

Sustainable Food Security Hazards in Bangladesh & the Socio-Economic Impacts

Md.Mizanur Rahman Mizan

Bangabandhu Sheikh Mujibur Rahman Science & Technology University

Corresponding Author: Md. Mizanur Rahman Mizan

mizan1999.baura@gmail.com

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ABSTRACT

The major problem of Bangladesh are various circumstance frequently climate changing impacts and acute problem of geographical location. The unexpected converted to all important sector day by day it has extended. In present times the difficult right way management of pure drinking water, irrigation water supply and dumping management system. It is the problem of serious key factors of water wide arsenic. About 2.1 million respondents of our country has using tube wells which almost 55 ppb of arsenic contamination. The main reason of agricultural problem such as lack of adequate super seeds, insufficient fertilizers and others actors influence the negative prosecution of food security. If our country of all sectors balanced then frequently decrease negative impact factors. To be main focus point of defended food security and overall increasing the arable production which includes the major concern of government bodies, NGO'S and international organisation.

INTRODUCTION

Bangladesh is dependent on agricultural production. Bangladesh is located in the south Asia region. It has the most density population country almost 160 million. To be understand that 71.11% people living in rural area. Overall information describing that shows the mainstream concern of some of the term the inflation of food consumer price which do inability make sure into the food management. The international organisation focus on raising the food production which success into the zero hunger decrease and under the proactive solution extended question in front of facing out of future generations feeding systemization. The households and personal food safety needed to the situation of relating feeding adequately is needed perspective and obtain the feeding defended ways. Whichever confirmation to food supply and future generations is difficult if do not right approach to ensure the sustainable food security and then decrease the food price and getting the all sector population food available into the internal and external food value system.

LITERATURE REVIEW

The Bangladesh constitution refer to several way describing the basic responsibility secure to the citizen needed food availability. In the article 18 coted that the regarding leave of primary food nutrition secure into the public health management. Food security is one of the major significance right of all the people and maintain the productive continuous prosecution. In 1971 has the rice production to 10 million but 2022 which increase over the 40 million metric ton(MT). In 1990 about 8.44(MT) of the cultivated land which the right way output the arable land build up. In 2022 the modern way recognition on the 85% arable land of rice production. Bangladesh has right now great way contribution of rice producer all over the world. Almost 82% agricultural land use to rice production capacity build up. In 2020 the expected rate of the rice production 38.3 million and it has raised to 41 million tons by the 2030. According to the updated report of FAO state that Bangladesh is now active fish producer countries which maintain world wide protection base nutrition and proactive status under the financial development of rural base people. In this report circulation that the three decades helped to inland fish producer from the 8.5 lac metric tones to the refer code into the helpful status of 40 lac metric tones. Bangladesh statistics bureau(BBS) the updated report the economic standard in the 2022-23 fiscal years the country 6.89 million tones fish production. Bangladesh has remarkable progress on food security , presently enacted the food safety act in order to the human protection control over the food production and systematic way proactive storage of supply and distribution. The safe food authority, the water supply act into the various chain of command under the management exploration specially enacted the consumer rights protection act the purpose of overall ensure into sustainable food security.

METHODS

The systematic study conducted with better decorations. Mainly I have used secondary data and describing this study three part of the way. 1) Beginning part.2) Experiment part.3) Discussion part. This parts are explained below:

Beginning Part

This part of the function are systematic design. The study way making the research question and setting some of the goals oriented question is given below:-1)What are influence of food insecure? 2)What does food authority reach into the FAO? 3)What are the step of food security? 4)How does we contribute the food availability? 5)How does the function of ministry of food with regional organisation?.

Experiment Part

The keywords and research question related are used to find out the ministry of food and department of food database. After searching in the designated place, the gained research articles, review papers and technical reports are reviewed. After the review process, only high quality research materials are selected. Finally intended to postpone some of the find out tools which do not match with research objectives.

RESULTS AND DISCUSSION

In the part most of the data is turned out from the selected to study oriented tools. The right information is separated into various main parts. After that logical data and information are separated for writing a definite sector or sub sector. Finally, through this systematic design and decoration my visionaries task completed.

Data Collection Approach

Firstly, I have collected data from food authority and the data cell of ministry of food and also FAO data cell. This all of the source is online version. I have also data from journal, books, and printed news in English version and food security protocol discussion. These source included but were not limited to the daily sun, daily star reports, the BBC, the guardian, Reuters. I have also collected data from the FAO related organisation. To postpone negative data from various media point that were connected my describing. All of the data find out I apply various checking method to several point for exact and finally deleted negative data.

Environmental Hazards

Climate Change

The incremental change of monsoon, raising sea level and raising temperature cause vanished food production in Bangladesh. The scholars have predicted that rice production in Bangladesh will lower percentage 8% and what 32% by 2050 due to the hazards influence of climate change. To be the

ministry of agriculture in Bangladesh coted that our country decrease about 80,000 hectare of productive land because of the hamper of climate change such as salinity, floods and droughts. Rice production in Bangladesh will decrease by 80 million tons by 2050 because of climate change. To understand also the output in a cost of U.S \$26 billion to Bangladesh agricultural department during the 2018-2050 period.

Frequency of Floods

Another environmental hazards to Bangladesh production of agricultural product loses the intended to season by season of flooding. To be per years estimated 20% of Bangladesh average agricultural result that flood destroy. Recently our country faces to the great way decrease in agricultural production due to the frequent floods. At the end of June 2022 and mid July 2023, floods output in the massive areas food shortage. In July 2023 the north western region of Bangladesh was again hit by floods.

Soil Fertility Decrease and Saline Expanded

The massive areas drought and polluted of paddy fields by salt water have a very simple accord in Bangladesh. In January 2023 saline water broad with the flooded areas about 120 hectare of farmland affecting about 200 families in Khulna district. Sweet water source likes ponds have also been contamination because of the mixing of saline water.

Crisis of Water

The lack of sweet water availability is one of the main hazards for sustainable food security in Bangladesh. Recently, Bangladesh is the great adventure to getting approve to water for irrigation and the among still productive lands. The 30 years long water sharing treaty of Ganges river signed with India has great way oppressed Bangladesh's fisheries, irrigation, Agriculture, industrial function salary broad of the coastal rivers, river silting, coastal erosion, sedimentation as well as the simple economic task. Recently water facilities in Bangladesh is about 120 billion cubic metres(BCM) during the dry season against the demand of about 200 BCM. It is the massive shortage of nearly 80% that output in drought in most parts of the country.

Decrease of Arable Land

In the last 30 years about one third of cultivated land of Bangladesh has disappeared due to planning less urbanisation and transfer of land to others areas. Bangladesh is a land shortage country other per capita farming land is only 11.5 decimals. It is allegations that per years almost 1% of the cultivated land in the country is converted to non-agricultural users. In the recently report of 2022 of the planning commission 1,20,000 hectare of agricultural land are being changed to the non cultivated land. In 2012 Bangladesh had six million hectare of cultivated land which were the reportedly decrease to about 4 million hectare in 2022. At present the farm land has been reducing by almost one percent every years and per day 325 point of land are being lost to others activities oriented use. The land scholar conscious that at the rate that farm land

is decreasing against the producing population it shall be very acute problem to ensure food security after 20 years.

Socio-Economic Hazards

High Population Growth, High Consumption Rate and Lack of Food

Bangladesh is the most relating populated countries in the world with a population of more that 164 million living on a small land area of 130,170 square kilometres. According to a report by the south Asian think tank centre for policy dialogue(CPD), Bangladesh can clearly face far more adapted food shortage in the next few years, beginning a hard level by 2050.To be understand also total that to overcome food shortage, Bangladesh has to import almost 2.5 million(25 lac) tons of wheat per years. The cultivated land of Bangladesh has reducing and food demand has increased importantly food shortage are prevalence too due to the negative practices in Bangladesh food marketing rule and regulation and by middle men. Such as, only 2250 tons of rice were imported in first time month of 2022-23 marketing years, 90 percent of which were by the private level. The private level also import lower quality rice agricultural elements from India due to the lower price. It is total that rice import may increase to 3,00000 tons in 2022, mostly by private level.

Poverty

Most of the farmers in Bangladesh are poor and the lower poverty line. Almost 90% of the farmers are small and marginal. About 60% of the rural population are great way landless with less than 0.05 acres of that land. The poor farmers depend on the market to meet massive needs their food. Because of adapting economical adventure, they have also cannot capable the high rate cost of cultivated agriculture production.

Insufficient Credit Facilities to Farmers

The credit amount is often insufficient and not problem in developed to the poor farmers. They are also not feet for micro-credit of non governmental organisations that deal exactly with landless farmers. This condition of farmers not to be adaptation the low quality system for agricultural elements because of high cost in fertilizers.

Adulteration of Food

In the present situation of food markets the basic items of the food like, fish, rice, fruits, vegetables and sweetmeats are contamination with adventure chemicals in an illogical manners. In 2022, a random survey conducted by the youth policy forum reported that more than 85% of food items on the market were find out the contamination.

Inflation of Food

The raising food price is the main present hazards of food security in Bangladesh. Since 2020, the price of major food elements has been increasing

rapidly, reaching a peak in the 2022 world wide food crisis due to Russia Ukraine war. If 2020 is taken as the main year of the food price hike, the raising price of food in 2022 and 2023 is starting. The prices of coarse medium fine food commodities have almost double in 2023 compared to those of 2022.

Inadequate Fertilizers Supply

Most of the farmers of Bangladesh can not use the proper rating fertilizers that are basic needs for high productivity. Inadequate fertilizers is postpone the food production of Bangladesh. In the past records, Bangladesh witnessed fertilizers crisis in 1974, 1984, 1989. Recently, fertilizers crisis happens in 2018, 2020 and 2021. Still poor farmers do not have open approval to fertilizers in adequate quantity to get together their cultivation requirement.

Inadequate Quality Seeds

The demand for great way process for the quality seeds in Bangladesh is still lacking because of a lack of costly seed conversation and systematic facilities. The Bangladesh Agricultural development corporations(BADC) achieve a subsidy from the government which provide seeds at a low level cost poor farmers, however have low level access to BADC seeds and have depend on the private level to purchase system seeds at a high level price. In this cases, poor farmers also do not adaptation and apply protocol type service for their cultivation product. As a result 35% of the farmers buy from others farmers in lower level markets and only 10% of the seeds are buying from the government seed suppliers.

Social Influence of Insecurity Food Value

Lower Health Condition and High Level Malnutrition

It is the exact link between malnutrition and household food inadequate. According to the scholar report, almost 45% of Bangladesh 180 million people live on less than U.S 2\$ a day .The CPD reported that almost 70% of food inadequate households were hit by hunger because of inadequate income. Malnutrition also raises at an warning rate in Bangladesh, oppressing almost 40 million women and 12 million children under five years old. Because of food shortage the village means current higher rates of three type of malnutrition, underweight and stunning in comparative to urban areas analysis. Over 55% of all pregnant and lactating women's have inadequate caloric intake and this complies birth of malnutrition babies. Recently, at least 63,000 indigenous people in the hill tract are foraging for food even resorting to eating leaves from trees on hill sides and forests.

High level of maternal mortality

According to the 2021 world bank report 35% of adolescent girls 46 per cent of no pregnant and 30% of pregnant women are anaemic. Around 28% of birth are born under the low level babies in Bangladesh because of low level nutrition. The report also highlights that frequently 50% children under the age of five are under level growth.

Economics Influence of Insecurity Food Value *Lowest Level of Labour Productivity*

The Labour food security is the low level day by day raised due to dependency on agricultural wage labour a vulnerable life. During the lean season march April and October November prior to hear vesting the major rice crops, job facilities are low. This output in lower wage per cent, while food values are at their highest perspective. Their income raise from no agriculture source provides a accurate safeguard against natural agricultural income and development the food security.

Inadequate Economic Development and Unemployment

According to the world bank report, in recent years, devastating floods, cyclone the dramatic raising in food price in 2023 and the global crisis have led to the food security and nutrition situation is lowest rate. The inadequate food security sometimes creates a largest influence on the future of children who are being taken out of schools to engage in income producing function to gain adequate food supply. Male members are also transferring to cities in find out of employment to cope with the high price hike of food.

Higher Rate of Debt

During the world food crisis in 2022, food cost represented 72% of total households cost, which was 10% points high level than the national total in 2022. As a result of the highest level food price, the poor people were forced to high level debt such as loans, thereby sinking the most deeply into debt. The farmers families take loans from their relations and high level moneylender to decrease food insecurity and meet the highest level consumption of their families.

Bangladesh Food Security Report-2022

In 2022, world food program continued to help the government of Bangladesh towards sustainable development goal two: zero hunger through ability to strengthening, resilience building, innovation and humanitarian assistance. In spite of a hard recovery from the covid-19 pandemic, poverty food security lack and lower point of malnutrition. And extreme weather program based hazards to the high populated country. Compounded by the world food crisis, high inflation and foreign currency shortage the vulnerability attached the poor people. World food program survey found that 12 percent of the population uses food insecure as of December 2022, an improvement from 29 percent reported in July. However the progress were unmatched 26% of low income households continued to experience food insecurity for six months in a row, from July to December. WFP sustained its life saving food and nutrition assistance to 1.7 million refugees and Bangladeshis vulnerability to food insecurity. While fires and monsoon flooding did affected the vast area of people. WFP swiftly provided emergency food assistance to 4,680 people affected by the fir. And in the after math of the June floods in the northwest,

WFP reached more than 267,000 Bangladeshi with emergency flood and economic assistance.

Bangladesh Food Management Report-April 2023

Almost 23% households have completely security less in food sector, a very bad trend progress in the last quarter of the years. In this reported the food insecure average percentage raise into 51 to 63%. In this situation all over the population to negative influence of food expenditure. Because of the exact time of Ramadan raise into the consumption and no increase the income source. In this great importance factors of food security not to be lack of income source. According this report the better situation of Dhaka division than others division. First of all due to the characteristics of the various households starting professions about the freedoms of agricultural function. The various number of occupation, working salaries, trading and proficiency response was the great way divisional reaction of food security. Such as, in the division of Khulna, the agriculture labour percentage was 16% than the other divisions. Almost family heads with the female and not to ability managed food for the family. To be created the comparative situation under February to march. In this condition the bad way income group people. In this survey opened the 43% people insecure in the food management in lowest income family. To understand 11% in the medium earning source of the family. In 61% family raise into the condition and said that high rating of food expenditure was concerns the bad level affected people 25% family decrease their health budget. All the families depend on food oriented and various strategies to the food manage system.

Defended Food Safety Reaction

Food security is one of the fundamental rights all the citizen. It has approval to adequate strong food values of nutrition of all the people. Bangladesh is the depend on agricultural production but frequently decrease the arable land. In spite of our country has remarkable development in sufficient food provide to 171 million people. It is imagine that the financial development to 42% contribute of the agriculture sector. Bangladesh national budget provide a significant percentage to continuous process of food safety and the program of social protection, It has positive influence to food ensure of the poor people. To be various social protection oriented function deal with old age allowance introduce the present government body. To obtain the several functional positive output into sustainable agriculture policy and governmental sustainable progressive targets.

International Facilities of Food Availability

Food Availability with FAO

In point out the react decades to great way manipulation of food security with FAO. In 2022-23 fiscal year, the ministry of food and the department of food the legal issues visible to the country director of FAO through the food security situation. In the hazards condition to food inadequately of the prospect of the export and import level. Recently, inflation system to do not food management of rural area people. In meantime, FAO emphasize the food

provides to Bangladesh management section and recommendations the vast area food production project deal with the financial support to the food oriented agricultural management issues. In between FAO and food authority time to time communication build up systemization of the ensure of food security.

Food Availability with South Asian Food Provider Centre

To be many others south Asian countries frequently development in digital agriculture system. In this process help the food provider centre into the major collaboration issues of submerge food insecurity into the Bangladeshi population. In order to the pandemic years various protocol emphasize the food security in Bangladesh. This centre the number of amount food production availability into the provide for Bangladesh. Such as 2020-21 fiscal year this centre provide almost 31 million tons food element.

Global Agriculture Research Centre

To be understand in 2022 global agriculture research centre provide the important program run into the Bangladesh agriculture sector such as the arable land making the quality produce system how development increase the quantity of total harvest. In others scenario I see that the various proactive agricultural project which contribute the governmental domestic production build up. In 2023 the same way ultimate goals completed the last fiscal years of the agricultural production activation into the food value oriented system. The recent information technical program share almost 30 billion dollar to the south Asian countries over solve the food security over malnutrition.

Governmental Measures of Bangladesh in Food Management

Raising the Agricultural Element Distribution Facilities

The recent year 2023, the Bangladesh government authority introduced the agricultural element supply program. Almost 10 million marginal farmers included this program and providing their fixed price fertilizers and seeds . To be increasing adopted the hybrid type of seeds which output of great way efficiency.

Development of Livestock Sector

In 2022, the Bangladesh governmental body formulated the great way policy of livestock sector. In addition to introduce the major hazards and sustainable facilities into the sector production under the gradual cultivator production in our country.

Climate Strategic Plan

The prime minister of Bangladesh refer to great way planning protection the negative impacts of climate change. The governmental visions implementation the next 25 years plan and decrease the climate change effect. This government followed to higher status countries and recent backdrop of multi facilities through the world climate effect into the attractions of support.

In addition to the modern innovation system to agro production build up adaptation to the climate change into this plan.

Strong Food Policy Adaptation

The Bangladesh government declared the adaptation plan of food production. This program includes the various issues such as nutrition and climate change. The governing body into the definite visions full file into the adequate food supply, open approval of food, the financial approval of food. In order to adaptation program basically evaluation and monitoring process under the security.

Development of Food Product Import

In alternatives approach apply the import system of food product which the consumer facilities increase to various marginal group. In 2022 the governmental report that the present situation of the right way food product balance of import and export.

Development of Food Product in Marginal Farmer

In this system the governing body raise under the various program build up which easy to food management of marginal farmer. In addition to the accessories subsidy distribution of the vulnerable people under the Reliance program.

Decrease the Vulnerable Condition in Agriculture and Rural Sector

The present governmental visions build up another sector of agriculture and rural development which the vulnerable people raise into the introduce into new projection of agricultural development.

Visionaries Progress of Southern Area

In the regional perspective of development of agriculture production into the coastal areas and fisheries sector. The multi sector production variable in great way agricultural improve to southern district. The ministry of agriculture are various road map in capabilities in the integration of functional approach running this area. In this master plan protective way into the marginal farmers and present to natural disaster.

Recommendations of Food Security

1. Raising digital agriculture services.
2. Increasing to agricultural research.
3. Raising to agriculture technology investment.
4. Development of social protection program.
5. Easy access to ensure marginal farmers.
6. Ensure financial development of vulnerable people.
7. Development of nutrition service provider.
8. Converted to consumption system.
9. Selected to food demand indicators.
10. Reformation of food policy.

11. Reformation of food product market policy.
12. Converted to food product trading system.
13. Adoption to green food security.

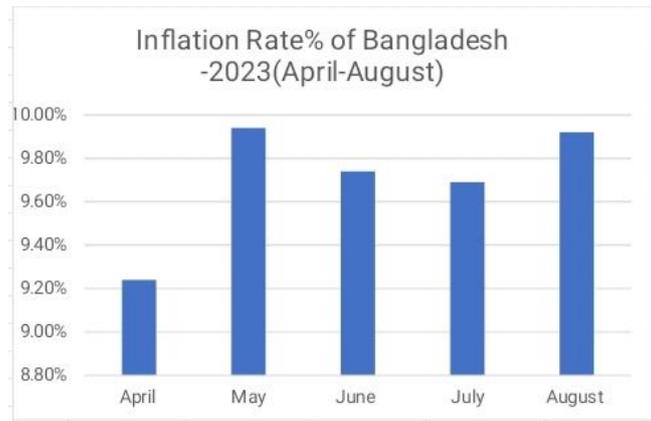


Figure. 1 Inflation Rate% of Bangladesh-2023(April-August)
 Source: Bangladesh Bank

FY	production	Consumption
2018-19	34,909 MT	35,400 MT
2019-20	35,850 MT	35,700 MT
2020-21	34,600 MT	36,100 MT
2021-22	35,850 MT	36,500 MT
2022-23(Oct-Sep)	35,650 MT	36,800 MT
2022-23(Nov-Oct)	35,650 MT	36,800 MT

Figure. 2 Rice production and Consumption
 Source: USDA

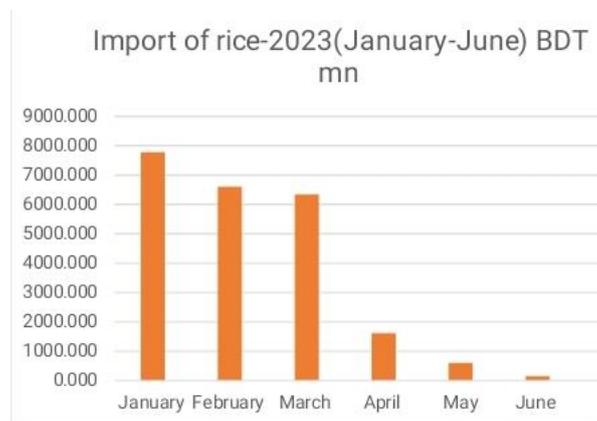


Figure. 3 Import of Rice-2023(January-June)
 Source: Bangladesh Bank

CONCLUSIONS

Bangladesh is the various issues oriented countries. Despite the fourth industrial revolution to output the origin of modern agricultural instrument which help to continuously agro-pharm remarkable progress. The governmental organisation play a importance role under the marginal farmer to growing their agro sector and full file food management. But sometimes face to great way crisis which fall into the agriculture production. To be collaboration the non government philosophy implementation. The government authority turned out the specific goals monitoring system into the food security perspective. In the right way framework maintaining their protection of food insecure and development of market values. To be food security evaluation into the several initiative emphasize on the knowledge base food values promotion under the necessary steps. In the hazarding case of food contamination of illegal chemical provoke the food management system.

FURTHER STUDY

This research still has limitations so further research needs to be done on it "Sustainable Food Security Hazards in Bangladesh & the Socio-Economic Impacts."

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