

AWARENESS OF FARMERS ABOUT CLIMATE CHANGE IN PLAIN ZONE OF CHHATTISGARH

O.P. Parganiha*, M.L. Sharma and H.K. Patra

Department of Agriculture Extension IGKV, Raipur (C.G.)

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Abstract : In order to combat from adverse effect of climate change and any coping or adaptation strategies, first of all the communities facing climate change should perceive that the changes are indeed taking place. In other words we can say that awareness of farmers regarding changes or variability in climatic condition is important to know its impact on agriculture. To know the level of awareness of farmers regarding climate change, present study was conducted with 240 selected farmers of Plain Zone of Chhattisgarh during the year 2013-14. Most of the farming communities cannot classify the term climate change but are well capable of describing changes in weather. It can be observe from Table 1 that majority of the farmers (70.00%) were fully aware about rise in the risk of crop failure due to climate change has increased, whereas, 65, 54.58 and 52.50 per cent of the farmers were fully aware about pollution is increasing in the atmosphere, climate is getting warmer and weather has become unpredictable, respectively. With regards to overall awareness of about phenomena due to climate change, about 55 per cent of the farmers were moderately aware, whereas, 32.08 and 9.58 per cent farmers belonged to highly aware and somewhat awareness category. Awareness and understanding of farmers on climate change is pre requisite to take appropriate initiatives to combat climate change. The only solution for these huge populations seems to be adequate and relevant adaptation strategies. It has been reported that there is a large deficit of information and knowledge in this vulnerable region which impedes decision making and assessment of climate related risks, and adaptation.

Keywords : Farmers, Climate, Crop

INTRODUCTION

In order to understand how human beings would respond to climate change, it is essential to study people's perceptions of climate and the environment in general (Vedwan et al., 2001). Human expectations regarding weather and climate sometimes lead to perceptions of climate change which are not supported by observational evidences (Rebetz, 1998). A better understanding of how farmers' perceive climate change, ongoing adaptation measures, and the factors influencing the decision to adapt farming practices is needed to craft policies and programmes aimed at promoting successful adaptation of the agricultural sector (Bryan et al., 2009).

As the understanding on global climate and its change is pre requisite to take appropriate initiatives to combat climate change. The only solution for these huge populations seems to be adequate and relevant adaptation strategies. It has been reported that there is a large deficit of information and knowledge in this vulnerable region which impedes decision making and assessment of climate related risks, and adaptation (McSWEENEY et al., 2010). Adaptation to climate change requires that farmers first notice that the climate has altered. Farmers then need to identify potentially useful adaptations and implement them.

Recent studies in climate change in Chhattisgarh indicated that the rainfall pattern has changed during

20th century, fluctuations in the onset and offset of monsoon rainfall, decreasing pattern of rainfall in many districts and also the deficit rainfall years increased during the global warming period. Climate is getting hotter in the state due to increasing trend for both maximum and minimum temperature, which, has been showed by many of the studies. With this climatic variability, farmers in the state are vulnerable because their livelihood is totally dependent on agriculture.

METHODOLOGY

The present study was conducted in 4 selected districts of Plain Zone of Chhattisgarh state. A total of 240 respondents were selected from 24 villages of 8 blocks. Selections were done by using simple random sampling method. The primary data were collected through personal interview with the help of pre-tested structured interview schedule. Collected data were tabulated and processed by using appropriate statistical tools and presented in terms of frequency and percentage.

To determine level of awareness of respondents regarding climate change 12 statements were considered and responses were recorded in three point continuum scale as scores was given 0, 1, & 2 for No, Partial and Complete awareness of respondents, respectively. Further, respondents were categorized into three categories according to scores obtained by them out of total score 24 as follows:

*Corresponding Author

Categories	Score
Not aware (Score 0)	0
Somewhat aware (Score up to 8)	1
Moderately aware (Score between 9-16)	2
Highly aware (More than 17)	3

RESULT AND DISCUSSION

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 changes in weather. It can be observed from Table 1 that majority of the farmers (70.00%) were fully aware about rise in the risk of crop failure due to climate change has increased, whereas, 65, 54.58 and 52.50 per cent of the farmers were fully aware about pollution is increasing in the atmosphere, climate is getting warmer and weather has become unpredictable, respectively. Most of the respondents were not aware at all about rise in sea

level (80.00%), incidences of cyclones are increasing (64.17%) and glaciers are melting (60.42%). While, somewhat awareness belonged to about 52.92, 52.08, 49.17 and 48.75 per cent of the farmers for the phenomena viz. animal health problem are increasing, human health problem are increasing, duration of season is changing and occurrence of extreme weather condition, respectively.

With regards to overall awareness of about phenomena due to climate change, about 55 per cent of the farmers were moderately aware, whereas, 32.08 and 9.58 per cent farmers belonged to highly aware and somewhat awareness category. Very few farmers (3.33%) were not aware about phenomena due to climate change. Similar findings were also reported by Sharma (2010), Aggarwal (2009), Dietz *et al.* (2007) and Kotei *et al.* (2007).

Table 1. Distribution of respondents according to their awareness about phenomena due to climatic variability

Particulars	Level of awareness					
	Fully aware		Somewhat aware		Not aware at all	
	F	P	F	P	F	P
Climate is getting warmer	131	54.58	97	40.42	12	5.00
Weather has become unpredictable	126	52.50	101	42.08	13	5.42
Duration of seasons is changing	64	26.67	118	49.17	58	24.17
Occurrence of extreme weather conditions	103	42.92	117	48.75	20	8.33
Rise in the risk of crop failure has increased	168	70.00	62	25.83	10	4.17
Pollution is increasing in the atmosphere	156	65.00	72	30.00	12	5.00
Glaciers are melting	21	8.75	74	30.83	145	60.42
Incidences of cyclones are increasing	25	10.42	61	25.42	154	64.17
Rise in sea-level	17	7.08	31	12.92	192	80.00
Occurrence of natural disasters/calamities are increasing	133	55.42	100	41.67	7	2.92
Human health problems are increasing	98	40.83	125	52.08	17	7.08
Animal health problems are increasing	94	39.17	127	52.92	19	7.92

Table 2. Distribution of respondents according to their level of awareness

Level of awareness	Respondents (n=240)	
	F	P
Not aware	8	3.33
Somewhat aware	23	9.58
Moderately aware	132	55.00
Highly aware	77	32.08

CONCLUSION

Today we are facing lots of challenges in acquiring knowledge and awareness about climate change and its impact on agriculture, that's why there is a gap between what we are capable of doing and what is actually being done. Which is need for better adaptation in the present scenario of climate change? The study showed mixed type of responses of farmers about awareness of climate change. Some people were fully aware of climate change but majority of them lacked in firsthand knowledge about climate change. So, to solve the problem of climate change at first we have to create awareness among the farmers by using mass media followed by individual contact method through trained extension agents. Such understanding of the farmers may provided an opportunity to take proper action towards better adaptation against bad consequences of climate change.

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