



A STUDY OF ISSUES AND CHALLENGES FOR ACHIEVING FOOD SECURITY IN INDIA

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ABSTRACT

Food insecurity is a major problem all around the globe nowadays. The Millennium Development Goals include food security as one of the four most pressing global challenges, alongside ending poverty, protecting the environment, and ending hunger. Food security is defined as the ability of a population to achieve their nutritional requirements and food preferences regardless of their financial situation. When "every person, at all times," has access to "adequate, safe, nutritious food" for physical and mental well-being, we have achieved food security. Consistent "Food availability," "Food access," and "Food use" for basic nutrition, care, and water and sanitation are the three pillars upon which food security rests. The security and accessibility of food is of paramount importance for emerging nations to achieve their goal of self-sufficiency. Billion-person populations provide a problem and stress for food security in nations like China and India. About half of the world's wheat and the majority of the world's rice are stored in these nations. India had a record crop in 2010, but roughly a third of its food grains were lost due to a lack of storage space. As a result, the government is determined to maintain its stockpile rather than liquidate its holdings. When it comes to global food and nutrition security, India is by far the most puzzling nation in the world.

KEYWORDS: Food Security, India, Food availability, Food access, Food use, nutrition security

INTRODUCTION

In order to adapt to changing circumstances and set priorities, a country's policy framework must be adaptive. Its long-term policies should be guided by a vision, but its short-term policies should be prepared to address pressing concerns as they arise. The Indian planned economy model is flexible enough to accommodate essential modifications. However, unforeseen circumstances keep cropping up that call for a policy course correction in the middle of the game. A shift in strategic food related policy and activities are necessary in light of the current food and nutrition situation in

India. Alternate solutions are presented below.

Policies Affecting Food Security:

A review of the nation's policies on production, marketing, distribution, commerce, resource management, and upkeep of the natural environment is necessary due to the opening up of the economy and the integration of the global market. Market and domestic sociopolitical and economic conditions must be considered while evaluating these strategies. When a global problem of such critical significance as food and nutrition security is at stake, such a concern becomes even more important for



agriculture. A pro-food security policy should prioritize food self-sufficiency, maintaining a reasonable level of food prices in a way that does not conflict with the interests of farmers and consumers, increasing agricultural exports, and increasing investment for upgrading production potential in a cost-effective and sustainable manner.

A major change in policy concerns the careful privatization of production, consumption, investment, and the spread of technology. In light of the recent collapse of the global economy, agriculture must be a part of this transformation. It is important to determine the state's role in the ongoing national discussion about the economy and society.

The decline in investment in Indian agriculture over the last several years is one of the main negative factors affecting the country's agricultural holdings. Growth in agricultural output has picked up as a result of renewed efforts in both the public and private sectors that began with the start of the 11th Five Year Plan. Developmental planning and policies should include an adequate injection of science-based technology to make this progress a sustainable and continuous process. The application of science and reason to the use of commercial and natural resources for food production is crucial to ensuring enough food and nourishment for everybody. Important resource-related policies and the possibility of altering them are explored below.

a. Land Reform Policies:

Land distribution has always been an integral aspect of official Indian policy. The dismantling of the Zamindari system and other revolutionary land policies in

India occurred after India gained independence. In India, the goals of the land reform policy framework were twofold:

1. One goal is to reform the inherited agrarian system so that it no longer creates barriers to expanding agricultural output.
2. Second, and related to the first, is the need to end social inequalities and exploitation within the agricultural system, guarantee the safety of farmers, and treat all members of rural society as equals.

During the British period in British India, numerous land revenue systems were established in various regions. There are essentially three distinct land tax structures. The following are examples of such land taxation systems:

- a. Zamindari System
- b. Ryotwari
- c. Mahalwari System .

Everyone in India is bound by the country's ultimate legislation, the Indian Constitution. It guarantees its citizens' access to essential services by enshrining them in a variety of guiding principles including the Fundamental Right and the Directive Principle of State Policy. Some Fundamental Rights are guaranteed to people of India under the heading of "right to freedom" in the Constitution of India (Articles 19–20, 219, and 2210). One of such rights is the right to own property.

Before and after the passage of the 44th Amendment Act in 1978, the concept of property rights may be seen through two distinct lenses. The right to property was formerly guaranteed to all Indian citizens under Article 19(1)(f) of Part III of the Constitution. After the Constitution's 44th (Amendment) Act changed Article 21 to Article 200A, the right to property was no longer considered a Fundamental Right.



As a result, in India, the right to property is now protected by law. The right to property is no longer a basic right, but just a legal right in India, according to the deletion of Article 19(1)(f) by the 44th Constitution (Amendment) Act of 1978.

While the Supreme Court ruled that "the right to acquire, hold, and dispose of the property has ceased to be a Fundamental Right under the Constitution of India," the right that "no person can be deprived of his property save and except by and in accordance with law" remained protected. In addition, the Supreme Court ruled in *Indore Vikas Pradhikaran v. Pure Industrial Coke & Chemicals Ltd.* and others that "right of property is now considered to be not only a Constitutional right but also a human as well as a legal right." Following the Chief Justice's adoption of certain guidelines in *Dwarkanadas Srinivas v. Sholapur Spinning and Weaving Co Ltd*¹⁶ with respect to acquisition under Article 21 of the Constitution, any deprivation of the property must be:

1. Authorized by law;
2. Necessitated by a public purpose;
3. Subject to payment of compensation.

According to the Supreme Court of R.C. Cooper, "the compensation under Article 21(2) implied full monetary equivalent of the property taken from the owner that is its market value at the date of acquisition." Articles 21A and 21B were added retroactively by the 1st Constitution (Amendment) Act, 1951, while Article 21C was added by the 25th Constitution (Amendment) Act, 1971. These safeguards are meant to protect individuals against legal action taken to limit their property rights.

The primary goal of Paragraph One of Article 21A is to promote the Agrarian Reform in order to strengthen the Agricultural Economy. The phrase "Agrarian Reform" refers to the process through which the government redistributes farmland to farmers and enacts new policies meant to boost the agricultural industry as a whole.

b. Water Related Policy:

In this sense, India is classified as a subcontinent due to the wide variety of its inhabitants' racial, religious, caste, linguistic, and cultural backgrounds, as well as its varied topography (including highlands, lowlands, deserts, rain forests, hot springs, and mountains). Despite being a part of Asia, India is considered a continent since it has all the characteristics that a whole continent should.

Water is a natural resource that may be found almost everywhere on the planet. It is tasteless, odourless, and transparent. There are literally billions of water molecules. One oxygen and two hydrogen atoms make up each molecule, and they're bound together by strong covalent bonds. On Earth, water may be found in all three of its known states: gas, solid, and liquid. Depending on the temperature, there are a number of different types of water that may be used. Water is the liquid that makes up the majority of the Earth's waterways and is used for a wide variety of human activities, from drinking and sanitation to energy and transportation to agriculture and leisure.

One of the most valuable national assets, water is also a crucial natural resource that all living things rely on. It is commercially recyclable but cannot be replicated. Farmers, manufacturers, and regular people all utilize it to great effect. Water



usage in agriculture is now a major issue. Considering the scarcity of this resource, water conservation and efficiency are of paramount importance. Everyone involved should work to maximize agricultural output from this resource. Water conservation has various implications for the farming industry. There is no other resource more precious or in greater demand than water, but its uses are as varied as human civilization itself. Despite worldwide warnings, India continues to severely limit its usage and demand for water, leading to massive waste.

c. Fertilizer Related Policies:

A fertilizer is any substance, either natural or synthetic, that is used to increase a plant's productivity and viability. Soil productivity may be enhanced because fertilizers can help the soil hold onto water and filter out surplus moisture. Indian agriculture owes much to the introduction of chemical fertilizers, which have allowed the country to become self-sufficient in food grain production. Urea is made accessible to farmers at a statutorily limited subsidized price in order to promote equitable nitrogen application and long-term agricultural growth. The fertilizer subsidy amounts to the difference between the Maximum Retail Price (MRP) and the real farm cost of fertilizer. The federal government has provided funding to a fertilizer production firm. The fertilizer subsidy is the difference between the price at which fertilizers are made available to farmers and the price at which they are retained. The suggested retail price (MSRP) printed on the bags will be used to determine whether or not the asking price is fair. The difference is given as a subsidy to the sector. According to the estimated table below, Indians spend the

third-largest portion of their overall subsidy amount on fertilizer, behind oil and food.

The rate at which these nutrients are used up is disproportionate to the rate at which they are being mined out of the ground. For greater and more stable economic yields, as well as to curb nutrient loss, halt soil and water pollution, and boost Total Factor Productivity (TFP), these applications should be more well-rounded. Applying nutrients in the right amounts will also boost fertilizer efficiency. The intriguing correlation between stable fertilizer use and national food output deserves emphasis.

The Indian government supports a program called "balanced and integrated use of fertilizers" that encourages farmers to apply nutrients to their crops in a sustainable manner. This involves the use of bio-fertilizers and organic minutes. To better advise farmers on the application of major and micro-nutrients and other areas of fertility management, the initiative offers financial help to set up new soil testing facilities and enhance the current ones.

Soil testing encourages farmers to use fertilizers in their farms scientifically. Only around a thousand labs in the United States do soil tests, yet they can analyze 12 million samples every year. One crucial part of any sustainable farming system is regular soil testing for the purpose of managing soil fertility. Value for money is maximized by proper soil testing and fertilizer application based on soil testing, which increases yield and quality of agricultural food while reducing hazardous chemical pollution of soil and ground water. The current infrastructure and network are insufficient; more soil testing



labs and qualified personnel are needed, along with greater coordination and a more effective monitoring system.

d. Seed Related Policies:

The seed is the starting point for the whole agricultural production process. The seed production program in India uses a breeder, foundation, and certified seed multiplication chain with a restricted generation scheme. By preserving a defined level of purity in a certain crop variety as it travels from breeders to farmers, the method guarantees the quality of each successive generation.

The efficient management of biological resources is crucial to ensuring the security of food and livelihoods. Since these specific plant species would have been grown and fostered for ages, protecting their biodiversity in food production systems is inextricably related to sustainable use and preservation. Biodiversity refers to the wide range of variation found among Earth's living beings, whether it in terms of species, genes, or ecological systems. All land, sea, and air-dwelling species are unique in their own ways.

The term "agro-biodiversity" refers to a subset of biodiversity resulting from agricultural practices. Food, fodder, fiber, fuel, and medicinal species and genetic breeds are all included. For the sake of protecting seed varieties and increasing agricultural output, food security, and economic benefits, agro biodiversity plays an important role in agriculture. In 1962, the government of India established the National Seeds Corporation, a seed bank. Seeds from various crops and endangered plant species are preserved in a seed bank, a specialized kind of general bank. Seeds from all possible plant species are gathered

and preserved in a seed bank, which then distributes those seeds to farmers. The majority of seeds have a long storage life without losing any of their genetic integrity. Seed banks' primary activities revolve on the selection, collection, and storage of various seed varieties. They also collaborate with community seed banks, non-governmental groups, and government agencies worldwide to create seed exchange networks. Two of the biggest seed banks are the Millennium Seed Bank and the Svalbard Global Seed Vault.

e. Price Policy:

Economic policies that put the needs of the people first are good for the economy as a whole. Any economic program should adhere to the same creed. Free market economic policies that lead to a market economy, regulated market economic policies that lead to a market economy, regulated market economic policies that lead to a command economy, and mixed economic policies that lead to a mixed economy are the main types of economic policies that currently exist in the world. All economic resources are divided, output is maintained, and finally, revenue is dispersed via these measures.

DEGRADATION OF THE AGRICULTURE LAND AND DIVERSION OF LAND:

Particularly in low-income nations, land degradation may have far-reaching consequences. Although soil erosion is a worry for vulnerable soils, the few comprehensive analyses that have been conducted in temperate regions suggest that the repercussions are not great for aggregate agricultural production. When a land's ability to supply ecosystem goods and services and guarantee those services



over time for their beneficiaries declines, we say that land has degraded.

Large swaths of land and many people in dryland regions are impacted by land degradation. An growing number of people get trapped in drylands during dry years as a result of population growth and human expansion into these areas during wetter times. Land degradation in India has serious consequences for people's ability to make a living, as evidenced by the rise in poverty, migration, and food insecurity, as well as a decline in crop production, productivity, land use intensity, changing cropping pattern from conventional crop, high input use, and declining profit.

CONVERSION OF LAND TO AGRICULTURE TO NON AGRICULTURAL PURPOSE:

Large-scale destruction is caused when farm, forest, and mountain areas are developed for other uses. Under the existing system of unrestricted market activities, land-use changes are being implemented in a way that is both random and environmentally destructive. Although deforestation is the primary cause of environmental deterioration, small farmers, loggers, ranchers, and plantation businesses will also contribute to the problem. The clearing of land for agriculture and grazing has long been recognized as a major contributor to deforestation. Deforestation refers to the systematic and long-term elimination of forest cover. Loss of biodiversity and climatic stability are only two of the many effects of cutting down forests. Siltation, floods, soil degradation, and dwindling wood supply all have negative effects on economic activity. Consequently, this endangers people's ability to make a living. As a result of deforestation, once-forested

land is no longer suitable for conservation purposes. Much of the land has been cleared for development, and it is no longer suited for ranching or farming. When land is no longer protected by trees, it quickly loses its fertility and arable status. Because of agro-processing industries and export-oriented cultivation by wealthy landowners who establish monopolies on ground water and surface water resources, agricultural lands are increasingly being diverted to non-agricultural uses like industry, housing, tourism, etc., and agricultural lands are being severely damaged as a result of industrial waste, pollution, water extraction by the industries, townships, etc. As a result, tribal populations are losing their source of income, and the amount of arable ground available for growing grains and pulses is decreasing, posing a danger to global food supplies.

The method for converting agricultural land to non-agricultural use in Karnataka is spelled out in Section 95 of the Karnataka Land Revenue Act 1966. The reason for the land's redevelopment must be explained. The Deputy Commissioner may provide approval, with or without restrictions. An original Record of Rights and Tenancy Certificate (RTC) issued by the revenue authority and a photocopy of the land atlas (survey number) attested by the Department of Survey Settlement and Land Records showing the dimensions with scale and boundary of the land proposed for conversion are required to avoid legal penalties. In addition to the proposed site layout, the applicant must include a copy of the village's revenue survey map highlighting the proposed land conversion's location.



Land with a changed use is restricted in several states. For a limited time, transferring it will cost a fee or need approval from the relevant government. The authorization to use the property for a different purpose is revoked and the land is returned to agricultural use if the original purpose is not fulfilled within a certain time frame in some states. To avoid having the conversion order revoked and the premium deposited forfeited to the State Government, any agricultural land that has been converted for a non-agricultural purpose must be used for such converted purpose within the specified time from the date of issue of the conversion order.

Furthermore, property that was formerly used for agriculture but has since been developed for housing cannot be utilized for manufacturing. All of these distinct land applications result in distinct revenue assessments. The owner of the land providing the reason for the conversion. The buyer of such transformed property should demand to see copies of all relevant paperwork, including the application for rezoning from agricultural to residential use and any relevant approvals.

The majority of India's land is used for farming, with forests taking up the second largest share. Although non-agricultural users, such as urban industries, infrastructure, and settlements, have historically occupied just a fraction of the nation's total land area, this proportion is likely to change dramatically in the next decades as the country rapidly urbanizes and develops. Most of the country's privately held land is classified as agricultural land and utilized for farming. Although landowners have the right to sell their property, changing the land's use from agriculture to industry, commerce, or

any other purpose often requires the authorization of the revenue department, which is typically granted in exchange for money. Large tracts of land are often purchased by the government on the condition that monetary compensation is paid in accordance with land acquisition regulations, when such property is needed for the building of railroads, canals, roads, or other public infrastructure, urban housing, or any other public purpose. Land acquisition for the purpose of locating privately held industries is authorized under these statutes. While landowners' choices over time have a cumulative effect, major shifts in land use are the result of policy decisions made at the national level, with forced land acquisition serving as the primary mechanism for implementing these shifts.

SOCIAL ISSUES INVOLVING FOOD SECURITY

The nation's development plans should give social concerns the highest priority since they are crucial to the country's economic growth. For a nation like India, where human development and associated social concerns have been ignored for generations, this is especially crucial. Economic planning, rather than social and human development, continued to be prioritized even after independence in 1947. The middle class and the higher classes are the ones who are benefiting the most from the current economic upswing. Some of the public mass has slid beyond the middle class and into poverty. The majority of BPL individuals, however, have not benefited from rising living standards. When compared to other countries, India ranks rather poorly in terms of human development. The population problem, poverty, hunger,



malnutrition, health and sanitation, education, child development, employment, and empowerment of women and farmers, along with Scheduled Castes and Tribes and poor segment of minorities and other classes, must all be addressed head-on if India is to earn a respected place among the socially developed nations of the world.

CLIMATE CHANGE IMPACT ON FOOD SECURITY:

The effects of climate change pose the greatest risk to the environment and are among the most pressing problems we face today. In instance, heat waves and other climatic extremes may have far-reaching, detrimental effects on human culture. Internationally enforceable agreements on climate change are notoriously difficult to establish, and much remains unknown about the effects of climate change. In the context of India's economy, climate change is a major concern. A substantial percentage of the population lives in poverty and goes hungry, and the country's dynamic geography only makes it more at risk from climate change. Because of its direct effect on agriculture and, by extension, food production, understanding climate change is essential.

Since the Rio Earth Summit in 1992, more and more people have been aware of the issue of climate change. With the goal of "stabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system," the UN Framework on Climate Change (UNFCCC) was adopted as a direct result of the Summit. Several international conventions and talks have been held on the subject throughout the years. Greenhouse gas emission reduction

goals for industrialized nations were first established by the Kyoto Protocol in 1997. The first commitment period did not begin until 2008 and last through 2012, despite the agreement being ratified in 1997. Beginning in 2012, the second commitment period will last until 2020. Adopting measures pertaining to climate change and global warming has also been emphasized in the newly approved Sustainable Development Goals (SDGs), the successors to the Millennium Development Goals (MDGs). In reality, "take urgent action to combat climate change and its impact" is a target of the Sustainable Development Goals (SDG). The 2015 United Nations Climate Change Conference, which took place from November 20th to December 12th, has come to a close in Paris, France. A target of "holding global warming to well below 2°C above pre-industrial levels" was established during this summit. Anthropogenic greenhouse gas emissions are to be reduced to zero by the middle of the 21st century, as per the accord.

Exposure of agriculture, water resources, and ecosystems to severe weather events and more variable precipitation effect of glacier melt on water resources quantity, biodiversity, and low-lying agriculture are only some of the climate change hazards to which India is vulnerable, according to a World Bank Report from 2009. Changes in forest vegetation and biodiversity, rangeland regime changes, and lower agricultural yields in tropical and subtropical regions"

Given the severity of this phenomena in terms of its expected severe consequences on the lives of human beings and assets around the globe, the phrase "climate change" has quickly risen to prominence



as one of the most significant effective expressions used in the global development conversation. According to the IPCC, "climate change" is a noticeable shift in the climate over a considerable length of time (decades or more) that can be traced to observable changes in the climate's mutable qualities. A climatic shift might be the consequence of natural variability or of human interference.

There has been an increase in the frequency of cyclonic storms and droughts in a separate region of India. In eastern Madhya Pradesh, North-Eastern India, and some portions of Gujarat and Kerala, monsoon seasonal rainfall has reduced by 6–8% of the average during the previous century. West Bengal and Gujarat, two states in India, have seen an increase in the frequency of severe weather. There has been an annual rise of 0.011 occurrences due to them. Additionally, annual increases in sea level range from 1.06 to 1.75 millimeters. Even by the end of the 21st century, India will be dominated by such wildly fluctuating climatic patterns. Heavy rains are forecast for India, which will cause massive amounts of soil erosion and landslides.

However, it is predicted that in rain-rich regions, the intensity of rainfall will rise, resulting to floods and the depletion of fertile soil. Drought is expected to worsen in drought-prone regions including Rajasthan, Madhya Pradesh, Gujarat, and Andhra Pradesh. Many people may be forced to leave their homes and communities as a result of predicted floods and droughts, and rising temperatures may increase the prevalence of vector-borne illnesses and cause heat-related deaths and water shortages. However, there is a

significant population in India that experiences hunger and malnutrition.

CROP DIVERSIFICATION:

Diversification can be thought of as a transition from low-value agriculture (crops and livestock) to high-value agriculture, or as the use of resources in a larger mix of diverse and complementary activities within agriculture. Thus, due to developments in rural infrastructure, fast technological change in agricultural output and varying patterns of food demand, agriculture is undergoing a process of diversification as it shifts from a focus on subsistence food crops to one that is more market-oriented. Efforts in India are being made to shift the country's agricultural focus toward higher-value crops and animals. There has been diversification not just between but also within the agricultural, cattle, forest, and fisheries industries. Non-crop agricultural industries including livestock farming, tree farming, and fishing have been steadily growing in importance within the agriculture industry, both in terms of production and employment. Rising per capita income, rapid urbanization, changing tastes and preferences of consumers, and sustained economic growth are all contributing to a shift away from staple foods like rice, wheat, and coarse cereals and toward higher-value food commodities like fruits, vegetables, eggs, meat, and fish products. These high-value goods have increased in both demand and supply at a considerably higher rate than basic foods.

CONCLUSION:

Fundamental requirements for human survival include We still base our lives on obtaining food, clothes, and shelter. Almost every kind of life on Earth relies on it to some degree, from the smallest



germs and insects to the largest mammals and birds. With a growing population and a large proportion of the population experiencing malnutrition and underweight, the government must take concerted action to ensure its citizens always have access to enough food. The distance between farmers and customers in the supply chain has to shrink. The food security situation in India may be improved and made more resilient through the use of farmer-friendly marketing methods. For India to finally achieve national food security, authorities there will need to make changes across the board in areas like administration, sociology, economics, policymaking, and more. This is because ensuring everyone has enough to eat is impossible from just one vantage point; only by addressing the problems listed above can the government hope to make universal food access a reality.

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