# Factors Influencing Level of Knowledge of Farmers on Climate Resilient Practices in Virudhunagar district of Tamil Nadu

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Abstract: Climate change is considered as the major threat to the globe; especially peoples who depend on nature are directly affected by the climate change and its impacts. Resilient practices are those which recover or restore the lost resources. The present study has been undertaken in Sivakasi taluk of Virudhunagar district, which comes under semi-arid climatic zone. Around 120 respondents were selected and their level of knowledge about climate resilient practices viz, Natural Resource Management, Crop Production, Livestock Management and Institutional interventions were measured. The results of descriptive study revealed that the level of knowledge on climate resilient practices were low. About 74.17 per cent of respondents had low level knowledge on Natural resource management, 68.33 per cent of respondents had low level of knowledge on crop production, and 65.78 per cent of respondents had low level of knowledge on livestock management and 71.67 per cent of respondents had low level of knowledge on institutional interventions. And it was also found that the relationship between the variables like age, income, landholding, social participation, farming experience and family type with knowledge are found not significant. From the above results it is concluded that the level of knowledge on climate resilient practices are poor since the respondents does not undergone any training or programmes on climate resilient practices.

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### 1. INTRODUCTION:

Agriculture is largely depends on climate. Dryland agriculture totally depends on climate only, the farmers of these regions are greatly affected due to the effect and impacts of climate change. In order to find out permanent solution to these changes in climate, Indian Council of Agricultural Research (ICAR) initiated National Initiative for Climate Resilient Agriculture (NICRA) to promote climate resilient practices over these climate change affected places. Under technology demonstration of climate resilient practices like Natural resource management, crop production, livestock management and institutional interventions are selected. The above four climate resilient practices give overall picture of climate resilience. Since, the study has been chosen to find out the level of knowledge on climate resilient practices by the farmers of Dryland agriculture.

### 2. MATERIALS AND METHODS:

For the present study, Sivakasi taluk of Virudhunagar district of Tamil Nadu has been selected, since the taluk's agriculture production is very less due to extreme climatic condition. Eight villages were selected randomly from the Sivakasi taluk for the present study. An interview schedule was prepared and pre-tested for the study. The sample population of 120 has been selected randomly from the selected villages. Relevant questions on climate resilient practices were collected with pre structured interview schedule to understand the knowledge levels of the respondents and answers were recorded with 3 point scale as fully correct (3), partially correct (2) and not correct (1).

### 3. RESULTS:

### 3.1. DISTRIBUTION OF RESPONDENTS BASED ON SOCIO-ECONOMIC PROFILE:

Table: 1. shows the distribution of respondents based on their socio-economic profile. About 50.83 per cent of the respondents are belonged to the age above 55 years followed by the age group of (36-55) and (20-35) respectively. 80 per cent of the respondents are in Nuclear family, followed by the joint family (20%) respectively. 43.33% of the respondents are earning the amount range of Rupees 50,000-75,000 followed by Rs. 25,000-50,000(31.67%) and above 75,000 (25%) respectively. 28.33 per cent of the respondents are having education up to primary education, followed by secondary education (21.67), Can read and write only (19%) and Illiterate (19%) respectively. 43.33 per cent of the respondents are having experience of 20-40 years, followed by less than 20 years (31.67%) and above 40 years (25%) respectively. 42.50 per cent of the respondents are having less than one hectare of land, followed by 1-2 ha (36.67%) and above 2 ha (20.83%) respectively. 39.17 per cent of the respondents were having medium level of mass media exposure. 62.50 per cent of the respondents we having low level of extension contacts . 93.33 per cent of the respondents were having low level of extension contacts we having low level

of innovativeness. 68.33 per cent of the respondents we having low level of risk orientation. 54.17 per cent of the respondents we having low level of scientific orientation.

Table 1 Distribution of respondents based on socio economic profile (n=120)

S. No.         Variables         Categories         Frequency         Percentage           1.         Age (in years)         20-35         4         3.33           36-55         55         45.83         Above 55         61         50.83           2.         Family type         Joint         24         20.00           Nuclear         96         80.00         38         31.67           5000-75000         38         31.67         5000-75000         30         25.00           4.         Education         Illiterate         19         15.83         11.67         15.83         11.67         15.83         11.67         15.83         11.67         15.83         11.67         15.83         11.67         15.83         11.67         15.83         11.67         11.68         11.67         11.68         11.67         11.68         15.83         11.67         11.68         11.68         11.69         11.68         11.68         11.69         11.68         11.69         11.69         11.69         11.69         11.69         11.69         11.69         11.69         11.69         11.69         11.69         11.69         11.69         11.69         11.69         11.69         11			respondents based on socio	_	
Secondary   Seco			C		
Above 55	1.	Age (in years)		•	
2.         Family type         Joint Nuclear         24         20.00           3.         Income         25000-50000         38         31.67           50000-75000         52         43.33           Above 75000         30         25.00           4.         Education         Illiterate         19         15.83           Primary         34         28.33         25.00         25.00           Higher Secondary         26         21.67         26.67         21.67         26.67         21.67         26.67         21.67         26.67         21.67         26.67         21.67         22.33         23.33         23.00         25.00         23.33         23.23         23.33         25.00         25.00         24.33         23.23         25.00         25.00         25.00         25.00         25.00         25.00         25.00         25.00         <					
Nuclear   96   80.00					
3.         Income         25000-50000         38         31.67           50000-75000         52         43.33           Above 75000         30         25.00           4.         Education         Illiterate         19         15.83           Can read and write only         19         15.83         28.33         34         28.33           Secondary         26         21.67         19.17	2.	Family type			
Solution   Solution			Nuclear		
Above 75000   30   25.00	3.	Income	25000-50000		31.67
Education			50000-75000		43.33
Can read and write only			Above 75000	30	25.00
Primary   34   28.33   Secondary   26   21.67   Higher Secondary   8   6.67   Graduate   4   3.33   Others   11   9.17	4.	Education	Illiterate	19	15.83
Secondary   26   21.67     Higher Secondary   8   6.67     Graduate   4   3.33     Others   11   9.17     5.   Farming   Less than 20   38   31.67     Experience   20-40   52   43.33     Above 40   30   25.00     6.   Land holding   Less one ha   51   42.50     1-2			Can read and write only	19	15.83
Higher Secondary   8   6.67     Graduate			Primary	34	28.33
Graduate			Secondary	26	21.67
Others         11         9.17           5.         Farming Experience         Less than 20         38         31.67           20-40         52         43.33           Above 40         30         25.00           6.         Land holding         Less one ha         51         42.50           1-2         44         36.67         Above 2         25         20.83           7.         Mass Media Exposure level         Low         45         37.50           Medium         47         39.17         High         28         23.33           8.         Extension contacts level         Low         75         62.50           Medium         34         28.33         11         9.17           9.         Social participation level         Low         112         93.33           High         1         19         15.83           Ievel         Medium         13         10.83           High         5         4.17           10.         Innovativeness level         Medium         19         15.83           High         12         10.00           11.         Risk orientation level         Low			Higher Secondary	8	6.67
Experience         Less than 20         38         31.67           Experience         20-40         52         43.33           Above 40         30         25.00           6.         Land holding         Less one ha         51         42.50           1-2         44         36.67         Above 2         25         20.83           7.         Mass Media Exposure level         Low         45         37.50         37.50           High         28         23.33         28.         23.33         28.         23.33         28.         23.33         31.67           9.         Social High         Low         75         62.50			Graduate	4	3.33
Experience   20-40   52   43.33   Above 40   30   25.00			Others	11	9.17
Above 40   30   25.00	5.	Farming	Less than 20	38	31.67
6.       Land holding       Less one ha       51       42.50         1-2       44       36.67         Above 2       25       20.83         7.       Mass Media Exposure level       Low       45       37.50         Medium       47       39.17       39.17         High       28       23.33         8.       Extension contacts level       Low       75       62.50         Medium       34       28.33         High       11       9.17         9.       Social participation level       Low       112       93.33         Medium       13       10.83         High       5       4.17         10.       Innovativeness level       Low       89       74.17         Medium       19       15.83         High       12       10.00         11.       Risk orientation level       Low       82       68.33         High       19       15.83         High		Experience	20-40	52	43.33
1-2			Above 40	30	25.00
Above 2   25   20.83	6.	Land holding	Less one ha	51	42.50
7.         Mass Exposure level         Low         45         37.50           Exposure level         Medium         47         39.17           High         28         23.33           8.         Extension contacts level         Low         75         62.50           Medium         34         28.33           High         11         9.17           9.         Social participation level         Medium         13         10.83           High         5         4.17           10.         Innovativeness level         Low         89         74.17           Medium         19         15.83           High         12         10.00           11.         Risk orientation level         Low         82         68.33           High         19         15.83           High <td></td> <th></th> <td>1-2</td> <td>44</td> <td>36.67</td>			1-2	44	36.67
Exposure level   Medium   47   39.17     High   28   23.33     8.   Extension   Low   75   62.50     contacts level   Medium   34   28.33     High   11   9.17     9.   Social   Low   112   93.33     participation   Medium   13   10.83     level   High   5   4.17     10.   Innovativeness   Low   89   74.17     level   Medium   19   15.83     High   12   10.00     11.   Risk orientation   Low   82   68.33     High   19   15.83     12.   Scientific   Low   65   54.17     Orientation level   Medium   38   31.67			Above 2	25	20.83
High   28   23.33     Extension   Low   75   62.50     contacts level   Medium   34   28.33     High   11   9.17     9.   Social   Low   112   93.33     participation   Medium   13   10.83     level   High   5   4.17     10.   Innovativeness   Low   89   74.17     level   Medium   19   15.83     High   12   10.00     11.   Risk orientation   Low   82   68.33     High   19   15.83     12.   Scientific   Low   65   54.17     Orientation level   Medium   38   31.67	7.	Mass Media	Low	45	37.50
8.         Extension contacts level         Low Medium         75         62.50           9.         Medium         34         28.33           High         11         9.17           9.         Social participation level         Low         112         93.33           Medium         13         10.83           High         5         4.17           10.         Innovativeness level         Low         89         74.17           High         19         15.83           High         12         10.00           11.         Risk orientation level         Medium         19         15.83           High         19         15.83 <t< th=""><td></td><th>Exposure level</th><td>Medium</td><td>47</td><td>39.17</td></t<>		Exposure level	Medium	47	39.17
Contacts level         Medium         34         28.33           High         11         9.17           9.         Social participation level         Low         112         93.33           Medium level         13         10.83           High         5         4.17           10.         Innovativeness level         Low         89         74.17           High         19         15.83           High         12         10.00           11.         Risk orientation level         82         68.33           High         19         15.83           High         19         15.83           12.         Scientific orientation level         Low         65         54.17           Medium         38         31.67			High	28	23.33
9.       Social participation level       Low       112       93.33         10.       Innovativeness level       High       5       4.17         10.       Innovativeness level       Low       89       74.17         11.       Risk orientation level       Low       82       68.33         12.       Scientific orientation level       Low       65       54.17         Medium       38       31.67	8.	Extension	Low	75	62.50
9.         Social participation level         Low High         112         93.33           10.         Innovativeness level         Low High         89         74.17           10.         Innovativeness level         Low High         19         15.83           High         12         10.00           11.         Risk orientation level         Low High         82         68.33           High         19         15.83           High         19         15.83           12.         Scientific orientation level         Low Medium         65         54.17           Medium         38         31.67		contacts level	Medium	34	28.33
Participation   Medium   13   10.83			High	11	9.17
level	9.	Social	Low	112	93.33
Innovativeness level         Low         89         74.17           High         19         15.83           High         12         10.00           It.         Risk orientation level         Low         82         68.33           High         19         15.83           High         19         15.83           It.         Scientific orientation level         Low         65         54.17           Medium         38         31.67		participation	Medium	13	10.83
level   Medium   19   15.83   High   12   10.00     11.   Risk orientation   Low   82   68.33   Medium   19   15.83   High   19   15.83     12.   Scientific   Low   65   54.17   orientation level   Medium   38   31.67		level	High	5	4.17
High   12   10.00     Risk orientation level   Low   82   68.33     Medium   19   15.83     High   19   15.83     High   19   15.83     Scientific orientation level   Medium   38   31.67	10.	Innovativeness	Low	89	74.17
Risk orientation level         Low         82         68.33           High         19         15.83           High         19         15.83           12.         Scientific orientation level         Low         65         54.17           Medium         38         31.67		level			15.83
Risk orientation level         Low         82         68.33           Medium         19         15.83           High         19         15.83           12.         Scientific orientation level         Low         65         54.17           Medium         38         31.67			High	12	10.00
High   19   15.83     12.   Scientific   Low   65   54.17     orientation level   Medium   38   31.67	11.	Risk orientation		82	68.33
12.         Scientific orientation level         Low Medium         65         54.17           38         31.67		level	Medium	19	15.83
orientation levelMedium3831.67			High	19	15.83
	12.	Scientific	Low	65	54.17
High 17 14.17		orientation level	Medium	38	
			High	17	14.17

## 3.2. LEVEL OF KNOWLEDGE ON CLIMATE RESILIENT TECHNOLOGIES:

Table: 2. Level of Knowledge on Climate Resilient Technologies (n=120)

	Table: 2: Level of Knowledge on Chinate Resident Technologies (n=120)				
S. No.	Climate resilient practices	Level of Knowledge	Frequency	Percentage	
1.	Natural Resource	Low (13-16.67)	89	74.17	
	Management	Medium (16.67-20.33)	20	16.67	
		High (20.33-24)	11	9.16	
		Total	120	100.00	
2.	Crop Production	Low (10-12)	82	68.33	
		Medium (13-14)	34	28.33	
		High (15-16)	4	3.33	
		Total	120	100.00	
3.	Livestock Management	Low (9-12)	25	65.78	

	(n=38)	Medium (13-15)	9	23.68
		High (16-18)	4	10.53
		Total	120	100.00
4.	Institutional Interventions	Low (8-11)	86	71.67
		Medium (12-14)	29	24.17
		High (15-17)	5	4.16
		Total	120	100.00

The table: 2 presented the distribution of respondents based on their level of Knowledge on climate resilient practices. 74.17 per cent of the respondents are having low level of knowledge on Natural resources management practices followed by medium (16.67%) and high (9.16%) respectively. About 68.33 per cent of the respondents are having low level of knowledge on crop production practices followed by medium (28.33%) and high (3.33%) respectively. 65.78 per cent of the respondents are having low level of knowledge on livestock production practices followed by medium (23.68%) and high (10.53%) respectively. 71.67 per cent of the respondents are having low level of knowledge on institutional interventions followed by medium (24.17%) and high (4.16%) respectively.

# 3.3. RELATIONSHIP OF INDEPENDENT VARIABLES WITH KNOWLEDGE ON CLIMATE RESILIENT PRACTICES:

Table: 3. Relationship of independent variables with Knowledge on climate resilient practices

No.   Variables   Natural Resource Management   Crop Production   Livestock management   Institutional interventions		Table: 5. Relationship of independent variables with Knowledge on chinate resinent practices				
Resource   Management   Management   Management   Management   Management	S.	Independent	Correlation (r) value			
Management           1.         Age         0.076565 <sup>NS</sup> -0.0706 <sup>NS</sup> -0.0786 <sup>NS</sup> -0.0512 <sup>NS</sup> 2.         Family type         -0.09659 <sup>NS</sup> -0.1477 <sup>NS</sup> -0.0319 <sup>NS</sup> -0.08761 <sup>NS</sup> 3.         Income         0.058158 <sup>NS</sup> 0.04268 <sup>NS</sup> 0.32057 <sup>NS</sup> 0.153563 <sup>NS</sup> 4.         Education         0.653758*         0.664259*         0.564772*         0.688864*           5.         Farming experience         0.040129 <sup>NS</sup> -0.02813 <sup>NS</sup> -0.0906 <sup>NS</sup> -0.0425 <sup>NS</sup> 6.         Land holding         -0.16084 <sup>NS</sup> -0.19195 <sup>NS</sup> -0.0352 <sup>NS</sup> -0.13222 <sup>NS</sup> 7.         Mass Media         0.652024*         0.698667*         0.760786*         0.737305*           Exposure         8.         Extension         0.611538*         0.582606*         0.60404*         0.650997*           9.         Social         0.404055 <sup>NS</sup> 0.409533 <sup>NS</sup> 0.578111*         0.471421 <sup>NS</sup> 10.         Innovativeness         0.604819*         0.605027*         0.644617*         0.640517*           11.         Risk orientation         0.830117*         0.865149*         0.918976*	No.	variables	Natural	Crop	Livestock	Institutional
1.         Age         0.076565 <sup>NS</sup> -0.0706 <sup>NS</sup> -0.0786 <sup>NS</sup> -0.0512 <sup>NS</sup> 2.         Family type         -0.09659 <sup>NS</sup> -0.1477 <sup>NS</sup> -0.0319 <sup>NS</sup> -0.08761 <sup>NS</sup> 3.         Income         0.058158 <sup>NS</sup> 0.04268 <sup>NS</sup> 0.32057 <sup>NS</sup> 0.153563 <sup>NS</sup> 4.         Education         0.653758*         0.664259*         0.564772*         0.688864*           5.         Farming experience         0.040129 <sup>NS</sup> -0.02813 <sup>NS</sup> -0.0906 <sup>NS</sup> -0.0425 <sup>NS</sup> 6.         Land holding experience         -0.19195 <sup>NS</sup> -0.0352 <sup>NS</sup> -0.13222 <sup>NS</sup> 7.         Mass Media Exposure         0.652024*         0.698667*         0.760786*         0.737305*           8.         Extension contacts         0.611538*         0.582606*         0.60404*         0.650997*           9.         Social participation         0.404055 <sup>NS</sup> 0.409533 <sup>NS</sup> 0.578111*         0.471421 <sup>NS</sup> 10.         Innovativeness         0.604819*         0.605027*         0.644617*         0.640517*           11.         Risk orientation         0.830117*         0.865149*         0.918976*         0.85865*           12.         S			Resource	Production	management	interventions
2.         Family type         -0.09659 NS         -0.1477 NS         -0.0319 NS         -0.08761 NS           3.         Income         0.058158 NS         0.04268 NS         0.32057 NS         0.153563 NS           4.         Education         0.653758*         0.664259*         0.564772*         0.688864*           5.         Farming experience         0.040129 NS         -0.02813 NS         -0.0906 NS         -0.0425 NS           6.         Land holding experience         -0.16084 NS         -0.19195 NS         -0.0352 NS         -0.13222 NS           7.         Mass Media Exposure         0.652024*         0.698667*         0.760786*         0.737305*           8.         Extension contacts         0.611538*         0.582606*         0.60404*         0.650997*           9.         Social participation         0.404055 NS         0.409533 NS         0.578111*         0.471421 NS           10.         Innovativeness         0.604819*         0.605027*         0.644617*         0.640517*           11.         Risk orientation         0.830117*         0.865149*         0.918976*         0.85865*           12.         Scientific         0.632187*         0.653712*         0.784253*         0.661641*						
3.         Income         0.058158 NS         0.04268 NS         0.32057 NS         0.153563 NS           4.         Education         0.653758*         0.664259*         0.564772*         0.688864*           5.         Farming experience         0.040129 NS         -0.02813 NS         -0.0906 NS         -0.0425 NS           6.         Land holding experience         -0.16084 NS         -0.19195 NS         -0.0352 NS         -0.13222 NS           7.         Mass Media Exposure         0.652024*         0.698667*         0.760786*         0.737305*           8.         Extension contacts         0.611538*         0.582606*         0.60404*         0.650997*           9.         Social participation         0.404055 NS         0.409533 NS         0.578111*         0.471421 NS           10.         Innovativeness         0.604819*         0.605027*         0.644617*         0.640517*           11.         Risk orientation         0.830117*         0.865149*         0.918976*         0.85865*           12.         Scientific         0.632187*         0.653712*         0.784253*         0.661641*	1.	Age		-0.0706 <sup>NS</sup>	-0.0786 <sup>NS</sup>	-0.0512 <sup>NS</sup>
4.         Education         0.653758*         0.664259*         0.564772*         0.688864*           5.         Farming experience         0.040129 NS         -0.02813 NS         -0.0906 NS         -0.0425 NS           6.         Land holding experience         -0.16084 NS         -0.19195 NS         -0.0352 NS         -0.13222 NS           7.         Mass Media Exposure         0.652024*         0.698667*         0.760786*         0.737305*           8.         Extension contacts         0.611538*         0.582606*         0.60404*         0.650997*           9.         Social participation         0.404055 NS participation         0.409533 NS participation         0.578111*         0.471421 NS participation           10.         Innovativeness         0.604819*         0.605027*         0.644617*         0.640517*           11.         Risk orientation         0.830117*         0.865149*         0.918976*         0.85865*           12.         Scientific         0.632187*         0.653712*         0.784253*         0.661641*	2.	Family type	-0.09659 <sup>NS</sup>	-0.1477 <sup>NS</sup>		-0.08761 <sup>NS</sup>
5.         Farming experience         0.040129 NS         -0.02813 NS         -0.0906 NS         -0.0425 NS           6.         Land holding         -0.16084 NS         -0.19195 NS         -0.0352 NS         -0.13222 NS           7.         Mass Media Exposure         0.652024*         0.698667*         0.760786*         0.737305*           8.         Extension contacts         0.611538*         0.582606*         0.60404*         0.650997*           9.         Social participation         0.404055 NS         0.409533 NS         0.578111*         0.471421 NS           10.         Innovativeness         0.604819*         0.605027*         0.644617*         0.640517*           11.         Risk orientation         0.830117*         0.865149*         0.918976*         0.85865*           12.         Scientific         0.632187*         0.653712*         0.784253*         0.661641*	3.	Income	$0.058158^{\mathrm{NS}}$	0.04268 <sup>NS</sup>	0.32057 <sup>NS</sup>	0.153563 <sup>NS</sup>
6.         Land holding         -0.16084 NS         -0.19195 NS         -0.0352 NS         -0.13222 NS           7.         Mass Media Exposure         0.652024*         0.698667*         0.760786*         0.737305*           8.         Extension contacts         0.611538*         0.582606*         0.60404*         0.650997*           9.         Social participation         0.404055 NS participation         0.409533 NS participation         0.578111*         0.471421 NS participation           10.         Innovativeness         0.604819*         0.605027*         0.644617*         0.640517*           11.         Risk orientation         0.830117*         0.865149*         0.918976*         0.85865*           12.         Scientific         0.632187*         0.653712*         0.784253*         0.661641*	4.	Education				
6.         Land holding         -0.16084 NS         -0.19195 NS         -0.0352 NS         -0.13222 NS           7.         Mass Media Exposure         0.652024*         0.698667*         0.760786*         0.737305*           8.         Extension contacts         0.611538*         0.582606*         0.60404*         0.650997*           9.         Social participation         0.404055 NS         0.409533 NS         0.578111*         0.471421 NS           10.         Innovativeness         0.604819*         0.605027*         0.644617*         0.640517*           11.         Risk orientation         0.830117*         0.865149*         0.918976*         0.85865*           12.         Scientific         0.632187*         0.653712*         0.784253*         0.661641*	5.	Farming	0.040129 <sup>NS</sup>	-0.02813 <sup>NS</sup>	-0.0906 <sup>NS</sup>	-0.0425 <sup>NS</sup>
7.         Mass Media Exposure         0.652024*         0.698667*         0.760786*         0.737305*           8.         Extension contacts         0.611538*         0.582606*         0.60404*         0.650997*           9.         Social participation         0.404055 NS         0.409533 NS         0.578111*         0.471421 NS           10.         Innovativeness         0.604819*         0.605027*         0.644617*         0.640517*           11.         Risk orientation         0.830117*         0.865149*         0.918976*         0.85865*           12.         Scientific         0.632187*         0.653712*         0.784253*         0.661641*		experience				
Exposure         0.611538*         0.582606*         0.60404*         0.650997*           9.         Social participation         0.404055 NS participation         0.409533 NS participation         0.578111*         0.471421 NS participation           10.         Innovativeness         0.604819*         0.605027*         0.644617*         0.640517*           11.         Risk orientation         0.830117*         0.865149*         0.918976*         0.85865*           12.         Scientific         0.632187*         0.653712*         0.784253*         0.661641*	6.	Land holding	-0.16084 <sup>NS</sup>	-0.19195 <sup>NS</sup>	-0.0352 <sup>NS</sup>	-0.13222 NS
8.         Extension contacts         0.611538*         0.582606*         0.60404*         0.650997*           9.         Social participation         0.404055 NS participation         0.409533 NS participation         0.578111*         0.471421 NS participation           10.         Innovativeness         0.604819*         0.605027*         0.644617*         0.640517*           11.         Risk orientation         0.830117*         0.865149*         0.918976*         0.85865*           12.         Scientific         0.632187*         0.653712*         0.784253*         0.661641*	7.	Mass Media	0.652024*	0.698667*	0.760786*	0.737305*
contacts         0.404055 NS         0.409533 NS         0.578111*         0.471421 NS           10.         Innovativeness         0.604819*         0.605027*         0.644617*         0.640517*           11.         Risk orientation         0.830117*         0.865149*         0.918976*         0.85865*           12.         Scientific         0.632187*         0.653712*         0.784253*         0.661641*		Exposure				
9.         Social participation         0.404055 NS         0.409533 NS         0.578111*         0.471421 NS           10.         Innovativeness         0.604819*         0.605027*         0.644617*         0.640517*           11.         Risk orientation         0.830117*         0.865149*         0.918976*         0.85865*           12.         Scientific         0.632187*         0.653712*         0.784253*         0.661641*	8.	Extension	0.611538*	0.582606*	0.60404*	0.650997*
participation         0.605027*         0.644617*         0.640517*           11.         Risk orientation         0.830117*         0.865149*         0.918976*         0.85865*           12.         Scientific         0.632187*         0.653712*         0.784253*         0.661641*		contacts				
10.         Innovativeness         0.604819*         0.605027*         0.644617*         0.640517*           11.         Risk orientation         0.830117*         0.865149*         0.918976*         0.85865*           12.         Scientific         0.632187*         0.653712*         0.784253*         0.661641*	9.	Social	0.404055 <sup>NS</sup>	0.409533 <sup>NS</sup>	0.578111*	0.471421 <sup>NS</sup>
11.       Risk orientation       0.830117*       0.865149*       0.918976*       0.85865*         12.       Scientific       0.632187*       0.653712*       0.784253*       0.661641*		participation				
orientation         0.632187*         0.653712*         0.784253*         0.661641*	10.	Innovativeness	0.604819*	0.605027*	0.644617*	0.640517*
<b>12.</b> Scientific 0.632187* 0.653712* 0.784253* 0.661641*	11.	Risk	0.830117*	0.865149*	0.918976*	0.85865*
		orientation				
orientation	12.	Scientific	0.632187*	0.653712*	0.784253*	0.661641*
NS NY GO GO		orientation				

NS = Not Significant

The table: 3 presents that the relationship between independent variables with knowledge on climate change and its impacts. Variables like age, family type, income, farming experience and land holding found no significant relationship [2] with knowledge on climate resilient practices, while variables like education, mass media exposure, extension contacts, innovativeness, risk orientation and scientific orientation has strong positive relationship with knowledge. Regarding social participation found significant in livestock management in the meantime found no significant with rest of the practices viz, Natural Resource Management, crop production and institutional interventions. [1]

#### 4. DISCUSSION:

From the above interpreted results, it is found that there is a low level of knowledge on climate resilient agricultural practices viz, Natural Resource Management, Crop Production, Livestock Management and Institutional Interventions. Even though the level of knowledge is less, there is a positive strong relationship between variables like mass media exposure, extension contacts, innovativeness, risk orientation and scientific orientation with knowledge. Similarly social participation also has medium strong positive relationship with knowledge.

<sup>\*=</sup> positively correlated

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### 5. CONCLUSION:

From the above results, it is concluded that the level of knowledge on climate resilient practices are low. There is no significant relationship between socio-economic variables like age, family type, income, farming experience and social participation with the level of knowledge on climate resilient practices. Further it shows that there is a significant relationship between variables like education, mass media exposure, extension contacts, innovativeness, risk orientation and scientific orientation with the level of knowledge on climate resilient practices. The above condition was observed because of the poor training and programmes on climate resilient agriculture, so the NICRA could take this results in mind in future for their technology demonstration programmes of non-selected districts like Virudhunagar.

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