



Food security for sustainable development and hunger management in every socio-economic level to establish hunger free society

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Abstract

Food security plight started in India after the partition of Burma from India which made India lose her best rice producing land in April 1937 and had to import from Burma 15 to 20 lakh tons of rice followed by which we had the Bengal Famine in 1943 which resulted in the death of millions of people out of hunger and diseases. India till today faces Food security in different ways, even after the green, white, blue, orange, yellow, brown revolution in India which helped India to develop as the largest producer of milk and the second largest producer of vegetable, fruits, wheat, rice, sugarcane and many other pulses, still India is unable to provide food security to all its people. Every one out of five child in India die out of hunger or malnutrition in India, People don't have access to a three meals per day in many parts of the country with 90% of the people living below poverty line, where as we see India is the one of the top countries when it comes to food wastage, In urban areas 67 million tonnes of food is wasted per year which can provide a many villages sufficient amount of food for a year. India has a poor agriculture system and the second largest agriculture country, where half of the land is unfertile due to soil erosion or salinization, there is lack of knowledge among the farmers about soil healthy, poor quality seeds. Lack of education is one of the biggest hurdle which comes in between for the overall growth and providing basic food security to its people. However what is required is a food security scheme and a food security waste management system to provide maximum support and food for all by introducing special food packages at the schools for children, making it mandatory to provide nutrient based foods for all, empowering women to be part of the food security measures, cultivate more food resources plan, introduce special food packages plan for child and pregnant women and also for doctors, nurses and army people followed by disabled persons and retired officers so that they can receive maximum food security for them and their families.

Keywords: Food security, malnutrition, food wastage, special food packages, hunger in food resources.

Introduction

Food security can be delineated as access to basic food products both physically and economically .The Food and Agriculture States that food security appears when all people have access to sufficient , safe and nutritious food that a body requires for an active and healthy life at all time physically and economically. Food security has three chief elements to it which are availability of food , access of food and absorption of food. Food security is a complex subject and goes beyond productivity , availability and demand for food .Access to basic food is a problem particularly for the vulnerable sector of the society and places where accessibility is difficult . Thousands of people die due to starvation in India. There is a need to become self-sufficient and a national food security which largely depends on domestic production of food for consumption. Today India no longer experiences famine , twelve famine and four major scarcities occurred during the period of the East India Company . In 1943 famine occurred in Bengal and it was a tragedy of unprecedented magnitude . The death toll was around 1. 5 million people dying due to starvation and diseases which has also encountered high food prices and agricultural unemployment . Famine in India continued till the period of British rules largely because of unemployment and import of machine made goods from Britain , over exploitation of farmers and restricted access to food, which was followed by two severe droughts in 1965 and 1966 .India became self –sufficient after the green revolution initiated started in the 1960s through the implementation of the seed-water- fertiliser .which has transferred the food security situation in India till today , It pentagonal food grain production over the next three to four decades and reduced food insecurity and poverty by 50% in the country . India is home to one-fifth of the world’s undernourished population . India has the second largest population in the world with 16 million adding to the population growth every year , Lack of economic facilities , improper distribution of resources , lack of decent living standard , no employment facilities, rapid urbanization have contributed to the food insecurity in India. A humongous amount of food is wasted every year in India , where as the poor don’t even receive a proper 3 meals a day , India is home to 195 million undernourished population and it is estimated that one in five death is associated with malnutrition. Government food security policy and the Right to food and National Food Security Act followed by the Public Distribution System and Minimum support prices and procurement price policy is not sufficient enough to provide basic food facilities and security in India.

Research Methodology

For the purpose of this exploration , I have used a amalgamation of two of the archetypical social sciences research tools application –as they are authentic and brilliant method to assemble statistics from multiple appellants in an methodical and convenient way . Question were asked to the parents and their children , survey , interviews –consisting of several interrogation which were dispersed among representative of each contender group .

Objective of the Research Paper

The main areas of exploration in this paper incorporates

- 1.What is food security and why is India lacking behind in food security
- 2.A study on all the revolutions starting green to brown revolution its impact on its people and how it helped to reduce poverty in India.
3. A study on the food wastage in India
4. To identify the issues in achieving food security in India.

5. How to overcome the issues in achieving food security in India and introducing new ways by which we can provide food for all.

Literature Review

The Green revolution helped in becoming self-sufficient and resolved the issue of food insecurity to a good extent in India. However Green Revolution has been criticized on the ground of focusing on only two crops that is wheat and rice and leaving other cereals and pulses behind, the green revolution has only helped the rich farmers, rice and wheat requires huge amount of water, crops which require more water are growth in India at a high rate. The green revolution was followed by white revolution in India which was initiated in 1970 also known as operation flood started with the objective to increase food productive in India which was a huge success in India and today India is the largest producer of Milk in the world by embracing new techniques for animal husbandry and changing the configuration of feed elements in different proportions. India also started the blue revolution also known as Neel Kranti Mission in 1985-1990 an initiative to escalate the farmer's income, growth of the aquaculture in the country. The aquaculture Industry is one of the fastest growth industry at an average rate of 9%, Blue revolution started in China which produces two-third of the world's aquaculture. Orange Revolution which promoted solar powered irrigation system in India to bring about changes in agriculture practises as with changing climate and increase in global warming, in methods are also required and a shift from conventional techniques to new techniques, followed by we have Yellow Revolution which was launched in 1986-987 to amplify the production of edible oils to attain self-reliance, edible oils like mustard and sesame seeds. Yellow Revolution directed nine oilseeds which incorporates groundnut, castor soybean, mustard, sunflower, safflower, linseed, sesame and niger. Yellow revolution started in Punjab, oil production was about 12 million in India which increases and doubled itself in the next ten years and helped to reduce socio-economic differences in the country, provided opportunities for employment and eradicating poverty to some extent. The period between 1991-2003 is known as the period of Golden revolution which is referred to as development in horticulture sector which improved economic conditions of farmers and increase production of fruits, and appeared as a sustainable livelihood options of rural India, improving income, use of new techniques and shift in cropping pattern to crops which will provide better allowances which has finally made India, the second largest producer of fruits and vegetable, However the horticulture Industry has been facing serious crisis in the from of lack of infrastructure for cold storages, Lack of market accessibility in rural areas, thus resulting in wastage of food contributing to Food security issue in India. Rural India plays a very important role in the food sector as they are the backbone on which the country survives the above revolutions in India has contributed to the food security in India and a main exporter of goods in the world. Today India is the sustainable producer of milk and pulses, the second gigantic producer of vegetables, fruits, rice, wheat, sugarcane and groundnut. A country rich in resources and production but is unable to feed the whole nation, with rise in population, demand for food is also amplifying. Climate Change, environment hazard, global warming, deforestation, exploitation of farmers, not providing them sufficient resources, illiteracy, lack of knowledge about the nutrients crops and which food is required for healthy lifestyle have all contributed to lack of food security in India.

Findings

8.8 Lakh people under the age group of 0-5 died in 2018, out of which 69% death were due to malnutrition. 67 Million tonnes of food is wasted every year which is equal to 92,000 crore, this amount can serve food to small state or even feed Bihar a whole year. 21 million metric tonne of wheat is decomposed every year in India. 73% of solid waste out of which only 3% is plastic and rest are dairy, fruits, and vegetable waste in Maharashtra contributing to 9400 metric tonne. New Delhi produces 9000 metric tonne of solid waste per day East Delhi produces the gigantic landfills. Wastage of food not only has a negative impact on the environment but also affects the economic of India. According to WFP report, providing an estimate how much a plate of food costs in different parts of the

world .A plate of food in New York cost \$ 1.26 , that same plate in India would cost six time more than the cost in New York which is equal to \$7.37 more badly effected countries would include Pakistan, South Sudan. It is estimated that 9 million people die each year due to hunger or hunger related disease .

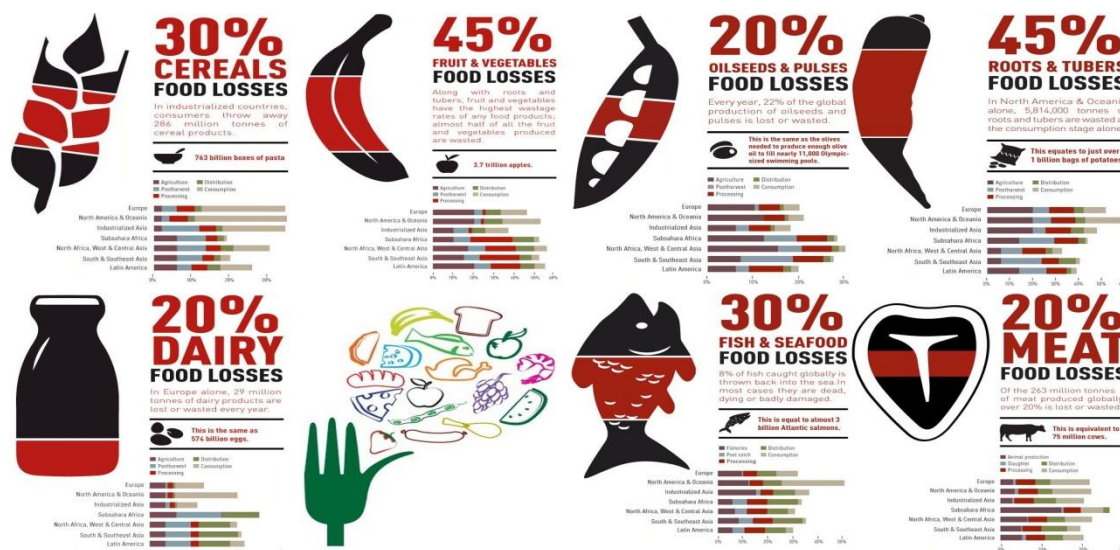


Figure 1: The amount of food wastage per year in India

In India food security Act is under the central government , every state has a different problem when it comes to food security , climate , geographical region has an impact on the crop producing , states where the water facilities is good and then there are states where we see water crisis which further adds to the problem.

Agriculture is the backbone of food security across the world and farmers are the tools of food . India is a Agriculture country and home to few of the largest growing crops. India is highly depended on the monsoon season for their harvest , the year India receives good amount of rain the crop growth ate is high otherwise it grows on an average rate . Due to constant climate change and environment degradation , the quality of soil and land id also degradation . Big farms land are being taken away for development projects which has made the famers unemployed in many regions. Many Famers have to work in other farmers land to grow crops, as all crops can't be grown on the same land, we have seasonal crops which can't be produced throughout the year . Agriculture logistic in India is in a very poor state we don't have enough cold storage facilities , lack of infrastructure , as there are many crops that are grown during a particular time of the year , those crops are grown in huge number and we need to store them , as we have lack of cold storage facilities in India , half of the crops grown become decay after a point of time and are wasted . To resolve this issue a few states or cities in India has started community supported agriculture like in Pune , Mumbai , where is a direct contact between the consumers and producer , the consumers decides which crop they want and according to that the famer grows crop , this helps to reduce food wastage and the famers income also remains stable , as the consumers directly pays to the famers and their is no third party involved, Usually when a third party is involved the crops are sealed at a different price and it goes through a chain of intermediaries and ultimately what the famers receive at the end after a long waiting , is not sufficient enough to earn their living and maximum famers are today living before poverty line.

Lack of Vocational training , knowledge about crops, fertilisers and soil erosion adds to the problem of food security . In India 70 % of the people living in rural India , out of which more than half of the population is dependent on agriculture for their living while some depend on horticulture and some are into fishery culture .However , we see a decline in fishery culture , with a rise in water pollution , big industries which are situated near the rivers or near a rural area usually dump their chemical waste into the river making it polluted , throwing different chemicals , oil waste ,even domestic garbage is thrown into the rivers which makes the water highly toxic , the fisheries in the river die out of these chemical

and toxic waste and even if the farmers continue with the fishery culture, the fish becomes unfit for consuming, many countries like have decided to end fishery culture and be depended on other countries as they are suffering from serious water crisis and water pollution. India has a serious problem of water, there is water scarcity in many parts of country. 70% of the groundwater in India is used for irrigation purpose, India is a poor irrigation facility, and most part of the country practices conventional method of farming, machines are not used till date and human labour is required. Good quality seeds are not available to all the farmers which is the main component for the growth of crops, the cost of the seeds is expensive which the small and marginal farmers can't afford and in some places due to poor road connectivity it becomes difficult to go and collect it. Salinization makes the land unfit for agriculture purpose, in recent years it is increasing and causing a serious threat to global food security. Organic farming is being promoted in many parts of the country, the government has introduced soil health cards facilities and e-NAM which will provide farmers knowledge about the soil quality, its productivity nature and the amount of nutrient it requires, knowledge on different fertilisers etc for the proper growth of crops.

Women participation in agriculture is declining with every passing year. In Haryana there is zero tolerance for women participation in agriculture. Women's have no rights on land, they kept away from agricultural activities in many region. It is estimated that 42% of farmers are women who have no recognition, women who participate in agriculture activities has very less work to do and main business of selling and buying remains in the hand of men. Kundumbashree movement in Kerala was a movement started by women, the women's got together and started working for collective growth and development. However in the tea industry, it is women who do most of the business and farming work which includes states of Assam, Kerala, Karnataka, Darjeeling and a free more. Defarmerisation of Women Agriculture.

Currently the government is playing an important role in food security by encouraging domestic production for meeting the demand of people, providing minimum support prices for procurement and storage of food grains, Public Distribution System and maintaining buffer stock. Right to food Act and National Security Act (NFSA) provides many facilities for the family living below poverty line both in rural and urban India. As per the Act 25 kilogram of rice and wheat will be provided at a price of rupee three and targeted public distribution system will provide subsidised food –grains to the below poverty population, constitute of food commission in every state for the proper monitoring the poor implementation of the Act, providing mid- day meals in primary schools, eradication all kind of social discrimination in food related matters, support effective breastfeeding. Around 5.35 lakh people, 23 crore ration card holders purchase 5 kg rice, 2 kg wheat and coarse grains at a reasonable price of rupee 3 for rice, rupee 2 for wheat under the Food Security Act, 2013. However the items that are provided using the ration card or Public distribution system doesn't provide foods that are rich in protein and are nutritious, As our body requires nutrition filled heavy diet for an active and healthy life, rice and wheat are usually the items that we can purchase what about that other pulses and vegetables and fruits that our body require on a daily basis which adds to mal nutrition, We don't have much millets crops in India and millets are an important component of a healthy diet, and even the mid day meal which is served in every primary school offers the same food every day, which would include rice, dal which is not sufficient enough for the body to develop in a healthy manner, the quality of food also matters. In every state the quality of rice differs which come from the Public Distribution System, However an initiative has been taken by the state of Karnataka, where during a particular time of the year millets are served as part of the Public distribution system

Hidden hunger where there is deficiency of vitamins and minerals, Fortification of certain foods. It is estimated that hardly 10% if the children are getting minimum diet diversity, the intake of food differs from village to village. where as we see India is the second largest producer of fruits and vegetables till

children and adult suffer from malnutrition and undernourishment both in the rural and urban India .Many states have interlinked agriculture and nutrient , Leveraging agriculture for nutrient to achieve Sustainable Development goal 2 :

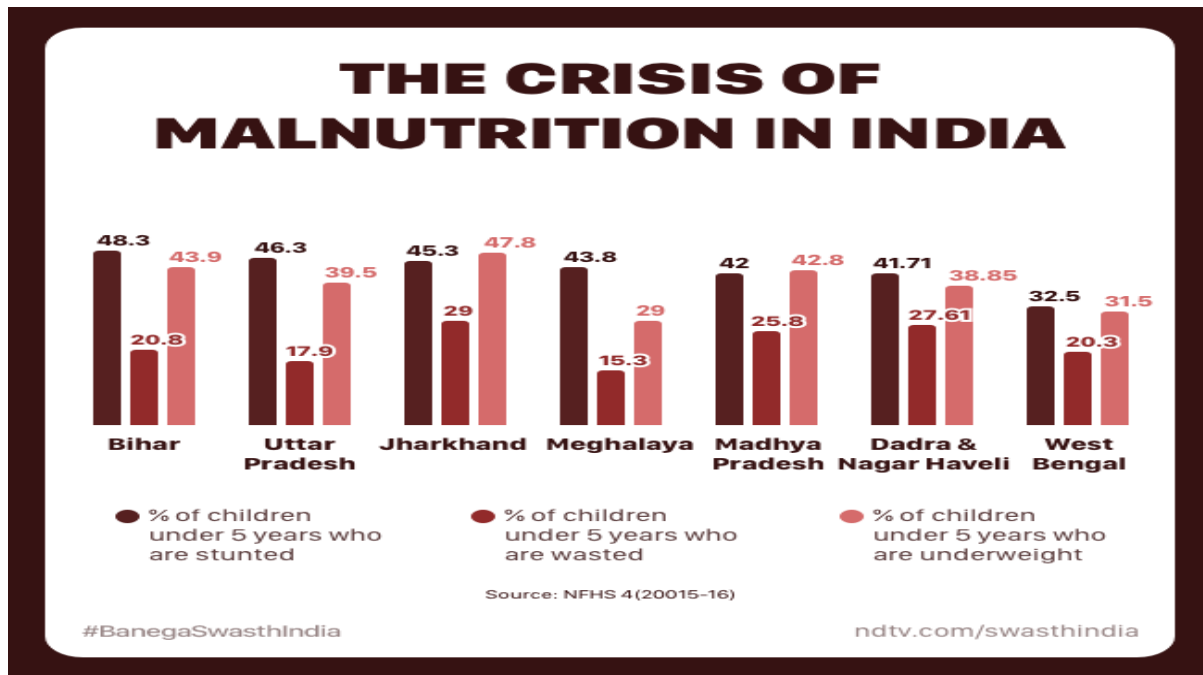


Figure 2 :Indicates the number of children dying out of Malnutrition in Different states

End of hunger and achieve food security , Farming system for nutrition approach has started to improve the nutritional status of small famers , Nutrition literacy is being provided tin many states ,explaining which crops are important to grow for healthy growth and development , nutrition based awareness programme , nutrition garden of fruits and vegetables supporting invention in poultry and fishery . Community Nutrition garden has been started by women in many states to promote the growth of nutrition based crops especially millets and pulses .Kitchen gardens are also growing in both rural and urban areas . Pathway of Nutrition sensitive Agriculture by empowering women , women nutrition and Rural area is best for nutrition crops but lacks marketing and store system .Moreover people across India needs education on nutrient and healthy food , earlier crops were grown which has good amount of nutrient , but it didn't flourish in the market , thus the farmers stopped growing those crops , as it was a waste .

Suggestions

As we know food security entails ensuring prominent food supply to people who are deprived of basic nutrients which will become measure concern in India . We need to introduce several policy suggestions

- 1.We need to introduce food insurance policy to maximize safety and security for Indian citizens who are economically weak and possessed less economical capital .
- 2.We need to introduce food loan to provide special food security towards economically weak community .
- 3.We need to introduce food bank to provide maximum growth in rural and urban sector .
- 4.We need to introduce free food once a weak for rural and tribal sector to provide maximum food safety and management.

5. We need to control food waste management to provide maximum food security in local-district sector.
6. we need to provide free food on the basis of nutrient structure to pregnant mother and mal nutrient as we know our nation accounted for 22% of global burden of food security.
7. we need to promote special child and pregnant food plan and security for better socio- economical development.
8. we need to introduce special food security for army and their family for better engagement and contribution to the national security and growth .
9. We need to cultivate more food resources to reduce food scarcity which will convert India into a larger exporter of food and other essential agricultural related commodities across the global.
10. We need to make mandatory “Special school food package “to fostering growth of school going children , teenager and make sure that poor student community should receive their essential nutrient into their colleges.
11. We need to introduce special nutrient food package to provide maximum food safety and security towards old people and orphan children.
12. We need to make mandatory to provide nutritious food to support maximum mental and physical growth of people.
13. We need to secure special food package for physically disabled people to provide maximum growth towards socio economic in a resilient manner.
14. We need to ensure that every retired person from different government semi-government , PPP model employ and private employees should at least allow to enjoy minimum food security related policy for sustainable growth in socio economic sector .
15. We need to introduce special urban and rural food package to rendering special testimony which will provide maximum food security and management towards several communities .
16. We need to ensure that establishment of ‘food security Center’ in every railway , urban and rural sector which will provide maximum growth and development towards Indigenous sub continent.
17. We need to introduce food collection unit to collect sea food , normal agriculture food , food waste (urban and rural) for providing maximum food safety in every sector which will achieve global acceptance towards globe food and security development project.
18. We need to introduce food bank which will provide a benefit strategy that covers food waste management , food safety and nutrient , food banking policy for maximum restoration of food waste, Women and child food safety and security .
19. We need a global food corporation which will ensure food security and management towards national and urban food safety management .
20. We need introduce to special food security facilities for women and child care .
21. We need to promote food security scheme for army and their family for better safety and health security.
22. We need to introduce special food insurance scheme for doctors , nurse and pharmacist for enhancing their socio-economical development

Conclusion

Food security is a burning issue in India , where thousands of people die every day out of hunger . We see a huge disparity in the urban and rural area , in urban area 67000 tonnes of food is wastage every year and in rural area people hardly have access to three meals a day . We need to bridge this gap to bring stability and provide food security for all . However there are a lot of reasons behind food security issues in India , where poverty is the biggest hurdle to achieve 100% food security , followed by unemployment , poor agriculture facilities , illiterate , lack of knowledge about nutrients and what a balance diet is and why it is required for an active and healthy life .Hidden hunger lack of basic vitamins , nutrients , minerals required for the growth , We even lack proper agriculture facilities like poor irrigation provisions , followed by lack of ground water facilities for growing crops , conventional methods of growing crops followed by lack of management system and health care facilities available at the rural level , lack of vocational training and skill development programmes for farmers related to agriculture development . However the government has provided many facilities but that is not enough for ending the problem of food security in India. We need to provide food management system , come up with new scheme to provide food facilities for pregnant women , children , old people and disabled persons .Global food cooperation to ensure food security for all , special food package scheme at schools , making it mandatory to provide nutrient based food facilities to all for maximum support and gain of all , introduce food bank policy and special food insurance scheme for doctors , nurses and army people.

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