

Forests and trees in global context

Sustainable food systems

Forests and trees play a key role in many food systems. Directly, they provide people with nutritious foods, and indirectly they provide ecosystem services and income. Food from trees and forests will be increasingly important in the face of challenges from population growth and climate change.

Nutritious diets

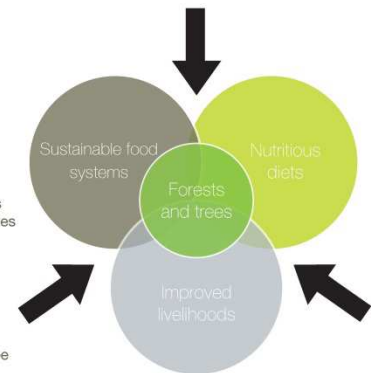
People who use foods from forests have significantly more diverse and nutritious diets. Forests provide a diversity of options for obtaining a balance of essential vitamins and minerals from leafy vegetables, fruits, nuts and other plant sources. In addition to these micronutrients, forests also supply macronutrients as carbohydrates from fruits and tubers and protein and fat from animals.

Improved livelihoods

According to the most recent Global Forest Resource Assessment, food is by far the largest category of non-timber forest products (NTFPs) harvested. More than 1.6 billion people – almost 1 in 5 – depend on forests for their livelihoods. The food from forests and trees contributes to household food security by helping to combat hunger and malnutrition directly but also indirectly: it can be sold and the income spent on food. Forest and tree foods are particularly important during emergency periods such as drought, which may increase as a result of climate change.

Threats

Among the most serious threats is the degradation of traditional food-yielding systems, such as parklands in West Africa, as a result of demographic pressure, droughts, desertification and agricultural practices. Other risks include competitive exploitation of NTFPs and conflict between the use of a single species for timber and food products.



Bioversity International is working on three projects focused on food trees species in Sub-Saharan Africa



Processing of shea butter from *Vitellaria paradoxa* and 'sombala' from *Parkia biglobosa*.

Threats to priority food trees in Burkina Faso

The project looks at two model species: *Vitellaria paradoxa* (karité) and *Parkia biglobosa* (nééré).

Objectives:

- To understand patterns of change in the mosaic of land uses under increasing immigration pressure and other socio-economic changes, and the effect of these changes on land tenure and access to food tree resources
- To understand how changing and intensifying land use and associated habitat fragmentation, in combination with climate-induced reduction of suitable habitat and overexploitation, affect viability and vulnerability of key food tree species
- To improve local capacity to propagate and cultivate important food tree species
- To produce management guidelines and recommendations for conservation and sustainable use of key food tree species, and policy briefs.

Food trees for food shortages

Gathering data through interviews with focus groups, households and key informants in Benin, Burkina Faso, Mali, Madagascar, Niger and Togo.

Objectives:

- Identify all native tree species consumed by rural communities during food shortages
- Assess their relative importance in the diet: how they contribute to the diet, how frequently they are used, what parts of the plant are consumed and how are they processed
- Identify main threats to these species to develop strategies for their conservation.



Powder from baobab leaves of *Adansonia digitata* and leaves of *Vitex doniana* used by the communities in West Africa as part of their diet.



Women from a rural community in the North of Benin interviewed to understand the composition of their diet and their dependency on food tree species.

Beyond Timber: Reconciling the needs of the logging industry with those of forest-dependent people

The project aims to facilitate multiple use of forest resources in the Congo Basin through innovative management. Research will be carried out in Cameroon, Gabon, Congo DRC where 90% of forest land is in timber concessions:

- Socioeconomic studies on uses of plants, including trees for food, in communities near or within forest concessions
- Assess resource inventories and impact of timber harvesting for priority tree species that produce both timber and food
- Nutritional, ecological and genetic studies on key species: one for fruit/oil (moabi, *Baillonella toxisperma*) and two that host edible caterpillars: sapelli (*Entandrophragma cylindricum*) and tali (*Erythrophileum suaveolens*)
- Develop forest management guidelines with concessionaires and communities to reconcile timber and non-timber production
- Make recommendations for forestry legislation and social responsibility contracts.