate change to food security.
 - In 2010 a High Level Panel of Expert (HLPE) was set up on food security and nutrition as a part of the reform of the international governance of food security to advise the Committee on World Food Security (CFS) which is the foremost intergovernmental and international platform dealing with food security and nutrition.
 - After 2010 the establishment of the UN Food Security Cluster (FSC) within the Humanitarian Community was effected: FSC was established to coordinate the food security response during a humanitarian crisis, addressing issues of food availability, access and utilization. The Cluster is based at WFP headquarters in Rome and is co- led by FAO and WFP. The Global Support Team includes FAO, WFP and INGO staff.
 - In 2012 there was approbation of a new Food Assistance Convention that symbolically implied a donor commitment to address world hunger. The objectives of this Convention are to save lives, reduce hunger, improve food security, and improve the nutritional status of the most vulnerable populations.
 - In 2012 the Agricultural Market Information System (AMIS) was created as an inter-agency platform to enhance food market transparency and policy response for food security. It was launched in 2011 by the G20 Ministers of Agriculture following the global food price hikes in 2007/08 and 2010. Bringing together the principal trading countries of agricultural commodities, AMIS assesses global food supplies (focusing on wheat, maize, rice and soybeans) and provides a platform to coordinate policy action in times of market uncertainty.
 - In 2015, 17 Sustainable Development Goals (SDGs) were adopted.

¹⁸ The Heiligendamm process is an initiative that will institutionalize high-level dialogue between the G8 and the five most important emerging economies, known as the O5 (Outreach 5): China, Mexico, India, Brazil and South Africa.

- SDG 1: End poverty in all its form' everywhere by 2030
- SDG 2: End hunger, achieve food security' and improved nutrition and promote sustainable agriculture by 2030.

Basic Concepts: - Definition, Dimensions and Measurements of Food Security:

Definition of Food Security: "Food Security" is one of crucial factors of development and poverty alleviation around the globe. Around 870 million people (out of which 852 million are from developing countries) are estimated to have been undernourished in the period 2010-12.¹⁹ There is no unanimity about the definition of the phrase "Food Security" though it is being draw upon widely.

Food security, as defined by the United Nations' Committee on World Food Security (CFS),²⁰ *is the condition in which all people, at all times, have physical, social and economic access to sufficient safe and nutritious food that meets their dietary needs and food preferences for an active and healthy life.*

World Health Organization (WHO): *"Food security means that:*

- *all people at all times have both physical and economic access to enough food for an active, healthy life;*
- *the ways in which food is produced and distributed are respectful of the natural processes of the earth and thus sustainable;*
- *both the consumption and production of food are governed by social values that are just and equitable as well as moral and ethical;*
- *the ability to acquire food is ensured;*
- *the food itself is nutritionally adequate and personally and culturally acceptable; and*
- *the food is obtained in a manner that upholds human dignity."*

There are three critical elements in the definition: *Availability, Access and Suitability*. Household food security is the use of this concept to the family plane, with individuals contained by households as the hub of interest. **Food Insecurity** is a situation when people do not have adequate physical, social or economic access to food as defined above. Regardless of how we delineate food security, having sufficient to have consistently for vigorous and healthful life is the largely the fundamental human necessity. Many developing people, particularly in South Asia and Africa, have not been able to accomplish this crucial requirement till date.

Dimensions of Food Security: From the above definition the following four dimensions of food security can be identified:

¹⁹ Food and Agriculture Organization (FAO), *State of Food Insecurity in the World 2012*.

²⁰ The Committee on World Food Security (CFS) is the foremost inclusive international and intergovernmental platform for all stakeholders to work together to ensure food security and nutrition for all. The Committee reports to the UN General Assembly through the Economic and Social Council (ECOSOC) and to FAO Conference

- 1. Physical Availability of Food:** Food production influences the crux of food availability; it is the foundation for food security. Availability refers to the physical availability of food stuff/stocks in preferred quantities. Availability of food stuff/food grains²¹ as a substitute for food depends on domestic food grain production largely. It also depends on space for storage and transportation facilities, road infrastructure and market link-ups within the country. In the Indian context, as per Swaminathan²², it is being estimated that the population of India will reach 1.5 billion by 2030, therefore the challenge facing the country is to produce more and more from diminishing per capita arable land and irrigation water resources and expanding abiotic and biotic stresses. India currently produces about 230 million tones of cereals to meet the needs of a population of 1.15 billion. While estimating food rations, the requirements of farm animals are habitually disregarded. The existing situation in India is that cereal production has to be twice as much by 2050 with the purpose of meeting the wants of the projected population of 1.8 billion, additionally to meeting the wants of livestock and poultry. Over 60 per cent of the Indian population carry on depending on agriculture and allied activities for their source of revenue. For this reason, expansion of this segment is indispensable for the general economic growth.
- 2. Economic and Physical Access to Food:** Food access is another facet of food security which takes into consideration income, expenditure and purchasing power of families/households or individuals. An ample stream of food at the national or international level does not in itself assure food security at the household/family level. Enhanced policies on higher incomes, expenditures, market link-ups and stabilization of prices go a long way in achieving food security. Apprehensions about deficient food access have resulted in the framing of better policies in these areas. Food access also deals with issues whether the families/households or individuals have adequate means to purchase right quantities of wholesome/nutritious provisions. Some of the pointers of this component at various levels are food price, wage rate, per capita food consumption, meal frequency, employment rate etc. This aspect can be gauged by Vulnerability Analysis and mapping (VAM), Food Access Survey, Food Focus Group Discussion, Intra- Household Food Frequency Questionnaire etc. Steps to perk up this factor of food security are among other things on-farm activities, off-farm actions and non-farm job creation, school-feeding programs, breast –feeding campaigns etc.
- 3. Food Utilization:** Food Utilization is basically food consumption; it is universally identified with as the way the body absorbs and makes the best use of numerous nutrients²³ in the food. Adequate energy and nutrient ingestion by humans is the

²¹ Any food made from wheat, rice, millet, semolina, tapioca, oats, cornmeal, barley or another cereal grain is a grain product. Bread, pasta, oatmeal, breakfast cereals, tortillas, and grits are examples of grain products. Grains are divided up into two subgroups, Whole Grains and Refined Grains.

²² Swaminathan, M. S., *The Media and The Farm Sector*, The Hindu. November, 11, 2009.

²³ A substance that provides nourishment essential for the maintenance of life and for growth. "fish is a source of many important nutrients, including protein, vitamins, and minerals"

outcome of best practices in good care and feeding, the way food is prepared, the variety in the intake of food and the manner of intra-household/family food distribution. The nutritional status of individuals also depends upon the human physiology i.e. how the food that has been consumed is utilized biologically. Hence we say that food utilization is an added dimension of food security. Food utilization deals with not only the volume of food intake but also the variety in diet and the food preparing/eating practices. Hence, it also includes food preparation, intra-family/household food allocation, availability and usage of water and basic sanitation and health care systems. The dietetic upshot of the food consumed by an individual will be proper and optimal only when food is prepared well and is fit for human consumption. Food consumption influences stunted²⁴ growth rate, wasting²⁵ rate, avoidance of diarrhoeal²⁶ maladies, usage of toilets/latrines, appropriate weight-for-age, goitre²⁷, anaemia²⁸, night blindness²⁹ etc.

4. **Stability:** Despite sufficient food intake, human beings would remain food insecure if inadequate access to food is an intermittent issue, it will kind of put in jeopardy a weakening of dietary status. Harmful environment, political volatility, or unfavorable economic causes like, unemployment, mounting food prices, possibly will have a bearing on the food security status. This aspect of food security focuses on the permanence and the strength of the other three above-mentioned dimensions in the fullness of time. Population of a country is not considered food secure unless there is constancy of availability of food stuff/grains, ease of access and proper consumption pattern of food/food stuffs. Wavering of market prices of essential food items and scarce risk bearing capability of the people in the event of hostile situations/condition e.g. natural disasters like a natural event such as a flood, earthquake and other adverse climatic conditions etc, political instability and joblessness are the foremost reasons affecting steadiness of food security. This element of food security can be evaluate evaluated by Global Information Early Warning System (**GIEWS**)³⁰, Anthropometric

²⁴ Stunted growth, also known as stunting and nutritional stunting, is a reduced growth rate in human development. It is a primary manifestation of malnutrition (or more precisely under-nutrition)

²⁵ Acute Malnutrition

²⁶ diarrhea, is the condition of having at least three loose or liquid bowel movements each day. It often lasts for a few days and can result in dehydration due to fluid loss.

²⁷ a swelling of the neck resulting from enlargement of the thyroid gland primarily due to a lack of iodine in the diet

²⁸ a condition in which there is a deficiency of red blood corpuscles or of hemoglobin in the blood, resulting in pallor and weariness.

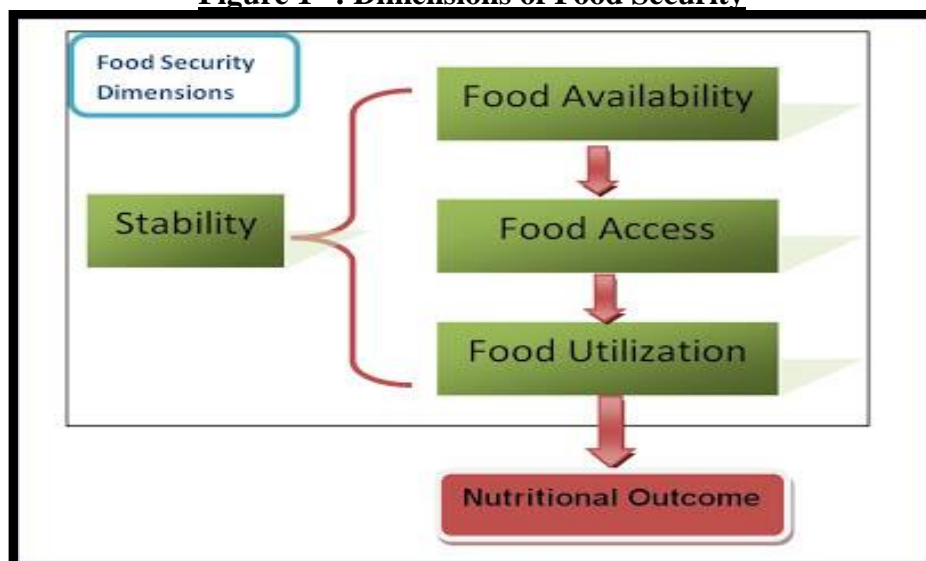
²⁹ a condition of the eyes in which vision is normal in daylight but abnormally poor at night or in a dim light; nyctalopia

³⁰ FAO's Global Information and Early Warning System (GIEWS) was established in 1975 in the wake of the world food crisis of the early 1970s. The System has the mandate to continuously monitor the global food supply and demand situation and alert the international community of

survey³¹, measurements of weighing charts of pregnant women etc against certain pointers like food price vacillation, women's BMI³², pre-harvest food safety practices, migration etc. Interventions to address this dimension are savings and loan policies for farm producers/farmers, inter-household food exchange, granaries, food storage facilities etc.

Summing up the dimensions of Food Security, the availability aspect envelop whether ample food is promptly available for people to consume, while access make sure if all families/households and individuals have sufficient means/incomes to acquire/procure the food they require either through manufacturing or buying. Correspondingly utilization is about human physiology functions to effectively consume, assimilate and metabolize the food intake. Stability is about assertion of maintenance of the above-mentioned dimensions. What the four dimensions do not cover: From the 1996 World Food Summit definition of food security, the elements that are not included in the four dimensions of food security as described above are the “Food preferences for an active and healthy life”. The elements related to “food preferences” could be the object of some further thinking and research, which, at the household and individual level, could be comparable to what food sovereignty is at the country level.

Figure 1³³: Dimensions of Food Security



countries or regions threatened by serious shortages or which have exceptional localized or exportable surpluses of food available for donor purchases and distribution to deficit areas.

³¹ Anthropometric measurements are used to assess the size, shape and composition of the human body. Learn about common methods used to gather these measurements, such as BMI, waist-to-hip ratio etc.

³² The Body Mass Index (BMI) is a value derived from the mass (weight) and height of an individual.

³³ www.foodandenvironment.com

Theoretical Framework: Food insecurity is often illustrated as a pressing social concern that merit instantaneous engagement in terms of policy framing. This stress can be noticed in the “Recommendations”/ Policy Implications”/ “Measures to be taken” segment of many academic publications.

Economist Amartya Sen has put forward decisive writings pieces on the incidence of hunger and famine across the globe^{34 35}. He proposed that accessibility to food is an entitlement; this approach is a sound foundation to explore how sociological theory can outline this issue. Sen states in modern age famines occur not because of shortage of food but scarcity of food is a problem about people’s capacity to access food or lack of ability to exchange wealth for food. This approach is opposed to the Malthusian idea that famine happens when the growth of population overtakes production of food grains. By *entitlement*, Sen means that some are able to secure food through either direct ownership of land to grow food or are able to convert wealth or wages to food. Without partaking food other critical needs of life cannot be appreciated, this need is fundamental and makes up the base of what Abraham Maslow refers to as the “hierarchy of needs”. A human’s physiological needs are primary without which one cannot attain any of the more enhanced requirements. As is explained through Sen’s theory, famine, or in the case of this research, food insecurity is not the upshot of food shortage but want of ability to exchange funds for food. This is certainly the case in the US, the world’s wealthiest nation whose food production (and food waste) could feed the country’s population and beyond.³⁶ Yet, millions of Americans are food insecure. Regardless of the high income range, the higher prices of food make it progressively more difficult for many to procure sufficient food, millions of Americans lack the purchasing capacity to buy food. On the other hand the, US culture that is intensively so achievement oriented and “fixed on the future” stigmatizes the poor for their inability to buy food.³⁷

Countries emerging from the war experienced a ‘baby boom’ for the next 15-20 years, even in countries like Britain where wartime food rationing continued into the 1950s. Improvements in medicine, notably the antibiotics that first went into mass production during WWII, lead to major increases in the rate of population growth around the world. There were several responses to the challenge of food availability in sufficient amounts. A major response was named as the *Green Revolution* in the 1960s involved striking increases in agricultural production predominantly by using new varieties of crops such as wheat, rice and maize, and augmented application of pesticides and oil-based fertilizers combined with mechanization. However, authors like Vandana Shiva, Eric Holt-Giménez and many others

³⁴ Sen, A., *Poverty and famines: an Essay on Entitlement and Deprivation*: Oxford, 1983

³⁵ Sen, A., *Commodities and capabilities*, OUP Catalogue, 1999.

³⁶ Gunders, D., *Wasted: How America is losing up to 40 percent of its food from farm to fork to landfill*, Natural Resources Defense Council, 2012

³⁷ Katz, M. B., *The Undeserving Poor: America's Enduring Confrontation with Poverty*, USA: Oxford University Press, 2013

have brought out the flip side of Green Revolution. Food productivity increased undoubtedly through research and technology transfers, it did not impact the society equitably and positively, social transformation regarding the distribution of agricultural land lagged behind. Specialized International Organs like the Food and Agricultural Organisation (FAO), movements related to farm land and the tillers of the land, academics and activists have countered with the model of food sovereignty that is directly linked and calls for the democratization of the food system and is not directly opposed to food security.

The Global Food Security Scenario and the Challenge of the Millennium Development Goals (MDGs): Thomas Malthus,³⁸ in 1798, predicted that the population growth would unavoidably supersede the food production and Dr. Aurelio Peccei³⁹ on the “Limits to Growth”, had forecasted the end of natural resources including feeding people. Yet, during the last decades the agricultural production worldwide has grown more rapidly than the population did and there is, now, more food, at least in terms of macronutrients, available to feed the world population, to feed more than today’s world population, more food than ever before. Still, the number of people suffering food insecurity is reported to be increasing and so is, since a few years, the proportion of the overall population suffering from insufficient food. Target 1.C of Millennium Development Goals (MDG) 1 aims to ‘halve, between 1990 and 2015, the proportion of people who suffer from hunger’. According to the MDG Report for 2011, the percentage of people in the developing world who went hungry in 2005-2007 continued to be steady at 16 percentage per cent, notwithstanding noteworthy lessening in the level of acute poverty. The MDGs are interwoven; advancement in one goal sustains improvement in others. Espousing sustainable agriculture and rural reconstruction and development aids in multiplying food production and ease poverty and hunger. Food and nutritional security are the foundations of a decent life, a sound education and the achievement of the Millennium Development Goals.⁴⁰

Food Security in India: India has endured numerous big and small famines and paucities during the days of the Raj. The Bengal famine of 1943 killed around 1.5 million persons and unleashed untold miseries. Periods of droughts and famines in India have also been the times when food prices, agricultural unemployment shot up. Food Aid to India was constrained by USA for being critical of the US during the Vietnam War. The Green Revolution on the other hand made noteworthy changes in the scenario. The Government of India had implemented the Seed-Water-Fertilizer Policy and India pulled off food grain self-sufficiency by the year 1976. Though the country is no longer face the threat of real famines however, due to poverty people lack purchasing power and this continues to trouble. Kalahandi and Kshipur districts of Odisha, Palamau district of Jharkhand, Baran district of Rajasthan, etc. have permanent food insecurity situations and famine-like

³⁸ Thomas Robert Malthus, was an English cleric and scholar, influential in the fields of political economy and demography.

³⁹ Aurelio Peccei was an Italian industrialist and philanthropist.

⁴⁰ United Nations Department of Economic and Social Affairs (UNDESA)

conditions, the people there starve even when the country's granaries are full and overflowing. India has come a long way since 1945 when the country became one of the founding members of the FAO as a low income food deficit country. Today, the country is not only self-reliant in rice and wheat, it also yields over 260 million tonnes of food grains, 269 million tones of agricultural produce and 132 million tones of milk. Agriculture is a mainstay of the country's economy, contributing to 18% of India's Gross Domestic Product (GDP) and providing a source of employment to more than 47% of the population. In a fraught global economic environment, exacerbated by climate change and shrinking resources, ensuring food and nutrition security is a daunting challenge for many nations. India, Asia's third largest economy and the world's second most populous nation after China with 1.3 billion people, is no exception. According to the Global Hunger Index 2014, India ranks 55 out of the world's 120 hungriest countries even behind some of its smaller South Asian counterparts like Nepal (rank 44) and Sri Lanka (39).⁴¹ Describing malnutrition as India's silent emergency, a World Bank report says that the rate of malnutrition cases among Indian children is almost five times more than in China, and twice that in Sub-Saharan Africa. The states Punjab and Uttar Pradesh achieved high growth rate; on the contrary, Jharkhand, Assam, Tamil Nadu, Uttarakhand, recorded decrease in their food grain production (for the year 2012—13). To alleviate hostile conditions, the Indian government has come about with quite a lot of initiatives that shall be briefly visited in the next section.

Food Security and Governance: The Government of India over the years have put in place the following mechanisms to work towards Food Security in the country:

- **Food Corporation of India (FCI)** was set up on 14 January 1965 by the Government of India as a special agency that is responsible for the implementation of food policies and guidelines of Central Government. FCI acquire food grains (wheat and rice) from the farmers in states where there is additional production on pre-determined rates (fixed by the government in advance) which is known as Minimum Support Price (MSP). This Food grains are made available from this buffer stock to the deficit areas at a lower price than the market price, this is known as Issue Price (IP).
- **Public Distribution System (PDS):** There is a procedure through which FCI distributes and makes the food grains accessible to the poorer sections of the society in the country. This arrangement is known as **Public Distribution System (PDS)** or more popularly as Ration Shops or Fair Price Shops (FPSs). The FPSs in various localities, villages, towns, and cities operate as outlets and assist the PDS. The total number of Fair Price Shops (FPSs) in the country as reported by States/Union Territories (UTs) upto 30.6.2011 are 5,05,879.⁴² India's public distribution

⁴¹ Concern Worldwide, 2014 Global Hunger Index: The Challenge of Hidden Hunger, International Food Policy Research Institute, 2014

⁴² Number of Ration Shops in the Country, Press Information Bureau, Government of India, Ministry of Consumer Affairs, Food & Public Distribution, 09-August-2011 15:39 IST
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system (PDS) is based on the ration card, which it uses to establish identity, eligibility, and entitlement.⁴³ Ration cards are voluntary in India; they are needed to obtain subsidized food and fuel. Eligibility for the Antyodaya, BPL and APL ration cards are based on the economic status of the family. The government issues ration cards and the people who have low income can apply and get ration cards from the ration card offices and avail the benefits of PDS. Only those people, who hold ration cards can purchase subsidized food.

- The high levels of food insecurity forced the Indian Government to introduce **three** food intervention programs during the 1970s. The programs are as follows –
 - Public Distribution System (PDS) for food grains with strengthened implementation structure in place.
 - Integrated Child Development Services (ICDS).
 - National Food For Work Program (NFFWP)/ (MGNREGA)
 - Mahatma Gandhi National Rural Employment Guarantee Act" (MGNREGA) Now that the MGNREGA is in force, the NFFWP has been included within this program. The MGNREGA was initiated with the objective of "enhancing livelihood security in rural areas by providing at least 100 days of guaranteed wage employment in a financial year, to every household whose adult members volunteer to do unskilled manual work".⁴⁴
- **Targeted Public Distribution System (TPDS)** was launched in 1997. This arrangement aimed its spotlight the poor in all areas. For this system, different prices are established for the poor and non-poor group.
- **Village Grain Banks Scheme (VGBS):** Village Grain Banks Scheme was earlier implemented by the Ministry of Tribal Affairs in 11 States. However, since 24.11.2004, the scheme is being implemented by the Department Food & Public Distribution. The primary goal of the scheme currently being operated to make available certain protection against food scarcity and starvation during the time of natural disasters or when farmers are suffering from lack of rainfall, during winter months with little harvest, or inadequate soil and when the marginalized food insecure households do not have sufficient purchasing power to buy or procure rations. Such people in need will be capable to borrow food grains from the Village Grain Bank.
- **Mid-Day Meal Scheme for Children** was launched by the Ministry of Human Resource Development (Department of Education) with effect from 15th August, 1995 for the benefit of students in primary schools under Employment Assurance Scheme (EAS)/earlier Revamped Public Distribution System (RPDS) blocks (2368). The Midday Meal Scheme is designed to improve the nutritional status of school-age

⁴³"Aadhaar-based PDS in Andhra Pradesh inspires other states". *Indiagovernance.gov.in*. 2012-11-05.

⁴⁴ Comptroller and Auditor General of India 2013

children nationwide. The Scheme presently covers 10.08 crores of children in the country on a daily basis.⁴⁵

- **Scheme For Supply of Food grains to SC/ST/OBC Hostels/Welfare Institutions:** The supply of food grains to SC/ST/OBC Hostels/Welfare Institutions with the idea of covering the requirements of Hostels /Welfare Institutions like Non Governmental Organizations, Charities that aid the orphans, other groups of poor not receiving benefits under TPDS or under any other Welfare Schemes, a supplementary allotment of food grains (rice and wheat) not more than 5% of Below Poverty Line (BPL) share of each State/UT (Union Territories) is made to States/UTs at BPL rates. This scheme was initially introduced in 2002-03 to clear up the stocks of food grains. Even though stock position of food grains in the Central Pool in recent years were not comfortable, the scheme continues to be in operation.
- **Severall** schemes such as Pradhan Mantri Fasal Bima Yojana (Prime Minister's Crop Insurance Scheme), Pradhan Mantri Krishi Sinchai Yojana, e-NAM- e-NAM (National Agriculture Market) is a pan-India electronic trading portal launched by Ministry of Agriculture & Farmers' Welfare, Govt of India, Paramparagat Krishi Vikas Yojana promotes Organic farming through adoption of organic village by cluster approach and PGS (Participatory Guarantee System) certification. Kisan Credit Card Yojana (KCC) scheme is a credit scheme introduced in August 1998 by Indian banks. This model scheme was prepared by the National Bank for Agriculture and Rural Development (NABARD) on the recommendations of R.V.Gupta⁴⁶ to provide term loans and agricultural needs. According to the Agriculture Census, the total number of operational holdings in India numbered 138.35 million with an average size of 1.15 hectares. Of the total holdings, 85 per cent are in marginal and small farm categories of less than 2 hectares. The small farms though operating only on 44 per cent of land under cultivation are the main providers of food and nutritional security to the nation.
- The following two schemes have been launched recently –
 - **Antyodaya Anna Yojana (AAY):** Antyodaya Anna Yojana (AAY) is a Government of India sponsored scheme to provide highly subsidised food to millions of the poorest families. It was launched by the National Democratic Alliance (NDA) government on 25 December 2000 and first implemented in the Indian state of Rajasthan.
 - **Annapurna Scheme (APS):** The Annapurna Scheme has been launched with effect from 1st April, 2000. It aims at ensuring food security to meet the necessity of those

⁴⁵ <https://timesofindia.indiatimes.com/india/10cr-children-are-fed-through-mid-day-meal-scheme-everyday/articleshow/53554096.cms>

⁴⁶ R. V. Gupta (the then Dy. Governor of Reserve Bank of India) Committee Recommendations on Agricultural Credit through Commercial Banks

senior citizens who, though eligible, have remained uncovered under the National Old Age Pension Scheme (NOAPS).

The Challenges that Food Insecurity poses: Some of the critical areas where despite several schemes the food security scenario is bleak in India can be enumerated as follows:

Rural India: In rural and tribal areas people of the country continue to pursue primitive and traditional methods of agriculture, there is not improvement in agricultural output due to insufficient support in terms of resources, availability of markets that is needed to obtain agricultural stability. An agrarian crisis is currently on in India. The availability and expansion of irrigation facilities is insufficient in comparison to the percentage of population dependent on agriculture and agriculture related activities, there is a slow-down in upgrading in agricultural technology and by and large in food grain production. Rural areas are perennially deficient in the opportunities of education, good teachers, better medical facilities, job opportunities, transport and communication facilities. These and other factors are propelling geographical migration is taking place all across the country. Climate change and adverse impacts of environmental factors are altering the pattern of agricultural productivity, this directly have an effect on the availability and accessibility of food stuff and ultimately, food security. Our agricultural scenario is rain-dependent, crucial effect of climate change is on rain fed crops, e.g. maize, bajra, moong other than rice and wheat. As far as the tribal communities in India are concerned, they live in far away areas that constitute what basically are known as demanding landscape and they carry on agricultural practices at the subsistence level that has led to severe economic backwardness.

In Urban Areas: Food Security is a critical issue among urban population as well. Unplanned growth in the urban areas is taking a toll on the lives of the inhabitants. There is an informal workforce in the cities that increases steadily resulting in persistent growth of shanties that lack basic amenities in terms of derisory water and sanitation facilities, poor housing and a boost to food insecurity, lack of educational facilities, provisions of health and hygiene services. Geographical migration is upbeat all across the country. Total migration has risen from 16.5% to 21.1% from 1971 to 2001.⁴⁷ The daily wage laborer is too poor to purchase food because they earn meagerly. Most of the urban slums in India are not yet notified, they are at the best described as slum-like areas because of which the inhabitants of these slums are not privileged to access the government services. Poor residing in the un-notified slums are forced to purchase food stuff from the retail shops that are not subsidized. Hence over the years urban food insecurity scene is frightening.

⁴⁷ Mitra A, Murayama M. Rural to urban migration: a district level analysis for India. Institute of Developing Economies discussion paper No. 137.

In Children and Mothers - Children in India suffer from food insecurity and go through malnutrition due to overpopulation, absence of education and incisive gender inequalities. There is want of adequate knowledge and education among mothers as far as nutrition, breast-feeding and best practices of parenting is concerned. Due to gender inequality the female child is at a disadvantageous position. Girls suffer more because they are considered last in the line of importance in terms of nutrition, education, schooling, awareness, even parental and family love. Lack of opportunities for any vocational and professional training for women stems their competence to become self-supporting. Besides in India, wage rates differentials exist between men and women. These gaps play a part to cutoff the efficiency of women, consecutively endanger the purchasing power of women and affect their ability to access food.

Flawed Food Distribution Approach – Our PDS is one of the most flawed food distribution system that we have across the globe, there are situations that grains lay rotting in the FCI granaries but poor in India suffer food insecurity. The identification of beneficiaries of PDS is defective and is arbitrary which fluctuate from state to state. In addition, substandard quality of grains and the mediocre service delivery arrangement at the FPSs has expanded the problem.

Un-supervised Nutrition Program – Several Nutritional programs are planned in the country however; many of them are poor in service delivery due to poor strategy of implementation. Inferior execution of the programs affects the quality of the same in ways more than one and this impacts food security.

Deficiency of Intercessorial Coordination - Lack of rational food and nutrition guidelines along with the nonexistence of intersectional harmonization among numerous ministries of government such as Ministry of Women and Child Health, Ministry of Health and Family Welfare, Ministry of Agriculture, Ministry of Finance etc have added to the problem.

National Food Security Act (NFSA) 2013: India's Department of Food and Public Distribution, under the Ministry of Consumer Affairs, Food and Public Distribution, Government of India in partnership with World Food Program (WFP), is currently executing the PDS through the FPSs which supply a monstrous 800 million people (67% of the country's population or 10% of the world's) with subsidized monthly household rations each year.⁴⁸ To tackle the challenge of food insecurity, India operates one of the leading food safety nets in the world — the National Food Security Act 2013. The beginning of this act script a paradigm shift in methodology to tackle food security in India – it has seen a marked shift from welfare to rights based approach. It is “*an Act to provide for food and nutritional security in human life cycle approach, by ensuring access to adequate quantity of quality food at affordable prices to people to live a life with dignity and for matters connected therewith or incidental thereto.*”

⁴⁸ Lal, Neeta, *Hunger in a Time of Plenty: The Curious Case of Indian Food-Security*, The Wire, 30.07.2016

The objective of the act is caring for nutritional requirements of all children, women and men in India and protecting them from hunger and food deficiency. The purpose of this Act also comprises laying down new principles of delivery, transparency and accountability for socially beneficial programs for the poor sections of the country. According to the Act, every person who fit in criteria of priority households is entitled to receive 5 kg of food grains per person per month at subsidized prices not exceeding Rs. 3.00 per kg for rice and Rs. 2.00 per kg for wheat. In July 2017, the Supreme Court remarked that the National Food Security Act 2013 has not been executed appropriately and as it should be.

Food Security and Meghalaya: The National Food Security Mission under National Food Security Act, 2013 was launched for the State of Meghalaya by Chief Minister Dr. Mukul Sangma with much fanfare at SMELC Building at Dakopgre, Tura in the month of September, 2015. Under NFSA, 2013, a total of 4.22 lakh has been identified as priority households in the State of Meghalaya. The program is designed to cover all eleven districts will benefit 77.79 per cent rural population and 50.87 per cent urban population. More thrust is on pregnant, lactating mothers and children between the age group of 0-6 years for supplementing their nutritional requirement, as is mandated in the act. The Act allows subsidized food grains to roughly speaking two third of the State population. Out of the total 6465 villages from the Socio Economic and Caste Census (S.E.C.C) 2011 database, 6427 villages are covered under National Food Security Act 2013. Some villages (38 Numbers) did not fall under National Food Security Act 2013. The reason is because the inhabitants of those villages are well-off and are excluded based on the Exclusion Parameters. The population coverage is 50.87% for Urban and 77.79% for Rural. For Rural areas, the number of beneficiaries are 18,45,542 and for the Urban areas, the number of beneficiaries are 3,03,485. The total population coverage is 21,49,027.⁴⁹

Measures to Ensure Food Security:

- Increase yields, profitability and environmental sustainability simultaneously
- Develop the varieties and breeds needed for sustainable food systems
- Decrease food loss and waste through more efficient distribution systems
- Create and share resources that serve all populations
- Ensure inclusive and equitable food systems
- Address the dual burdens of under-nutrition and obesity to ensure full human potential
- Ensure a safe and secure food supply that protects and improves public health
- Promote Education and Literacy to empower the poor.
- Encourage Crop Diversification to achieve food security, improved human nutrition and increase in rural employment
- Tackle impacts Climate Change
- Integrated Water Management will help in the rain fed areas.

⁴⁹ <http://megfcsca.gov.in/nfsa.html> / Food Civil Supplies and Consumer Affairs Department, Government of Meghalaya
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- Integrated Nutrient Management will maintain soil fertility and of plant nutrient supply at an optimum level and will increase productivity
- Improved Varieties of crop will boost food security
- Improved agricultural technology Adoption will enhance farm produce
- Awareness on Population Growth
- Focus on Small Farmers to fight rural poverty and to develop solutions that enable them to overcome poverty themselves
- Boosting Agricultural Production will increase food security
- Endorsement of Agri-Horticultural Forestry will enhance employment in agriculture, horticulture, livestock, fishing and forestry and stimulate agricultural output that will increase non farm employment.
- Livestock Development will produce food, enhance crop production and provide additional economic goods and services as well as cash income
- Agri-Business Activities will include agrichemicals, breeding, crop production distribution, farm machinery, processing, and seed supply, as well as marketing and retail sales.
- Capacity Building for Governance will work towards empowering rural people. Farmers' organizations and Civil Society Organizations can be delegated to develop suitable agricultural development plan with a holistic approach aimed at increasing food security.
- Village level producers' groups can take dynamic role in ascertain their needs and embark on appropriate income generation activities to augment agricultural production.
- Development of value chains will improve the profitability in agriculture and related activities, in the context Public - Private Partnership may be promoted.

Conclusion: Food security is a multi-dimensional phenomenon. In a country as huge as India where population grows at about 8 % and where a considerable section of the population is malnourished and under-weight it becomes indispensable to accomplish the goal of food security. The supply chain between the farmers and the consumers should be abridged. Farmer-friendly marketing procedures needs to be put in place so that the food security situation in India is positive and prepared to meet any eventuality, in one way such a positive situation will stop suicide of farmers too.

Bibliography:

1. Bhatt, M.S. (Ed.), *Poverty and Food Security in India: Problems and Policies*, New Delhi: Aakar Books, 2005.
2. Chatterji, B., *Food Security In India*, New Delhi: Regal Publications, 2012
3. Das, Sandhyarani, Aruna Kumar Nishanka and Narottam Gaan, *Search For Food Security In Asia*, Delhi: Kalpaz Publications, 2017

4. Fukuoka, Masanobu, *Sowing Seeds in the Desert: Natural Farming, Global Restoration, and Ultimate Food Security*, USA:Chelsea Green Publishing Co; Reprint Edition, 2013
5. Guha-Khasnobis, Basudeb, Shabd S. Acharya, Benjamin Davis (Ed.), *Food Security: Indicators, Measurement, and the Impact of Trade Openness*, (WIDER Studies in Development Economics), UK: OUP, 2008
6. McMahon, Paul, *Feeding Frenzy: The New Politics of Food*, England: Profile Books Ltd, 2013.
7. Mishra, Shyam Kartik, Babita Agrawal (Ed.), *Food Security in India: Policies & Challenges*, New Delhi: New Century Publications, 2013
8. Mukherjee, Amitava, *Food Security in Asia*, Sage India, 2012
9. Sethi, Deepti, Surabhi Mittal, *Policy Options to Achieve Food Security in South Asia*, Cambridge: Foundation Books, 2011
10. Shiva, Vandana, *Seed Sovereignty, Food Security: Women in the Vanguard*, New Delhi: Women Unlimited, 2015
11. Simon, George-André, *Basic readings as an introduction to Food Security*, Rome: University of Roma Tre, 2012
12. Stuart, Trsitram, *Waste: Uncovering the Global Food Scandal*, UK: Penguin, 2009
13. Swaminathan, M.S., *Combating Hunger and Achieving Food Security*, Cambridge: Cambridge University Press, 2016
14. Universal Law Publishing-An Imprint of LexisNexis, *National Food Security Act, 2013*, 2017
15. Vyas, V.S., *India's Agrarian Structure, Economic Policies and Sustainable Development: Essays on Indian Agriculture, Poverty and Food Security, Economic Reforms*, New Delhi: Academic Foundation, 2003.
16. Vyas, V.S., Vijay S. Vyas, *Food Security in Asian Countries: In the Context of Millennium Goals*, New Delhi: Academic Foundation, 2005
 - *Information brief on Water and Agriculture in the Green Economy. UNW-DPAC, 2011.*
 - *The environmental food crisis: The environment's role in averting future food crises. UNEP, 2009.*
 - *United Nations World Water Development Report 4. UNESCO, UN-Water, WWAP. March 2012.*
 - *World Population Prospects: The 2008 Revision, Highlights. UNDESA. 2009.*
 - *World Agriculture: Towards 2030/2050 – Interim Report – Prospects for Food, Nutrition, Agriculture and Major Commodity Groups. FAO. 2006.*