



**Food and Agriculture Organization
of the United Nations**

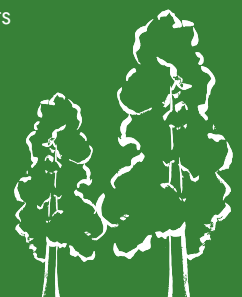
MAXIMIZING NUTRITION IN THE FORESTRY SECTOR IN UGANDA

IN BRIEF

Wild foods are an ecosystem service that contribute to household food consumption in all countries. In poorer countries, wild foods from forests often provide a significant portion of dietary and nutritional profiles. Contrary to common belief, however, these foods are consumed not only during times of food insecurity, but also as part of a complete and healthy diet, with fruits, vegetables and fungi providing important micronutrients to the diets of forest-dependent communities, particularly those of women and young people.

Wild foods are consumed in many parts of Uganda, especially in the northeast and northwest, and the West Nile regions. Studies have found that wild foods serve three main roles: a) as a food source when food security is reduced due to drought or other factors, b) as a supplementary source of food nutrition derived from social and cultural tradition, and c) as a modest source of income for those who sell wild food products at local markets.

Integrating nutrition into wild food production systems is critical to addressing the unacceptably high global prevalence of malnutrition and micronutrient deficiencies. However, uncertainty over what practical approach to adopt remains a challenge for policymakers and practitioners at all levels due to a lack of proven methodological tools. To help address this challenge the Food and Agriculture Organization of the United Nations (FAO), with support from World Vision (WV), has developed an innovative stepwise approach that combines theory and practice by establishing a **theory of change and associated impact pathways**. This work was carried out as part of a consultative process involving expert stakeholders from Uganda. The results obtained demonstrate the utility of this methodological process in helping political decision-makers and field officers **formulate and evaluate nutrition-sensitive policies, programmes and interventions**.



THE KEY STEPS OF THE METHODOLOGICAL PROCESS

STEP 1. SITUATIONAL ANALYSIS

- Scientific literature review
- Identify key participants from the sector in the selected country
- Identify sector challenges using the food system framework
- Validate the situational analysis findings

STEP 2. DEVELOP THE THEORIES OF CHANGE

- Prioritise the challenges to be addressed by the theories of change
- Develop theories of change for each identified priority

STEP 3. DEFINE IMPACT PATHWAYS BASED ON PRACTICAL EXPERIENCES

- Identify the relevant sub-sectors
- Map policies and actions from selected sub-sectors
- Define practice-based impact pathways for each sub-sector based on existing activities

STEP 4. VALIDATION OF THE THEORIES OF CHANGE AND IMPACT PATHWAYS

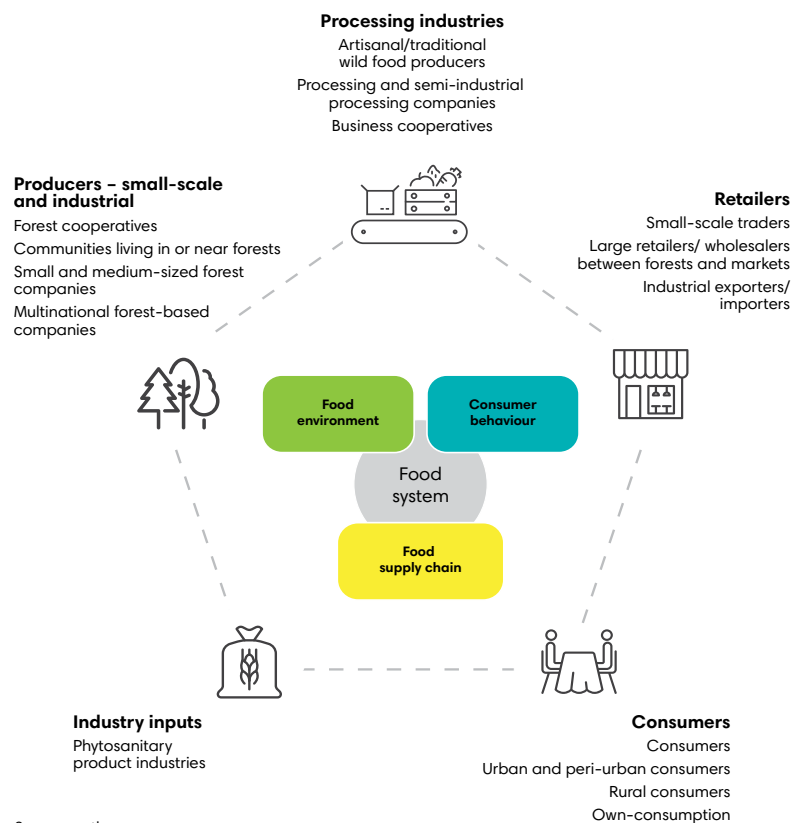
- Assess critical hypotheses and trade-offs
- Consolidate the theories of change based on the impact pathways
- Provide indicators to measure the expected changes
- Consult stakeholders and validate findings

I. Entry point: a food systems approach

Why is it necessary for the forestry sector to integrate nutrition into food systems?

Almost one-third of children under five years of age are stunted in Uganda (USAID, 2018a). This increases with age, peaking at 37 percent among children 18–35 months old. Stunting is generally more prevalent among children in rural areas (30 percent) than urban areas (24 percent), although there are some regional variations. A large proportion of these individuals reside in forests. The use of wild foods among forest-dependent communities in Uganda is generally considered to be widespread. One survey of 400 households found that two-thirds consumed foods gathered from forests (Rowland *et al.*, 2016). Although wild foods are recognized as a right, there are few measures in place to protect this right. Formal food systems/value chains involving large-scale production, aggregation, processing, packaging, storage, distribution and consumption do not exist for most wild foods, leading to low subsistence incomes and food insecurity. Protecting these communities and food systems by providing a supportive policy, institutional and research environment will allow them to identify, improve and sustainably manage their wild food resources while maintaining their cultural and traditional practices. This could lead to improved health and nutritional outcomes, especially among vulnerable groups such as women and children, and a greater resilience of food chains to threats such as climate change and zoonotic disease.

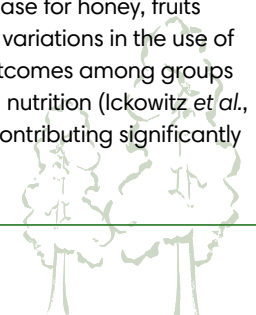
The key players in the forestry food sector and their relation to the three key components of the food system



II. Identification of challenges and issues in relation to addressing nutrition in the forestry sector

Wild foods in Uganda tend to be seasonal, variable/inconsistent in quality, involve minimal processing, and are often sold on roadsides or at nearby markets. Value chains that are compliant with food, processing, storage and transport standards have not yet been widely established for wild food crops, this being most notably the case for honey, fruits and insects, all of which are in high demand (Acanakwo, 2019). Although there are considerable geographical variations in the use of wild foods in Uganda, research indicates that preserving forest and tree cover can lead to higher nutritional outcomes among groups that are food insecure, while ecosystem and landscape change raise the risk of long-term negative impacts on nutrition (Ickowitz *et al.*, 2014): a reduction in forest cover has been shown to reduce the availability of wild fruits rich in vitamin A, thus contributing significantly to vitamin A deficiency (Okidi *et al.*, 2018).

Carry out a contextual analysis using a food systems approach to prioritize sector specific challenges and issues related to nutrition and to contribute to more diverse diets.



III. Overarching theory of change for the forestry sector

The theory of change developed for this brief, in consultation with stakeholders, indicates that the availability and diversity of wild foods can be increased through appropriate ecosystem and landscape management, and that greater access to and demand for wild foods from sustainable value chains will directly benefit forest-dependent communities by providing them with additional income. The general population, especially vulnerable women and children, will also indirectly benefit, as they will be able to access wild foods to complement their diets.

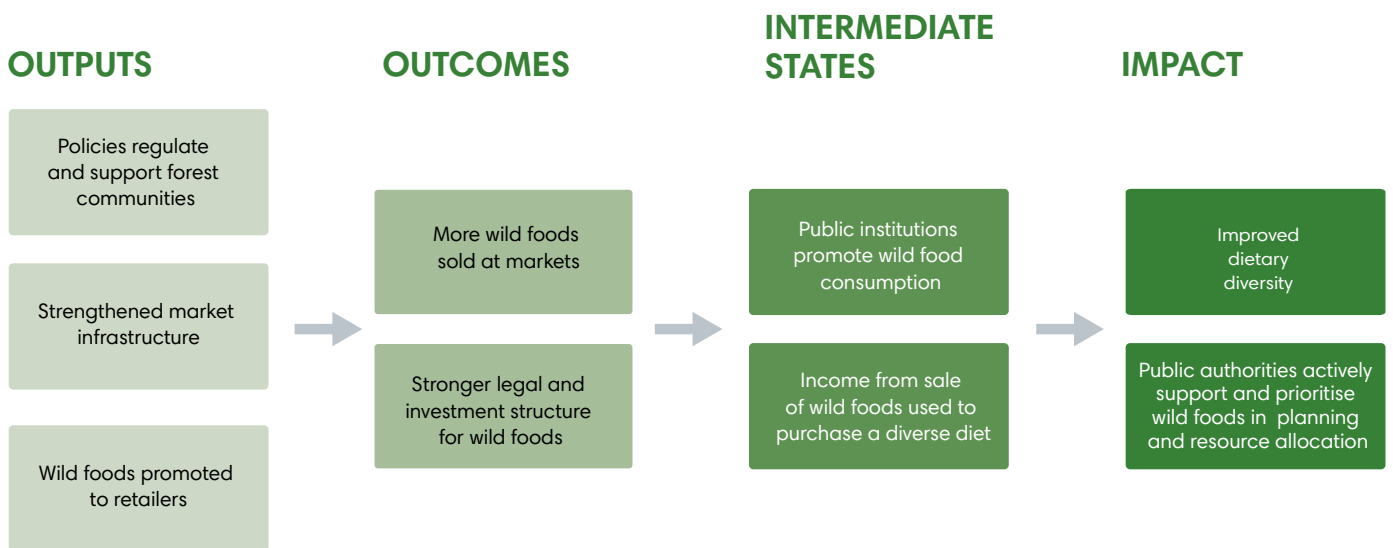
Establish key assumptions that identify the sectoral changes needed to contribute to more diverse diets.

IV. Illustrative food system impact pathway for the forestry sector aimed at improving nutrition outcomes

This impact pathway recognizes the role of agroforestry in the maintenance of essential ecosystem services and the restoration of degraded landscapes, for example, through reforestation. In light of the significant influx of refugee populations, indigenous tree and plant species could be introduced in and around refugee settlements to preserve and protect local landscapes and help meet nutritional needs. The pathway also considers the use of incentives, such as payments for environmental services and ecosystem-based adaptation initiatives, to provide income. This would be complemented by nutrition education to ensure that both host and refugee communities derive as much benefit as possible from the fruits and other wild foods they gather, most of which are expected to be consumed directly.

Develop impact pathways based on sub-sector specific practices to identify existing gaps and opportunities that may contribute to more diverse diets.

Example impact pathway: protecting ecosystems and landscape through sustainable management



Source: the authors.



V. Recommendations and evidence gaps

Recommendation 1

Increase the visibility of non-wood forest products (a category which includes wild foods) when public policies and programmes are being formulated. This can be achieved by gaining advocacy from international stakeholders, in collaboration with local stakeholders.

Consolidate theories of change on the impact pathways findings, and provide recommendations for improving nutrition in the sector/sub-sector.

Recommendation 2

Maintain the momentum built by the workshop on Enhancing Opportunities for Sustainable Exploitation of Non-Wood Forest Products in Uganda (held in February 2020). Should it not be possible to hold an in-person workshop in the near future due to the continued uncertainty created by COVID-19, cooperative efforts between relevant ministries, international organizations (such as FAO, World Agroforestry, the Centre for International Forestry Research, the United Nations Development Programme and the United Nations High Commissioner for Refugees), Ugandan universities and others could focus on the following:

- Building inter-ministerial support within the government of Uganda for working collaboratively towards a coordinated national programme on wild foods aimed at improving the nutrition and food security of vulnerable groups, based on the theories of change and impact pathways developed in this brief.
- Continuing or expanding efforts to document and improve the knowledge base of wild foods in Uganda, such as efforts aimed at providing a better understanding of their value chains, nutritional benefits, and health and safety issues, as well as opportunities for scaling up production.
- Raising awareness among international donors of the role played by wild foods in both meeting humanitarian needs and building resilience within local forest-dependent communities.

Evidence gaps

- A top priority is the need to **fill evidence gaps in order to inform public policy and programmes** by systematically identifying, describing and evaluating the vast array of wild food species that are currently undocumented. With the exception of the small number of wild foods mentioned in this guidance note, there are hundreds of tree and plant species reported as being consumed by forest-dependent communities, but about which little is known in terms of their nutritional characteristics.
- Given the limited capacity of government to address the issue of wild foods, future work should build on existing efforts to document wild food value chains. Additional considerations are **issues related to gender equity and social inclusion**, which are not yet fully understood for the wild foods value chain. Areas that require further research include the access, distribution and sharing of resources, and participation in decision making.

For more information check also:

- Maximizing nutrition in forestry using a food systems approach. An evidence-based literature review
- Maximizing nutrition in forestry. A guidance note on impact pathways for mainstreaming nutrition based on a case study from Uganda

To access to all the publications on maximizing nutrition, go to:
www.fao.org/nutrition/policies-programmes



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