

The Economic Impact of Climate Change on Agriculture: Modelling the Effects of Changing Weather Patterns on Crop Yields and Food Security

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Abstract: *The economic impact of climate change on agriculture is a pressing concern. Climate change can lead to shifting weather patterns that have significant implications for crop yields and food security. To model these effects, researchers employ complex climate and agricultural models. They simulate scenarios of temperature changes, altered precipitation patterns, and extreme weather events to predict how they will affect crop production. These models help assess potential economic losses in agriculture due to reduced yields, increased pests and diseases, and resource scarcity. Understanding these impacts is crucial for developing strategies to adapt to and mitigate the economic challenges posed by climate change in the agricultural sector.*

The possible rise in hunger and food insecurity is one of the biggest effects of climate change. The hazards of hunger and malnutrition are exacerbated by rising temperatures and extreme weather. The frequency and severity of certain disasters, such storms, floods, and droughts, are increasing due to climate change. The security of food and livelihoods are negatively impacted by this. Climate-related disasters have the capacity to ruin important community assets, vital infrastructure, and crops, degrading livelihoods and making poverty worse. The rising sea level brought on by climate change is a long-term and progressive menace to livelihoods in river deltas and coastal areas. Accelerated glacial melt will also alter patterns of flooding and drought and have an impact on the amount and dependability of water available.

Keywords: Adaption; Climate change; Crop model; Food policies; Food security; Temperature

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