

**CLIMATE CHANGE AWARENESS AND ADAPTATION IN  
SOME IRRIGABLE AREAS OF BATTICALOA  
DISTRICT**



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## ABSTRACT

Climate change is defined as the significant variation in climate for an extended period of time. It is the major problem in the world as well as on Sri Lankan agricultural and livestock sector. The agricultural sector is highly vulnerable to climate change impacts as this primary production is highly linked with the natural resources. The adaptation strategies are important to minimize the negative impacts of climate change. Therefore, assessment or study on the present climatic change, detailed study of the area and socio-economic status of the people in order to accept the adaptation strategies are very important in implementing any adaptation practices or projects against climate change to a particular area. In this view this research was conducted with the aim of assessing the impacts, awareness and adaptation of climate change on agriculture and socio-economic condition of farmers.

This research was conducted at some selected irrigable areas of Batticaloa district during the period from December 2010 to February 2011. During this research study, ten villages were selected from the irrigable areas of Unnichchai scheme, Rugam Scheme and Navagiri scheme. The questionnaire survey, key informant interview and direct observations were carried out to collect the primary data. Also the Secondary data were collected from the Department of Agriculture, Agrarian Services Centre, Meteorological Department, Irrigation Department and other relevant publications from journals. Both quantitative and qualitative research methods were used in the data analysis.

The results showed that, most of the farmers are aware of the drought and floods. The regression analysis of the rainfall data for past five years were carried out and showed

the increasing trend of rain fall ( $R^2 = 0.55$ ). Also, it was found that the climate change reduces agricultural production and increases the poverty of the sample population. About 75.8% of the cultivated land of respondents was affected by flood of January 2011. Majority of the farmers (43%) are adapting a new method of paddy cultivation such as reuse of drainage water, increase the number of ploughing and the use of tolerant crop variety like BG 300, At 307 etc. By inspecting the 'crop calendar' it was found that *yala* and *maha* seasons are shifted to some extent due to the change of rainfall pattern especially during *yala* season. However the agronomical adaptation percentage of the farmers were less compare to the increased trend of climate change.

Adaptation in livestock was very poor in the study area. Many livestock died during drought experienced during the period from April to September 2009. However, the management system of livestock is nowadays changing from extensive to semi intensive system. It is also found that adaptation relevant to water resources such as the use of micro irrigation; rain water harvesting and waste water irrigation are at low level. It is also concluded that the awareness on recent climate change impacts on productivity among the people residing in the study area is inadequate. Therefore, conducting awareness programme by the respective authority will create some awareness among those people.

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