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Impacts of traditional practices on food security and the Need for sustainable adaptation strategies.

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By 2050, the global population is expected to hit 10 billion people. This means that – to feed everyone – it will take 56 per cent more food than is produced in the world today, according to the United Nations Environment Programme (UNEP)



5 components of food security

Food Availability Food Access Sufficient quantities Access by individuals to Appropriate quality adequate resources Capacity of agricultural to acquire appropriate production system foods for a nutritious diet. Sustainability & Resilience Resource potential of capacity of consumers & market forces agro-ecosystem **Dimensions** of Food Security **Ensures the nutritional** Round the year wellbeing & accessibility of food human wellbeing. products to the **Factors- Cleanliness,** human population. clean livable environment. food safety and sanitation

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Food Stability

Food Utilization

The negative traditional practices in cultivation

Traditional agriculture, the most practiced form of agriculture around the world, became commonplace following the two world wars, as it was during that era that knowledge about chemistry greatly increased. Traditional negative agriculture is based on treating the soil and plants with products that are noxious.

Unsustainable techniques:

- Using lots of chemicals
- Growing monoculture crops
- Overproduction and more food waste
- Growing crops on every space and inch of land available
- Natural vegetation clearing
- Using manufactured fertilizers to feed the soil
- Growing a few varieties of crop plants
- The using of water resources



In terms of soil erosion, research indicates that traditional farming methods contribute to soil loss at rates of 10-100 times higher compared to sustainable farming systems



Sustainable Agriculture

An economically and socially sustainable agriculture system is one that <u>enables</u> <u>farms of all sizes to be profitable</u> and contribute to their local economies. Such a system supports the next generation of farmers, deals fairly with its <u>workers</u>, promotes <u>racial equity and justice</u>, creates access to <u>healthy food for all</u>, and prioritizes people and communities over corporate interests.





Sustainable agriculture practices

Through decades of science and practice, the following farming practices have proven effective in achieving sustainability, especially when used in combination:

- Rotating crops and embracing diversity.
- Planting cover crops and perennials.
- Reducing or eliminating tillage.
- Applying integrated pest management (IPM).
- Integrating livestock and crops.
- Adopting agroforestry practices.
- Managing whole systems and landscapes.







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Thank you for your attention

