

SUSTAINABILITY OF INDIAN AGRICULTURE WITH EMPHASIS ON CLIMATE CHANGE

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ABSTRACT

The major cause of climate change has been ascribed to the increased levels of greenhouse gases like carbon dioxide (CO₂), methane (CH₄), nitrous oxide (NO₂), chlorofurocarbons (CFCs) due to the uncontrolled activities like burning of fossil fuels, increased use of refrigerants and enhanced agriculture related practices. There is no doubt that climate is changing. The main reason for climate change is the increase in the concentration of greenhouse gases in the atmosphere due to several natural and anthropogenic activities. The level of greenhouse gases has already increased considerably over the period particularly after industrial era (1850). Agriculture is an economic activity that is highly dependent on climate in order to produce the food and fiber necessary to sustain human life. The agriculture in India is highly sensitive to variations of weather and climate. The history of Indian agriculture reflects a series of adaptation. Soil, water, terrain, climate, technological developments and market factors provide constraints and opportunity for agricultural productions. Climate change has already been a reality for Indian farmers. These changes over time represent stimuli that affect the success of farming activities negatively and that prompt adjustments to altered circumstances. Since the inceptions of 'sustainable agriculture' in Rio Summit in 1992, a diverse range of approaches are put forward by researchers, state organization, nongovernmental development bodies, private organization in India but guided by the basic principle of sustainability. Sustainable agriculture must be economically viable, socially responsible and conserve land, water, genetic and other resources for future generation.

KEYWORDS: Agriculture, Climate Change, Greenhouse Gases, Sustainability, Vulnerability