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## CONFRONTING GLOBAL WARMING INCLUDING THE ISSUES OF FOOD PRODUCTION

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### ABSTRACT

*In recent decades the main worries that the world's environment, people and economy have been impacted by climate change have been examined. As a result of increasing global food supply while dealing with limited land and water resources and developing climate-change concerns, agricultural activity will face significant difficulties in the 21st century. However, such issues offer more environmentally, economically, and socially risk-resistant options to build and sustain food and subsistence systems. In order to cope with these problems, it is definitely essential to use current multidisciplinary knowledge and different technological and institutional advances. The changing climate is confronting agriculture and agricultural policy-making. Agriculture must handle both greenhouse gas (GHG) emission reduction and climate change adaptation. The goal of this article is to analyse some of the key findings concerning many of these issues, with an emphasis on climate change and to provide an overview of the significant difficulties faced by the world's food and agricultural environment in the 21st century and its effects. Specific issues and their impact on agriculture will be the topic of future research.*

**KEYWORDS:** Abiotic Pressure, Agriculture, Biotechnology, Food Security, Salinity.

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### 1. INTRODUCTION

The global population in 1900 was 1.6 billion; in 2000 it reached 1.6 billion people and last year it surpassed the milestone of \$1 billion. In this century, the effects of the world's greatest population increase are evident throughout the globe. The global population continues to rise, although at a slower pace, and emerging nations are projected to account for nearly half of the world's population growth. (Fig. 1).



**Fig. 1: Climate Change Threatens the World's Food Supply, United Nations Warns.**

This century will witness little or no population growth in emerging countries, although the bulk of the increase will be via immigration from the less developed nations. It will assist the poorest nations in the world. The population of the developing world in 1950 was 1.7 trillion or about a quarter; in 2020, more than a quarter of the world's population will have grown to be in the least developing nations[1]. These countries have weak revenues, significant economic volatility and low indices for the human development. Urbanism is now one of the planet's greatest transformational forces. More than a billion people are projected to reside in cities all over the globe. By 2050, population were projected to increase to 2 billion. Many individuals, particularly young people, are increasingly migrating from rural to urban areas, which is a worry both for urban and rural people. We still speak about rural and territorial development directly or indirectly when we talk about urbanisation. How can we guarantee access to healthy meals for urban residents? What can we do to supply adequate food for the city's people? What type of infrastructure is required and what kind of food in urban areas can be produced? What methods do the communities use to guarantee that their environment's environmental services are protected[2]?

Many of the main problems are related simultaneously to urbanisation and food safety. Diet preferences as well as prosperity and insecurity have changed as a consequence of urbanisation. Structural change is also happening in rural regions. However, as shown in Fig. 2, income growth is uneven between and within countries. Fig. 3 illustrates how the global economy is going to expand rapidly, with Purchasing Power Parity (PPP) exchange rates increasing at 4.6 percent year, to one percent. Global growth will be accomplished every day, based on PPP exchange rates, which have much less to do with food supply and far more to do with hunger in rural areas of industrialized nations. Rich individuals rarely get hungry, whereas poor ones constantly stay similar[3].

On the flip hand, food shortages are increasingly and more seen as a chance for instability, drought, and mass emigration. August famine has increased from approximately 800 million in 1996 to more over 1 billion presently according to the latest Food and Agriculture Organization (FAO) estimate. Most hunger in the world is concentrated in a few places. These areas include large rural populations, persistent poverty and vast stretches of low agricultural production owing to the gradual deterioration of resources, terrible economic circumstances and severe climatic risks. 74 per cent (810 million) of the world's 1.1 billion severely disadvantaged rural areas depend on small-scale farming. Despite the notion that the world's food supply is abundant, hungry people exist[4].

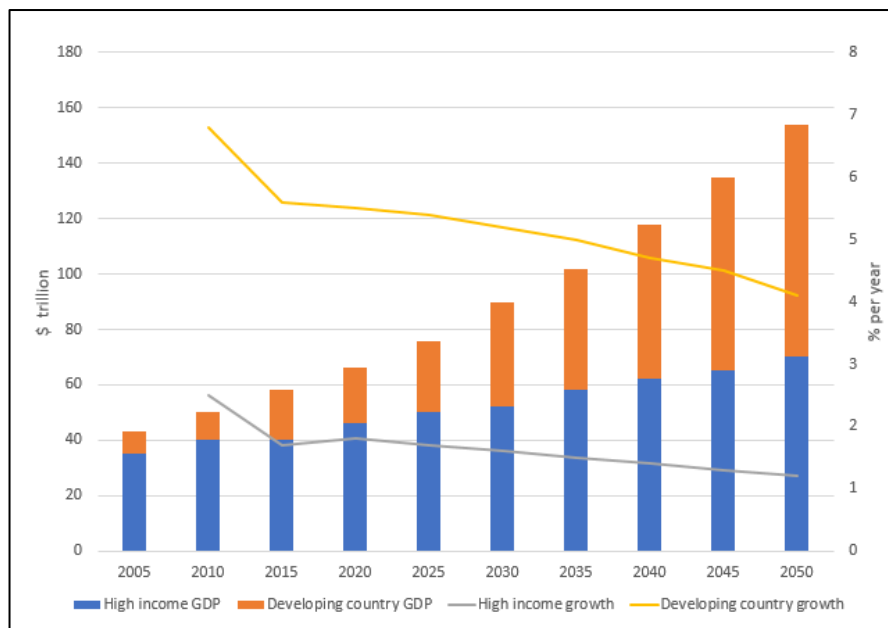


Fig. 2: Income Growth

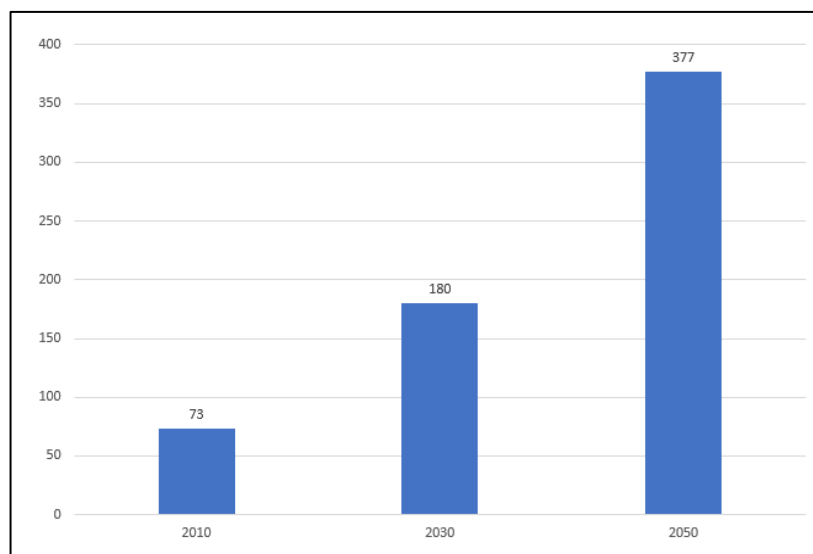


Fig. 3: World GDP Growth (\$ Trillion) From 2010-2050

While the number of hungry individuals has decreased, the total number of hungry people is still increasing. In 2009, for the first time in history, the number of individuals classified as undernourished surpassed 1 billion. Food production, per capita consumption and life expectancy in Sub-Saharan Africa have decreased over many years. In addition, the most rapid population growth, lowest land fertility and least ability to welcome immigrants in towns and cities are impoverished African nations, such as Malawi, Niger and Ethiopia. Although since 1990 worldwide hunger has decreased somewhat, it is still considered as grave. Significant regional and country variations are concealed beneath the worldwide average[5].

The biggest improvement was observed, particularly the number of young people, but this rapid rise could not be maintained. Sub-Saharan Africa has developed over the century and has reached South Asia. A 70 percent increase in global food production is expected to satisfy the growing world demand for food by 2050. Most of the expansion would require additional land, which in

recent years has been a source of concern[6].

## **2. LITERATURE REVIEW**

R. Roson et al. stated in the paper that if the item is effective, healthy, and safe, it must be manufactured with the maximum processing capacity regenerated for a number of years. During the last few decades the growth of food production systems has grown increasingly integrated in agriculture, fisheries, forestry and other commercial practises. The worldwide demand for all agricultural goods is expected to grow by 1.1 percent each year between 2005/07 and 2050. Because supply is commensurate with global demand (not for particular countries or industries), global output should be 60 percent greater in 2050 than in 2005/07. Although growth rates for key commodity categories may be modest in percentages compared to previous years, they are substantially different in numbers[7].

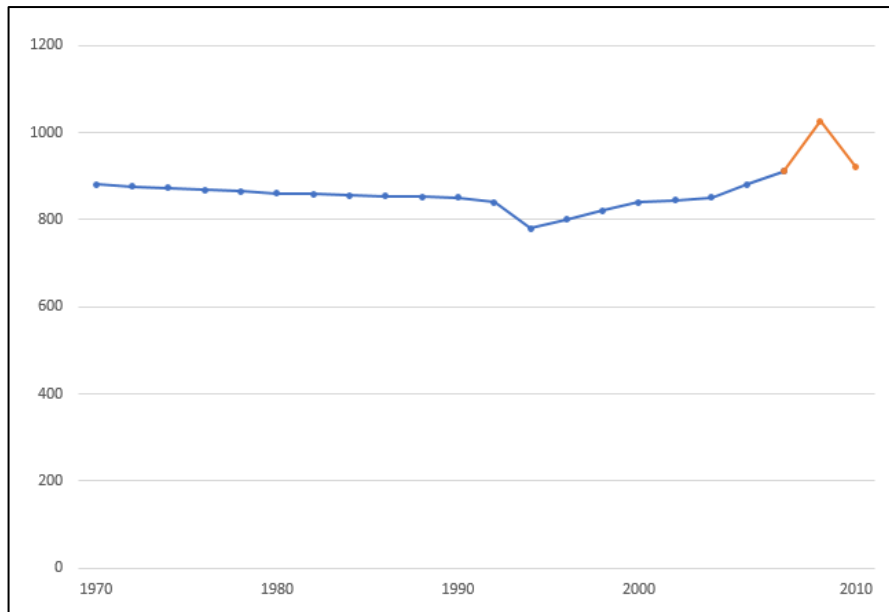
NASA et al. stated in the paper that the issue is whether the decreased area of planting and the limited increase in the planted area would be adequate to satisfy projected demand, with the exception of a few nations and crops. On the other hand, climate change is presenting a significant worry, which could damage the capabilities of the world's agricultural goods. Generally, the long-term sustainability of the food processing system is under question. The concept of more, i.e. exporting things as a percentage of the total region across enormous distances was questioned[8].

Many individuals believe, according to EPA-12 et al, that sustainable production intensification is needed. Can the anticipated production levels be achieved? We stress to support production forecasts by trusting in both demand and yield improvements. Grain returns will increase by about 1 percent yearly over the next few years, according to the International Food Policy Research Institute. The global supply of food is projected to grow at a speed of around percent yearly, which is consistent with the current % rate each year. Food prices have risen globally. Earlier efforts to alleviate hunger have been undertaken worldwide[9].

## **3. DISCUSSION**

Farmers and consuming countries speak about a more serious and longer-term issue between manifestations: persistent food insecurity. Huge increases in prices of wheat and maize, as well as, and especially worse, the situation, are addressing a more serious and long-term issue between producers and consuming nations: the ongoing food insecurity. Food prices will, on average, rise significantly with modest changes in temperature by 2050, while earlier some estimates expect a small decrease in actual costs. Second, the costs are expected to increase when temperatures continue to rise beyond 2050. The drought and large increases in imported agricultural commodities in many affluent regions (Europe) reduce local food prices in poor nations by 8.9 percent in 2011.

Food costs are projected to be 3 percent lower in 2012 in the case of a normal crop year than in 2011. In spite of standardisation, food cost is 25 percent higher in industrialized nations than it was at the start of the 2005 market. Food prices increased substantially, restricting profit for many individuals who spend more than half their income on food, particularly the urban poor. It is defined as a long-term feature in its broadest sense, independent of source. As a consequence, shorter-term oscillations, such as El Nio, are omitted from climate change. Fig. 4 shows the graphical representation for undernourished people in million from 1970-2010



**Fig. 4: Graphical Representation for Undernourished People in Million from 1970-2010**

The term Climate Change was created in 1994 to differentiate human and global climate change activities produced by natural processes on earth. In, especially as far as environmental policies are concerned. Greenhouse gas emissions will increase as well as climate change will have an effect. A phrase used in scientific publications indicating increases in surface temperatures. The climate change involves the rise in greenhouse gas emissions and global warming. The energy collected from the sun and lost in space controls the Earth's temperature and atmosphere in the most basic manner.

This energy is dispersed by wind, ocean tides and other processes throughout the globe, and climatic changes take place throughout the planet. The term environmental forcing is used to refer to components that may have an effect on the climate (EPA U). These processes include changes in solar radiation, changes in the orbit of the planet, mountains and continental shifting and changes in the amount of greenhouse gases. Feedback on climate change may either enhance or reduce the initial strength and take place in various forms and sizes. Some components of the climate system, such as the sea and ice cells, are more slowly impacted by climate change. Forced structures may be employed externally or externally. Internal forcing systems are a natural occurrence of the climate system[10].

Secondary forces may be global or manmade (climate change). Whether the initial push factor two is still in effect or not. This may result in the climate system responding rapidly, but it could take decades or more to respond to forcing processes. Slow components produce internal forcing or instability of the global temperature by the five elements according to experts of the earth's crust.

**4. CONCLUSION**

The population had more than quadrupled since it expanded gradually across the globe in 2000, and by 2050 the best projections reached 9 billion. For example, the high number of people has had tremendous effect on the world environment, because we are converting massive portions of natural vegetation into farms and grasslands. High-scale fishing has killed down the aquatic variety to feed thousands of people. When millions of farmers produce cattle or maintain poultry, human and domesticated animals create habitat changes. In gathering emissions that are now harming the environment, the drive for items and requirements and the poisoned peaks utilized to generate energy have been developed.

The intake of minerals, ores, Fossil Fuels and Biomass is expected to reach above 140 billion

tonnes by 2050. It is expected to quadruple our dietary requirements by then. Does mankind, due of our increasing population, stand on the brink of extinction? Can a limited universe sustain a maximum number of individuals and, if so, have we achieved this? Agriculture is also regarded as a diversion for the climate discussion, and for many years the United Nations has been unable to conclude. In the 21st century, world farming will confront three major challenges: feeding a rising global population, contributing to a reduction in rural poverty and responding to developing natural resource management issues. Bruce Campbell, CGIAR Climate Change leader, Agriculture and Food Security (CCAFS) research project, explained: Both in terms of increasing weather and temperatures. We need global action to guarantee food security in the face of climate change.

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