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PEOPLE AND BIODIVERSITY

Agricultural biodiversity is fundamental to human populations who rely on the environment and on ecosystem services for their livelihoods. Men and women farmers not only use biodiversity to meet daily needs; they also hold a special role as *custodians* of biodiversity information and practices. This specialized knowledge needs to be recognized as a tool for achieving food security and sustainable rural development. FAO is committed to help conserve both the variety of the biosphere's resources *and* the local knowledge for dealing with them.

BIODIVERSITY AT THE HUMAN LEVEL

Biodiversity exists in all land and water-related dimensions of agricultural activity, and also supplies ecosystem services such as oxygen production, erosion control and pollination. Together, biodiversity and the ecosystem services it provides sustain the environmental functions on which the well-being of all humans depends. *Rural* men and women, however, are often *entirely* dependent on the environment

for daily living and food security - the more natural resources available to people, the easier it is for them to find products which meet livelihood necessities. In this respect, any change in biodiversity patterns will first and foremost affect the viability of rural survival. Since rural dwellers are often among the world's most poor and vulnerable groups, preserving agricultural biodiversity is a necessary component of sustainable rural development, food security, and poverty alleviation.

LOCAL KNOWLEDGE AND BIODIVERSITY

Rural populations have relied on the environment for thousands of years, and local knowledge about that environment has persisted throughout. This unique relationship means that rural men and women have accumulated specialized information about biological variation and management, allowing to protect themselves against crop failure, animal loss, soil infertility, climate shifts, and other threatening factors. Indeed, men and women farmers are both **users** and **custodians** of biodiversity. In Mozambique, for example, knowledge about wild plants such as the Mungomu Tree protected rural communities against food shortages during the war; only because of their local expertise in alternative foodstuffs were these communities able to avert starvation. The collection of "famine foods", such as the fruit of the Mungomu tree, and other strategies of survival depend on **biodiversity awareness** and **availability**.



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THE GENDER DIMENSION OF AGRICULTURAL BIODIVERSITY

Local knowledge about biodiversity differs between the genders, reflecting variations in men's and women's social positions. This gendered differentiation in local knowledge has important implications for biodiversity management and conservation. For example, men tend to have better knowledge about deep-sea fishing practices and organisms, as they are generally involved in commercial fishing activities with better access to big boats. Women, on the other hand, know more about inland aquatic environments and utility, since they tend to concentrate their efforts in shallow marine zones closer to home. In the end, men and women's knowledge systems act as complements in rural agricultural systems, and both are equally important.

THREATS TO BIODIVERSITY AND REPERCUSSIONS OF BIODIVERSITY LOSS

Local knowledge about biodiversity and natural resources management has allowed people to subsist in often challenging environmental conditions. However, the magnitude and intensification of more recent developments is threatening both this adaptive capacity *and* nature's biodiversity itself. Issues such as climate change, over-harvesting, environmental



degradation, globalization, and commercialization have serious impacts on biological and human systems. Many genetic varieties have disappeared and hence people will lose their understanding of biological resource use. The result is an erosion in the foundations which uphold our agricultural systems and food security. Agricultural systems are underpinned by the interdependence between biodiversity and local knowledge of both men and women. Development processes and practices must take this into consideration if rural development and food security are to become viable prospects.

Learn more:
www.fao.org/sd/LINKS/GEBIO.HTM



Further information about the work of
FAO on biodiversity is available at:
www.fao.org/biodiversity

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