



THE IMPORTANCE OF BIODIVERSITY AND NATURAL SYSTEMS TO FOOD SECURITY IN TANZANIA



Biodiversity and natural systems provide goods and services that contribute to food security including wild foods, pollination, pest control, soil formation, and climate regulation. A growing body of research highlights their role in supporting food security and nutrition in Tanzania.

Contributions of Natural Ecosystems to Food Security and Nutrition in Tanzania

- A study in the Eastern Arc Mountains area found that local communities consumed **over 120 indigenous plant species**; more than a quarter of study participants also reported that they obtained some income from the sale of these indigenous forest foods.³
- In Kilimanjaro, researchers found that while relatively wealthy community members were able to diversify their livelihoods or rely on stored food in response to changing rainfall patterns and decreasing crop yields, **the poor were more likely to use wild foods as a coping strategy**.⁴ Another study from the same region found that during a drought-related food shortage, the second most common coping strategy was to gather wild foods.⁵
- In the East Usambara Mountains, research showed that communities consumed **more than 90 species of wild foods** including fruits, vegetables, fish, birds, insects, and mammals, particularly during the rainy season when people were more food insecure.⁶
- A recent analysis of the Southern Agricultural Growth Corridor's suitability for agricultural intensification concluded that multiple criteria beyond potential yield such as **land cover, freshwater availability, and land tenure should be considered in agricultural planning** to ensure natural systems and ecosystem services are managed sustainably.⁷
- In the Shinyanga region, **restoration of 300,000 hectares of miombo and acacia woodland from 1985 to 2004 led to multiple benefits for local food security**, including increased availability of forest products (e.g., wild foods and firewood) and a decreased level of effort to collect key household needs such as water.⁸
- A recent study found that Dagaa (*Rastrineobola argentea*, a small sardine-like fish), bushmeat, larger species of lake fish, and other **wild foods were among the cheapest sources of animal protein for communities** around Serengeti National Park. Households consumed an average of 8.1 kg of meat or fish per week, of which 49% was Dagaa and other fish, 29% was bushmeat, and 10% was beef.⁹

Food Security in Tanzania

Many Tanzanians face chronic food insecurity and undernutrition despite steady national economic growth. The most recent Demographic and Health Survey found that 38% of children in rural areas are stunted and chronic undernutrition is a major contributor to under 5 mortality in the country.¹ Poverty and food security are also closely linked, with two thirds of households that experience poor dietary intake falling below the poverty line.²

“Forests, trees, and agroforestry systems contribute to food security and nutrition in many ways, but such contributions are usually poorly reflected in national development and food security strategies. Coupled with poor coordination between sectors, the net result is that forests are mostly left out of policy decisions related to food security and nutrition.”

– FAO, Forests for Food Security and Nutrition¹⁰



Benefits of an Integrated “Food Systems” Approach

Biodiversity and ecosystems face a number of threats in Tanzania including agricultural expansion, overharvesting of resources, invasive species, pollution, and climate change.¹¹ One recent analysis from the Eastern Arc Mountains region found that from 1908 to 2000, forests declined by 74% and savanna by 10% while cropland increased five-fold.¹² Marine and freshwater ecosystems in Tanzania are threatened by overfishing, habitat degradation from poor fishing practices, and coral reef decline.¹³ The subsequent loss of ecosystem services could contribute to food insecurity through impacts on the provision of wild foods, water availability for agriculture, soil fertility, pollination, and natural pest control. Food security and nutrition strategies that integrate biodiversity can help maintain and strengthen natural systems so they continue to provide these critically important ecosystem goods and services.

Recommendations

Tanzania’s rich natural resources base contributes to food security and nutrition by supporting agricultural productivity, providing wild foods, and improving community resilience. The following recommendations can help maintain and strengthen this resource base and minimize harm to natural systems:

- Improve management of Tanzania’s wild fisheries and forests so that they can sustainably continue to provide wild foods.
- Maintain ecosystem services that underpin agricultural productivity in Tanzania such as pollination, water provision, soil formation, and natural pest control.
- Integrate biodiversity into efforts to build resilient food systems - biodiverse ecosystems are more resilient to climate change and can help mitigate shocks such as droughts, floods, and other extreme events.



Sources

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