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## Abstract

### **Impacts of Climate Change on Food Security and Economy: A Global Perspective**

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#### **Abstract**

Climate change (CC) is described as the alteration in the climate of an area as a result of anthropogenic and natural catastrophes, viz. the depletion of the ozone layer, and greenhouse effects. It may result from factors such as changes in solar emission, long-term changes in the earth's orbital elements (eccentricity, obliquity of the ecliptic, the procession of the equinoxes etc.), natural processes, and human forcing on a planet. Climate change not only causes a fundamental threat to the places, capitals, species and people's livelihoods but also unleashes detrimental impact on agriculture (including fisheries and livestock), water supplies, migration patterns, infrastructure, healthcare, disease prevalence, tourism stream, labour productivity, financial flows, energy demands and economic activity. Therefore, this work attempts to beam searchlights on the hazards that climate change poses to human existence, development, environment, habitat, global economy and food security. Probably the most worrying threat to our planet is global warming. There are several reasons why global warming is occurring and some necessary steps taken by both government and individual to overcome this situation. The most predominant factors resulting in the warming of the earth are the emission of CO<sub>2</sub> and fossil fuels. For these consequences, an attempt to resolve the effects of temperature on economic productivity at the micro and macro levels produces predictions of global economic losses due to climate change that are much higher than previous estimates. Climate change could potentially interrupt progress and hinder the production of food in actual time by changing the variability of seasons. A robust and coherent global pattern is discernible of the impacts of climate change on productivity that could have consequences for food availability. The stability of whole food systems may be at risk under climate change because of short-term variability in supply. However, the potential impact is less clear at regional scales, but it is likely that climate variability and change will exacerbate food insecurity in areas currently vulnerable to hunger and undernutrition. Likewise, it can be anticipated that food access and utilization will be affected indirectly via collateral effects on household and individual incomes, and food utilization could be impaired by loss of access to agriculture production and damage to health. The evidence supports the need for considerable

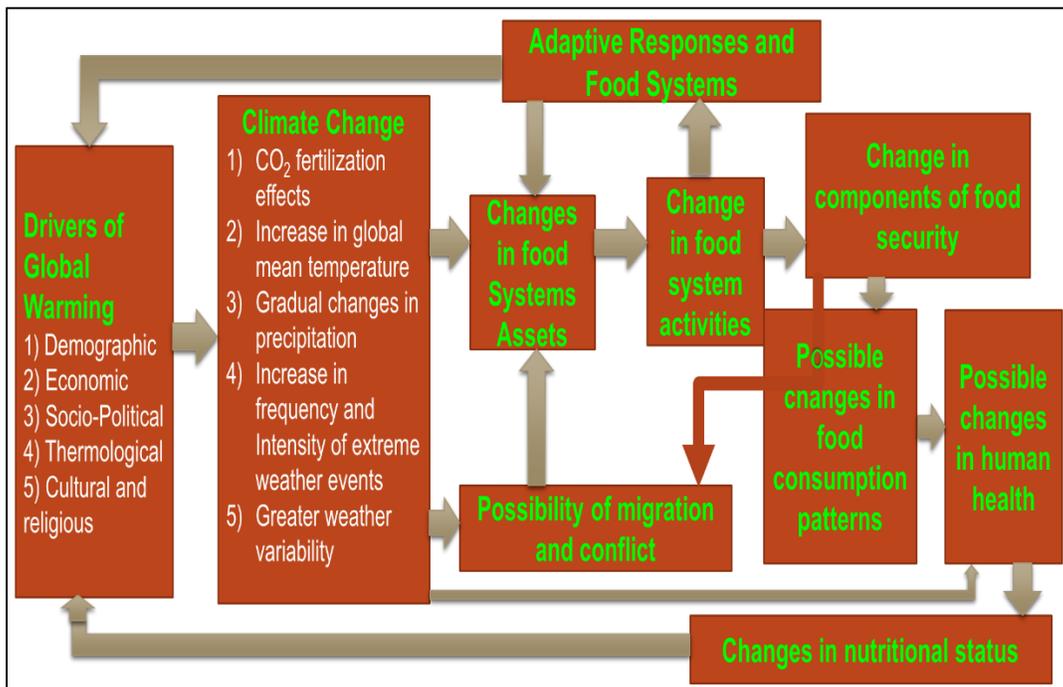
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investment in adaptation and mitigation actions toward a “climate-smart food system” that is more resilient to climate change influences on food security. However, achieving food security under climate change scenarios requires strong policies, releasing high-yielding stress resistant varieties, developing climate resilient structures, and climate-smart agriculture. Nevertheless, both the sign and magnitude of the projected changes in food yield vary with alternative climate models and from one country to another. Therefore, future research and development should focus on the researching and innovation of climate-resilient technologies, alternative and carbon neutral energy sources, carbon pricing, wild food sources and bio-energy to mitigate adverse climate change impacts.

**Keywords:** Global warming, climate change, production, food security, climate finance



**Figure 1.** Schematic diagram of climate change and food security