

# The Changing Role of Agriculture in the Indian Economy

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**Abstract - At present climate change is very big problem. Due to climate change the problem of drought sometimes arise in front of the farmer, sometimes more rain and sometimes temperature fluctuations not only affect farming. Rather the dreams of the farmer as well as the expectations of production also drain. Climate change is a natural problem and this natural disaster cannot be stopped, Therefore research of new varieties of climate friendly seeds and crops is the need of the hour and it is the result of continuous efforts of institutes like agricultural university of India that today India is emerging as a food exporting country. Failure of crop production, changing crop productivity, loss of standing crops, loss of agriculture due to new decisions and changing farming methods. Therefore, climate change is the biggest threat to agriculture. Which affects the production of rice due to the increased temperature at night as compared to the increased temperature during the day. And due to this increased temperature, the chances of getting insects and disease in standing crops increase more and due to the high probability of getting sick, pests also cause huge loss of crops. (Agrawal, P.C.1960)**

**Index Terms – Temperature, Farming, Varieties, Efforts, Agriculture, Climate change, Affects, Crops.**

## INTRODUCTION

Climate Change is said to have historically changed the pattern of average seasonal conditions normally, these changes are studied by dividing the earth's history in long term. This change in the state of climate can also be national and can be the result of human activities. Similarly, greenhouse effect and global temperature are considered to be the result of human actions. After the industrial revolution, the result of the increase in the amount of gases like carbon dioxide etc. Coming out of industries by humans. (Akhtar, R 1974) India is an agrarian country, and it is well known that the Indian economy is primarily agrarian, and agriculture is very important for India. Because this gives us protection related to food, nutrition and livelihood of India and nowadays India as well as the

world is also facing the problem of climate change. Due to climate change many types of changes are being seen in the environment such as increase in temperature decrease or excess of rainfall, change in the direction of the wind etc. as a result of which it has a very bad effect on agriculture. The main cause of climate change is greenhouse gases in the environment such as carbon dioxide (CO<sub>2</sub>), Methane (CH<sub>4</sub>), Nitrous oxide (NO<sub>2</sub>), increase in volume. (Ali Mohammad 1979)

Greenhouse gases are infrared radiation from the ground i.e. Infrared radiation which does not allow global warming or global warming rise out of the atmosphere resulting in an increase in the earth's average temperature. Due to the increase in global temperature polar ice is melting as a result of which the water level of the sea and rivers is increasing and as a result the problem of floods and cyclones is also increasing climate change affects farming through direct and indirect means like crops, soil, cotton, insects, etc. A decrease in rainfall during the monsoon leads to a decline in the productivity of rainfall areas cold and frost reduces the production of oilseeds and vegetables. As a result of cold wave in the month of January in the year 2003 the production of various food items like mango, papaya, banana, brinjal, tomato, potato, maize rice etc. was highly affected.

India's climate has changed to an extreme extent in the last few years for example in the years 2002, 2004, 2006, 2009, 2010 and 2012 there was a famine situation the habitat was flood situation in 2005, 2006, 2008, 2010 and 2013 and in the year 2002 and 2005 there was an outbreak of cold wave and in the year 2004, 2005, 2010 there was a high temperature situation in the months of January and March. In the year 2003 Andhra Pradesh saw the effect of hot waves that is climate change is having a rapid impact on the whole world and agriculture and the whole world is grappling with this problem today and many actions

globally to avoid its effects. Are being done so that its effect can be avoided.

any region of India any region\*-n related to the world, wherever elements related to this title have been received. I have included them in it.

**RELATED WORK/REVIEW OF RESEARCH PAPER**

**ACTUAL RESEARCH**

In relation to this research paper what is the impact of climate on agriculture and what has happened to India’s greenhouse gas emissions in different years and have worked on the changing state of agriculture in the Indian economy? Along with this from a critical point of view it can be said that the changing state of agriculture in the Indian economy is having a great impact and most of the Indian economy is based on agriculture.

In order to cope with the adverse effects of climate change on agriculture and to adapt to the changing nature of climate change, we first need to look at the situation in each region independently and we should not propose customized impacts on the entire state of the region. The results of the study and have identified crops that are most affected by the changing seasons monsoon alterations affect family crops such as sugarcane, sorghum, peanuts, on the other hand the effect on productivity of cotton and pigeon pea has been found to be very less.

**DATA AND METHOD**

**ACKNOWLEDGMENT**

To complete this paper, I have used all the data that I have received from reference book and using the data received from newspaper and other sources related to the ongoing climate change we have used descriptive and explanatory methods.

I express my gratitude to my mentor who made me warty of this and helped me a lot in completing this research paper and the Madhya Pradesh government which is so developed that it wants to know and the last one to provide its last I am grateful to these who continuously erase the agriculture data that we all get.

**OBJECTIVES/PROPOSED WORK/PROPOSED WORK**

**RESULTS AND ANALYSIS**

1. Climate change and agriculture.
2. To find out the causes of climate change.
3. The consequences of climate change on agricultural work.
4. Climate change and the current state of agriculture.
5. Study of the impact of climate change on the current environment.
6. Brief study of all aspects related to agriculture and climate change.

As a result of the research paper it can be said that by the year 2010 the productivity of crops will decrease by 10%-40% and ravis crops will suffer more and with every one centigrade temperature increase there will be a reduction in the production of 4-5 million tons of grain along with this the loss due to water will also be reduced which will cause les damage to potato peas and mustard and due to increase in drought and floods there will be a situation of uncertainty in the production of crops and also change the area of crops to be extinguished. But is likely to be produced at some new locations.

**STUDY AREA**

**TABLE- Impact of Climate Change on Agriculture**

In the research paper, due to a particular place only studies related to the effect of climate change on agricultural work have been done whether it is India or

S.No.	Type of effect	Influences and influencing factors
1	Impact on soil fertility and productivity	Oxide of nitrogen oxide carbon dioxide gases due to high emission and reduction in entire soil pocket carbon nitrogen sources as a result of effect on soil productivity effect on agriculture.
2	Effect of climate change on soil.	Impact on agriculture due to effect on soil moisture and efficiency due to temperature rise.

3	Physical effect on plants.	Lack of water in the tissue of plants that are higher than the absorption rate due to the hot environment due to temperature.
4	Changes in crops purchasing	Changes in crops cycle naturally due to shifting of climate zones by climate change.
5	Weed problem	Increase in weeds found in c <sub>3</sub> group crops as a result of increase in carbon dioxide content and concentration.
6	Effect on crops yield	Reduction in yield of c <sub>3</sub> and c <sub>4</sub> group crops by 9 to 30% due to increase in temperature capacity.
7	Increase in diseases and pests of crops	Increase in pests and diseases of crops due to climate change increase in reproduction of plant diseases like bacterial fungi and other microbes due to humidity in temperature and gases of the atmosphere.

Source:1.Mathur, A.N. (1993): Learning environment, Himanshu publication, Delhi.  
 2.Srivastava, Pankaj (1948): Learning environment, M.P.Hindi Granth Academy, Bhopal.

This table describes the major types of climate change impacts on the agriculture and a brief explanation of their effects and influencing factors is also given.

TABLE-2 India’s Greenhouse gas emissions in the last year All values are in cgco<sub>2</sub>e(1Gg=10<sup>2</sup>g=1000t)

S. No	Area	1994		2000		2005		2010	
		Fractions of emissions	Parts (%)	Fractions of emissions	Parts (%)	Fractions of emissions	Parts (%)	Fractions of emissions	Parts (%)
1	Energy	743820	62	1027016	67	1210384	69	1510121	71
2	Industrial processing and production utilization	102710	7	88608	6	124017	7	171503	8
3	Agriculture	344485	29	355600	23	360313	21	390165	18
4	LULUCF	14292	----	-222567	----	-278721	----	-252532	----
5	Waste	23333	2	52552	4	62638	4	65052	3
6	Total (LULUCF)	1214248	----	152377	----	1757352	----	2136841	----
7	Total net emission	1228540	----	1301209	----	1478632	----	1884309	----

Source: 1.Prasad,Anirudh(2006):Environment and Environmental Protection Framework.

This table describes india’s greenhouse gas emissions and its different areas and emissions and its and percentages under the year 1994,2000,2005 and 2010. FIGURE-1 India’s Greenhouse gas emissions (Energy) (Year 1994,2000,2005 and Year 2010)

■ Year 1994 ■ Year 2000 ■ Year 2005 ■ Year 2010

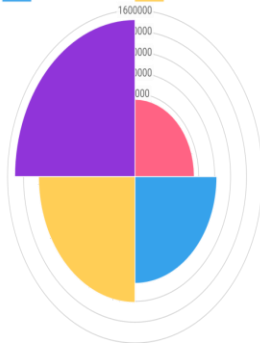


FIGURE-2 India’s Greenhouse gas emissions (Total LULUCF) (Year 1994,2000,2005 and Year 2010)

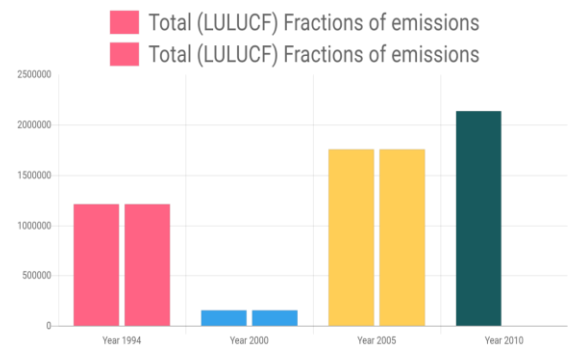
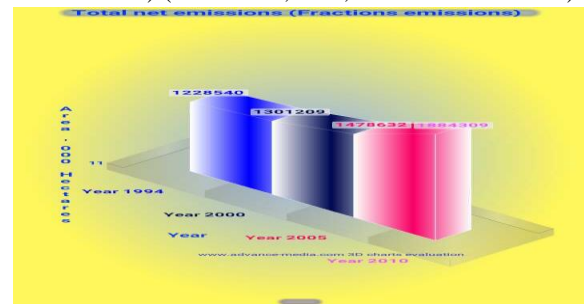


FIGURE-3 India’s Greenhouse gas emissions (Total net emission) (Year 1994,2000,2005 and Year 2010)



### DISCUSSION AND SUGGESTION

The researcher has suggested some measures to protect the interests of the farmers of the states use of alternative practices away from current agricultural practice, changes in sowing and harvesting dates, changes in need dates, expansion of seed diversity and alternative means of irrigation and choice of alternative livelihoods and regulation of crops markets. These are some of the provisions that can be followed to adapt to the changing trends in climate change vulnerability.

### RECOMMENDATION

This topic of research is very important. Because at present many agro-based industries are also operating which are very important in the agriculture Indian economy. That is in relation to this subject you can say that in order to get information about it, I recommend that we must try to know this subject.

### CONCLUSION

The combined results of climate change in the agriculture sector which are being observed can be of mainly two types. First field based and second crops based different areas many have different effects on different crops or each crops of the same area wheat and paddy are the major food crops of our country and its production is being affected by climate change.

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district. Further on, I want to sagar to pursue a PhD for higher studies and from there I received my PhD from Dr. Harisingh Gour University Sagar in the year 2007. After receiving this degree I started teaching at government jatashankar trivedi govt. college balaghat as a visiting scholar of Madhya Pradesh under the Madhya Pradesh higher education department from the year 2007 itself. Similarly in this system, I have continuously worked as a teacher in Ajaygarh (2008-9), Narsinghpur (2009-10), Gairatganj (2010-11), Damoh (2011-12), Jabera (2012-13 to 2016-17), till present and I am currently teaching in Batiyagarh government college.

#### BIOGRAPHY

My name is Dr. Mukesh Mishra S/O Shri Bhagwat Prasad Mishra my qualification M.A. (Geography), PhD, MPSET, 14 research paper, 8 international research paper and 6 seminar. I was born on 27 January 1978 in pipariya champat a small village in damoh, a small district located in Madhya Pradesh, India. My education from class one to class eight was done at my birthplace pipariya champat and education from class 9th to M.A. has been done in damoh