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**ORIGINAL ARTICLE**

**Awareness Level of farmers on Climate Change in the  
Disadvantaged Districts of Tamil Nadu**

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**ABSTRACT**

*The study was conducted in disadvantaged districts of Tamil Nadu. A sample size of 300 respondents was selected from the four disadvantaged districts of Tamil Nadu. The research data were collected through personally with help of a well structured interview schedule. Percentage analysis was used for analyzing and interpreting the data. The results indicated that about half (47.67 per cent) of the respondents had medium level of awareness of climate change followed by high (35.00 per cent) and low (17.33 per cent) level of awareness about climate change. Regarding issues wise awareness on climate change more three- fourth of the respondents aware variation in temperature (87.67 per cent), followed by uneven distribution of rain fall (87.33 per cent) and occurrence of flash flood (85.33 per cent).*

**Key words:** awareness, climate change.

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**INTRODUCTION**

Climate change refers to a statistically significant variation in either the mean state of the climate or in its variability, persisting for an extended period. Climate change may be due to natural internal processes or external forces, or to persistent anthropogenic changes in the composition of the atmosphere or in land use [3]. Climate change is one of the biggest challenges the present world is facing today. It refers to a long term change in the state of climate that can be identified by changes in mean or changes in variability of its properties and that persists for an extended period, typically decades or longer. It refers to any change in the climate over time, whether due to natural variability or as a result of human activity [5]. The effects of global climate change are many folds and there is a need to create awareness and its impact on various sectors of economy. Agriculture and climate are mutually dependent. There is a need to understand the influence of climate change on agricultural sector both at global and as well as at regional level, especially from the point of view of providing food to vulnerable section of the population. Changing climatic conditions can have the big effect on our life and our environment. In fact, it is the greatest environmental threat faced by the planet earth. The climate has changed and the major environmental problem in both crop and livestock production is recurrent droughts, hailstorms, floods and pest incidence [2].

**MATERIAL AND METHODS**

In this present research study was conducted in disadvantaged districts of Tamil Nadu. The sample size 300 respondents were selected based on random sampling techniques. The data were collected using a well-structured and pre-tested interview schedule. Awareness which is more of cognitive behavior was operationalized as the level or extent to which the respondents were familiar with climate change pattern. Awareness was measured on a two point continuum viz, aware and not aware with a score of 2

and 1 respectively. The score scoring procedure followed by [4] obtained by the respondents were added to arrive at the final score which was classified in to high, medium and low using cumulative frequency method .

## RESULTS AND DISCUSSIONS

### Overall awareness levels of climate change

An understanding of global climate and its change is pre requisite to take appropriate initiatives to combat climate change. Climate change with expected long-term changes in rainfall patterns and shifting temperature zones are expected to have significant negative effects on agriculture, food security and livelihood of the farmers. Most of the farming communities cannot classify the term climate change but are well capable of describing change in weather. Climate plays a gambling game with agriculture, specifically on rainfall. Agriculture basically depends on monsoon and other climate parameters, even narrow fluctuation in normal rainfall can hamper the farming severely. Hence, it is indispensable to know the awareness of farmers on climate change. The extent to which a community is aware of climate change reflects its level of exposure to climate risks. This data regarding awareness of the climate change of the study area were collected, analysed and presented in table1.

**Table1. Distribution of respondents according to their overall Awareness level on climate change\ (n=300)**

S.No	Category	Number	Per cent
1.	Low	52	17.33
2.	Medium	143	47.67
3.	High	105	35.00
<b>Total</b>		<b>300.00</b>	<b>100.00</b>

It could inferred from the Table1,that 47.67 per cent of the respondents had medium level of awareness on climate change, followed by high (35.00 per cent) and low (17.33 per cent) level of awareness about climate change.

The probable reason for the medium level of awareness might be due to majority of the respondents were found in medium to higher level of farming experience and a fairly better level of education, more contact with extension agency and mass media exposure . May be the probable reason for medium to high level of awareness exist among the respondents. This finding is in line with the findings of Aarthi [1].

### Issue-wise awareness levels of climate change

Fourteen major statements. Table 2, were selected, after a careful preliminary survey in the study survey dotted with focus group discussions, to explore the issue-wise climate change awareness levels of the paddy farmers.

**Table2. Distribution of respondents according to their issue-wise awareness level of climate change (n=300)**

S. No.	Particulars	Aware	Per cent	Not aware	Per cent
1.	Uneven distribution of rain fall	262	87.33	38	12.67
2.	Reduction in number of rainy days	249	83.00	51	17.00
3.	Could not able to predict rainy days	236	78.67	64	21.33
4.	Variation in temperature	263	87.67	37	12.33
5.	Unseasonal precipitation	229	76.33	71	23.67
6.	Variation in wind speed and direction	196	65.33	104	34.67
7.	Variation in relative humidity	206	68.67	94	31.33
8.	Heavy summer	225	75.00	75	25.00
9.	Heavy winter	227	75.67	73	24.33
10.	Sea level rising	225	75.00	75	25.00
11.	Occurrence of flash flood	256	85.33	44	14.67
12.	Frequent cyclone	252	84.00	48	16.00
13.	Acid rain	135	45.00	165	55.00
14.	Increasing head and cold waves	186	62.00	114	38.00

It could be seen from the table 2, more than eighty per cent of the respondents were awareness about the climatic issues viz, variation in temperature (87.67 per cent), uneven distribution of rain fall (87.33 per

cent), occurrence of flash flood (85.33 per cent), frequent cyclone (84.00 per cent), reduction in number of rainy days (83.00 per cent), Could not able to predict rainy days(78.67 per cent), unseasonal precipitation(76.33 per cent), heavy winter (75.67per cent), heavy summer (75.00 per cent), sea level rising (75.00), followed by more than half of respondents were awareness about the climatic issues viz, variation in relative humidity(68.67 per cent), variation in wind speed and direction (65.33 per cent), increasing head and cold waves(62.00 per cent), increasing head and cold waves (62.00 per cent) and acid rain(45.00 per cent).

Farmers had experienced the continuous drought, erratic rainfall, increasing temperature etc. in these days. Many farmers had faced crop failure and yield reduction situations due to non-availability of enough water for crop which ultimately depends on rainfall. Farmers usually discuss about the temperature and rainfall when they find time to discuss with their fellow farmers. Through the news channels, print media and self experience farmers became more aware about the high temperature during the summer, arrival of monsoon, floods and droughts, drinking water scarcity in different parts of the state. Department of Agriculture and Indian metrological department has guided the farmers regarding cropping calendar at the right time. These are all the possible reasons for medium to high level of awareness among the respondents regarding climate change.

The above findings revealed that majority of the paddy farmers were aware about variation in temperature and uneven distribution of rain fall. Temperature and rainfall is very important to farms to make sure that the crops that are being grown receive the right amount of moisture so that the crops harvested are maximized. Temperature and rainfall is the first source of water. Irrigation can supplement rainfall to supply crop water need. The above result might be due to the respondents might have gained medium level of farming experience and medium level of contact with extension agency. This findings of present study is supported by Sangeetha [6] and Sivaraj [7].

## CONCLUSION

The data revealed that more than half 47.67 per cent of the respondents had medium level of awareness of climate change followed by high (35.00 per cent) and low (17.33 per cent) level of awareness about climate change. Climate change is one the biggest challenges to the Indian agriculture. Climatic variability through and precipitation cold influence different stages of crop growth and also food security. Adaptation is extensively recognized as a dynamic component of any planning with respect to climate change. The adaptive capacity of a system or society describes its ability to modify its characteristics or behaviour so as to cope better with changes in external conditions.

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