



Food security is not only an explicit concern under climate change; successful adaptation and mitigation responses in the agricultural sector can only be achieved within the environmental and economic sustainability goals set forth in both the UNFCCC and the Millennium Development Goals. Use the links on the left to read more on emissions of greenhouse gases; the potential impacts of climate change; and solutions including mitigation, adaptation and the policy framework.

Agriculture, forestry, and fisheries are among the most climate-sensitive sectors. Therefore their production processes – whether for food, feed, fibre, beverage, energy or industrial crops, or for livestock, poultry, fish or forest products – will be heavily impacted by climate change. In the next decades, impacts in temperate regions are expected to be positive, and those in tropical regions negative, although there is still considerable uncertainty about how projected changes will play out locally, and projected impacts could also be altered by adoption of risk management measures and adaptation strategies that strengthen preparedness and resilience.

Climate change will particularly affect vulnerable people and food systems

More frequent and more intense, extreme weather will have adverse immediate impacts on food production, food distribution infrastructure, on livelihood assets and opportunities in both rural and urban areas. Changes in mean temperatures and rainfall, increasing weather variability and rising sea levels will affect the suitability of land for different types of crops and pasture, the health and productivity of forests, the incidence of pests and diseases, biodiversity and ecosystems. Loss of arable land is likely due to increased aridity, groundwater depletion and the rise in sea level.

Changes in agricultural production patterns will affect food security in two ways

1. Impacts on the production of food will affect food supply at both global and local levels. Globally, higher yields in temperate regions could offset lower yields in tropical regions. However, in many low-income countries that have limited financial capacity to trade, and that rely heavily on their own production to cover their food requirements, it may not be possible to offset declines in local supply without increased reliance on food aid.
2. Impacts on all forms of agricultural production will affect livelihoods and ability to access food. Producer groups less able to deal with climate change, such as the rural poor in developing countries, risk having their safety and welfare compromised.

Climate change will increase hunger and malnutrition

Climate change will worsen the living conditions of farmers, fishers and forest-dependent people who are already vulnerable and food insecure. Hunger and malnutrition will increase. Rural communities dependent on agriculture in a fragile environment will face an immediate risk of increased crop failure and loss of livestock. Mostly at risk are people living along coasts, in floodplains, mountains, drylands, and the arctic. In general, poor people will be at risk of food insecurity due to loss of assets and lack of adequate insurance coverage.

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