



# Effect of Climate Change on Farmers in Hyderabad Karnataka Region

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## Abstract

Extreme weather in crop witness from Hyderabad Karnataka farmers – Farmers are suffering from a widespread epidemic of damage because of the effects of rain, temperature, and climate change. Randomized techniques are used to inform Farmers' Studies. According to research, there are disparities in the ways that the climate affects farmers in places like Hyderabad and the Karnataka region. Why and how to create various ratios, crop protection, particularly for landless and other farmers. The farmer will inevitably expand his or her farm and find numerous strategies to conserve rainwater.

Keywords: Effect, Farmers, Climate Change, Season.

## 1. Introduction

The method plays a significant role in determining the different stages of the task. The present study is done on the small farmers of Karnataka, so the universe of the present study is the state of Karnataka, and the variables are small and marginal farmers. Depending on the nature of land holdings, respondents are classified as small farmers, tenants and marginal farmers. There are different criteria, such as rural and urban, age groups; Education, marital status, etc. are considered when selecting models. After deciding the subject, the researchers went through the available literature on agriculture and small and very small farmers in consultation with research supervisors. A review of the literature reveals that practically no studies have been conducted on socio-economic conditions and problems of small farmers and marginal farmers.<sup>1</sup> The climate in this Hyderabad Karnataka district of is characterized by general dryness. Throughout the year except for the Southwest Monsoon. The summer season lasts from mid-February to the first week of June. This is followed by the southwest monsoon season, which lasts until the end of September. October and November form the post-monsoon or retreating monsoon season. Winters last from December to mid-February and temperatures begin to drop by the end of November, December being the coldest month with an average daily maximum of 27.3 0C and an average daily minimum of 6.4 0C. By mid-February, daytime and night-time temperatures will begin to rise rapidly. May is the hottest month, with an average daily maximum temperature of 45.8 0C and a daily low of 25.9 0C. With the withdrawal of the southwest monsoon in the first week of October, there is a slight increase in daytime temperatures, but night temperatures are steadily decreasing. After October, daytime and night-time temperatures gradually decrease.<sup>2</sup>

Hyderabad-Karnataka region is already under coercion from climate stresses, which proliferate vulnerability to further climate crisis and diminish the adaptive capacity. The detrimental effects of climate crisis hamper the paddy cultivation, which is the backbone of most Hyderabad- Karnataka region. This has influenced the poor food production and thereby effect on pervasion of poverty. Farmers in the study area are blended the traditional agricultural adaptation strategies with new techniques to confront climate variability and extreme events. The success of these potential strategies needs to be dispensed among communities. Methods include, namely, diversification of cluster, income and labours, different and improved crop production technologies, improved soil and water management techniques, a delegation of government resources, livestock management techniques and the handling of land use leading to land-use conversion, to name a few. However, these potential techniques and strategies need to validate with scientific evidence from the scientific community for wider adaptation to face additional climate risks accompanying with the climate crisis.<sup>3</sup> It is obvious that there are Marginal land farmers, The study area perceives the severe impacts of climate change on crop production. Th<sup>4</sup>ere really are some kind of programs in it- U.S. Global Change Research Program. USDA Weather Hubs. Climate Program Office, NOAA. Global Change Master Directory, NASA. ARS National Climate Change, Soil and Emissions Program. Forces to resolve Providing appropriate solutions to farmers. Short farmers experience in the study area, and insect infestation, lack of water Improvement of maximum growing arsons requires some immediate relief, research on smallholder farmers adapting to climate change Bringing in some relevant findings and recommendations for the study.<sup>4</sup> Perceptions influence the type of questions, explanations, meanings and values that we give to the world within which we live. Thus, farmers dynamically structure and devise multiple possibilities of actions, such as responses, strategies and transformations. Perceiving the change in climate is crucial, to analyse and interpret the ways of adapting to the changes and re-optimize retrospective factors which determine the capacity to make decisions and respond and implement the corresponding responses.<sup>5</sup> The pursuit of low carbon development is consistent with growth and inclusion. In the low carbon strategy, energy efficiencies in households, buildings, industry and transport play important roles. At the same time, low carbon supply technologies, such as solar and wind in the power sector and greater use of public transport and non-motorized transport are critical.<sup>6</sup>

## 2. Objectives

To Understand effect of climate change on farmers

## 3. Hypothesis

Climate change effect on groundwater

Climate change Impact on rainfall pattern

## 4. Administration of the tools of Data collection in Research Design.

Data analysis:

LE: a big surplus (about 60%) E: overabundance (20 to +59%) N: normal (from -19 to +19%) D: deficiency (-20 to -59 percent ) D: significant deficiency (from -60 to -99%) NR: No precipitation (-100 percent) .

Sl No.	Districts	Annual Rainfall 2021			
		Normal (mm)	Actual (mm)	%DEP	Class
1	Ballari	599	684	14	N
2	Koppala	614	640	4	N
3	Raichur	654	624	-5	N
4	Kalaburagi	770	943	22	E
5	Bidar	838	907	8	N

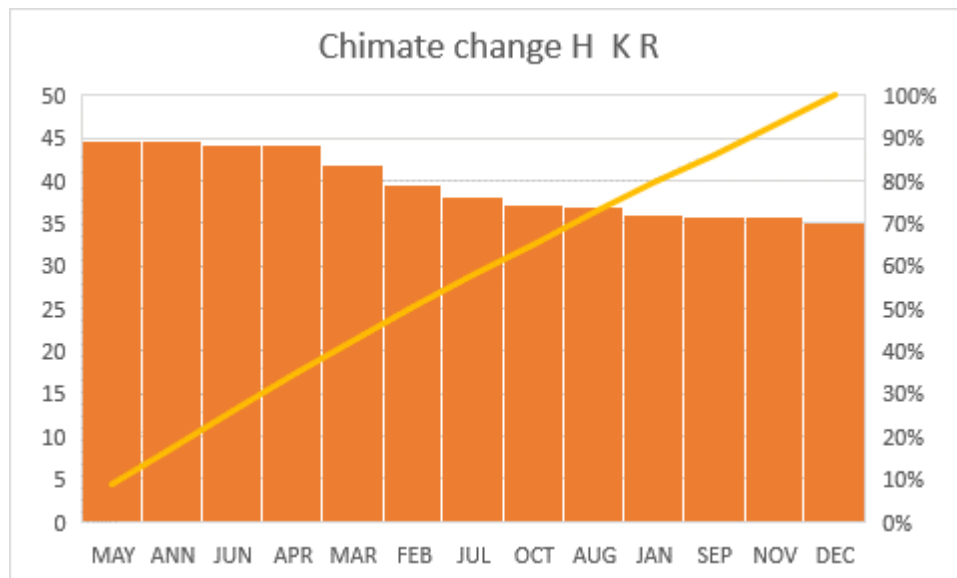
6	Yadgir	719	669	-7	N
Total		4194	4467	36	

Source: Karnataka state natural disaster management centre.

Area sown by districts during Kharif, Rabi, and Summer (Area in lakh ha.)

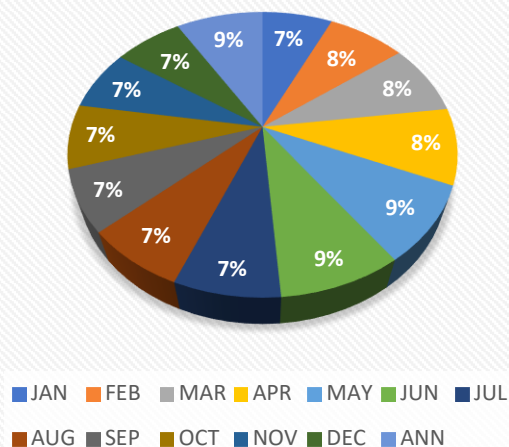
Sl No.	Crops	Normal Area (K+R+S)	Kharif 2021	Rabi 2021	Summer 2022	Total area	Col.7 as% of Col.3	Total Area (K+R+S) 2020	Col.9 as % of col.3
1	Ballari	5.29	4.29	0.71	0.31	5.30	100	5.8	110
2	Bidar	4.52	3.71	1.12	0.00	4.83	107	4.79	106
3	Kalaburagi	9.91	7.50	2.33	0.01	9.85	99	10.31	104
4	Koppala	4.68	3.09	1.74	0.00	4.82	103	5.19	111
5	Raichur	6.80	4.72	2.27	0.33	7.33	108	7.83	115
6	Yadgir	4.28	3.78	0.80	0.00	4.58	107	4.95	116
Total		35.48	27.09	8.97	0.65	36.71	624	38.87	662

Source: Karnataka state natural disaster management centre.



<https://power.larc.nasa.gov/data-access-viewer>

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## 5. Conclusion

Collects complete data on lands affected by climate change, and what kind of positive effects it can have on farmers' welfare. Farmers in Hyderabad Karnataka are experiencing a decline in crop yield, an impact on production, an increase in prices of pulses and an increase in malnutrition due to use of varieties that reduce calorie intake. Farmers are also feeling the effects of climate change. Hyderabad Karnataka is useful for farmers growing various crops and commodities.

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