

Climate Smart Agriculture

Subhashisa Praharaj^{*} and Usha Das

Center for Smart Agriculture, Centurion University of Technology and Management, Paralakhemundi, Odisha- 761211

**Corresponding author: subhashisa.praharaj@cutm.ac.in*

Abstract

Climate change is one of the major threats to agriculture production system across the globe. The negative impacts of climate change are being felt in the form of frequent extreme weather events. As the success of crop production is largely dependent on climate, hence climate change is expected to affect food security. To feed the growing population, which is expected to reach 9 billion by 2050, agriculture needs to be transformed. Highly unsustainable intensive agricultural practices need to be replaced with climate smart agricultural practices to meet the future demand of food under a changing climatic scenario. Climate smart agriculture aims at enhancing food security, building adaptation and resilience and reducing and/or removing greenhouse gas emission wherever feasible. Climate smart agriculture is not a specific agricultural technique that can be universally applied; rather it requires site specific considerations to develop an agricultural production strategy that can help in achieving the objectives of food security, climate change adaptation and mitigation.

Keywords: Adaptation, Climate Smart Agriculture, Food security, Mitigation, Sustainability

1. Introduction

Climate change impacts are visible all across the globe. However; countries like India are more vulnerable to the impact of climate change due to dependence of majority of people on agriculture, small land holding, poor resource availability, excessive pressure on natural resource etc. Agriculture is broadly categorized based on irrigation availability as rainfed and irrigated. The climate change thrust is more conspicuous on the rainfed areas and a major share of Indian agriculture is still under rainfed condition. Projected consequences of climate change are not limited