

Food Production Systems for Uncultivated Foods



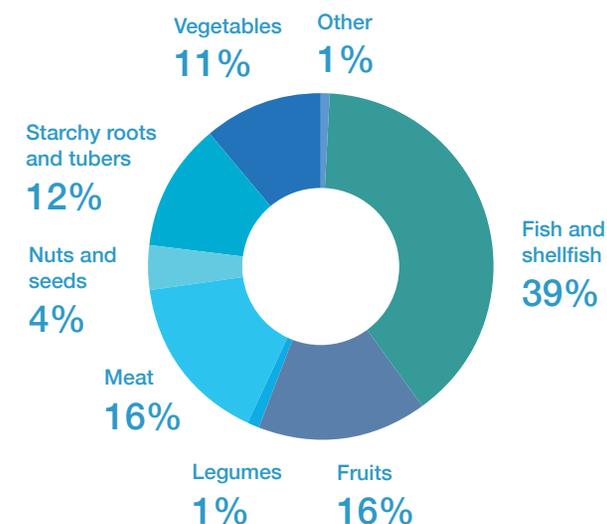
Actionable Area

Recognise the important role of wild and uncultivated foods in climate-resilient production systems and protect biodiversity and provide policy and programme support for their recognition, conservation, and promotion.

Issues

- Forests and commons have been food reservoirs, and many communities rely on these sources to fulfill their food needs. There are various benefits of uncultivated foods. They are organic, naturally regenerative, based on local ecosystems, resilient to local climatic conditions, and represent an extensive low input food system. Communities living near forests and where common lands like permanent pastures and meadows have been preserved have reported rich biodiversity in the availability of such foods that significantly contribute to their food and nutritional security. Still, the uncultivated food systems, termed as “treasure troves” of nutrition, have not yet gained the required recognition in policies and programmes related to agriculture or forests.
- A study on wild edible plants identified 1403 wild edible species from 184 families consumed across India. Various other studies have suggested that uncultivated foods account for a significant calorie intake of households living in forest fringe areas. Food available from forests, common lands, and water bodies include edible flowers, leaves, fruits, seeds, mushrooms, roots and tubers, bamboo shoots, edible insects, birds, honey, fishes, crab, and other aquatic plants and aquatic species. Micro studies have indicated that these foods forming the food and nutrition bank for communities gain significance during food insecurities and intermittent cropping periods.

Wild foods in the FAO/INFOODS Food Composition Database for Biodiversity



Note: “Other” includes milk, eggs and miscellaneous wild foods.
Source: Authors’ calculation based on BioFoodComp 4.0, FAO/INFOODS

- Including edible wild food species as part of the human diet is directly correlated to plant availability, which is governed by local environmental parameters, namely soil type, temperature, altitude, rainfall, etc. The communities living near such food banks are well versed in the identification and consumption of these foods. They have a strong knowledge base and their wisdom for harvesting such foods. Being available as part of common resource pools, the communities have developed. They have shown resilience in demarcating areas for each other's that each one of them can maintain their respective food diversity from this pool.
- The economic system interlinked to uncultivated foods is based on barter/cash exchange of foods and the sale of surplus food that has been gathered/harvested. The underlying principle of this exchange is not profit maximization but optimization of dietary diversity – where each group can access and consume diverse food through these transactional exchanges.
- The uncultivated food system is representative of an agro-ecological production cycle as it is-
 - a. based on the use of local resources (natural endowments);
 - b. follows natural regenerative cycles;
 - c. any organic waste is used and consumed within the habitat (as food for animals or for enriching organic matter);
 - d. traditional knowledge ensures responsible harvesting/gathering so that the carrying capacity of the plant species is maintained;
 - e. and the economic and ecological balance is maintained through reciprocal exchanges.
- Wild and uncultivated foods face increasing challenges from uncontrolled spread of industrial farming that not only encroaches common lands but also, using agro-chemicals, adversely impacts the ecological habitat of such foods. Further with the predominant paradigm of conservation through protection that governs forest policies have reduced access of communities to wild and uncultivated foods. Uncultivated foods do not appear in major development discourses, nor does it find place in agriculture or food policies of national or state governments.
- Climate variability of changing micro climatic weather patterns manifested in warming, extreme weather events of temperature and precipitation, increased incidences of frost and/or hailstorms, local storms and flooding has impacted the regenerative capacities of wild foods. Anthropogenic interferences have further slowed down the process of natural selection among these plant species. However, based on indigenous varieties and well adapted to local climatic conditions wild foods have an in-built resilience to bounce back and continue to provide bio-food diversity to human population.

Vision 2030

- **Recognise and promote the wild and uncultivated food systems through policies and programmes related to agriculture and forest.**

Pathways

IMPLEMENTATION



Increase awareness among consumers to switch food preferences for wild foods, enhance cooking skills, and popularise the recipes without compromising their nutritive value.

Develop a food grading and certification system that recognizes and certifies wild foods, e.g., wild honey, which will help food gatherers and harvesters a market advantage for their produce.

Use biodiversity registers as the benchmark for maintaining the stock and diversity of wild foods.

Promote sustainable and responsible harvesting practices to ensure that harvesting is within the ecological limits of the carrying capacity of the local ecosystem.

Promote niche crop diversity and link it to an efficient value chain under the cluster development approach.

Link strategies to the working plan of forests and dovetailed with CSR investments in localising minor forest produce on local lands. A specialised approach to assessing and managing the man-animal conflict will be required as fruit trees often form food for animals as well.

Adopt a landscape-level approach with convergence for landscape transformation to strengthen and enrich the wild food systems.

Pathways

KNOWLEDGE AND RESEARCH



Undertake research to enhance the shelf life of wild foods to enable these foods to find wider markets and cross-seasonal consumption. Encourage start-ups and other technology-enabled systems to take a lead role in finding such technologies and markets.

Undertake rigorous, nuanced, and immersive documentation of wild and uncultivated foods at the local, regional and pan India level and their contribution in nutritional and dietary diversity to bring such foods into the mainstream discussion on food and nutritional security.

Learn with the local communities to document edible wild foods and develop their gene pool so that these can be re-introduced in case their abundance is threatened or destroyed.

Undertake action research on habitat balance (private and common lands) in respect of biodiversity to account for changing contexts and demands on wild foods.

POLICY



Within food, policies recognize the contribution of uncultivated foods to increase the climate resilience of food systems and thus prioritise projects that conserve, protect, and promote such landscapes in the country.

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