



Food and Agriculture Organization
of the United Nations

NWFP - Opportunities in Non-wood Forest Product Data

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Outline

- What are NWFPs
 - Available data
 - Challenges to data collection
 - Finding methods to improve the data
- What's next

- **“Non-wood Forest Products consist of goods of biological origin other than wood, derived from forests, other wooded land and trees outside forests.” (FAO, 1999)**
- **NWFPs cover (1) wild products; (2) managed products; (3) cultivated products.** *Wild products:* Untended biological resources other than wood obtained from gathering. (Muir, et al. 2020)
- **Includes:** mushrooms, fruits, nuts, herbs, aromatic plants, game, fibres (used in

construction, clothing or handcrafts), resins, gums, saps, and products used for medicinal, cosmetic scopes.



- For most of human history forest products other than wood were more valuable for **nourishing, clothing, healing and for providing shelter**
- species like rubber, oil palm, and cocoa were brought into **cultivation** around the world
- most high value products became **agricultural crops**.

However, NWFPs still matter both national and international scale

a few examples.....

India - Around 55% of employment in forestry is attributed to the NWFPs sector alone (Source: Indian Institute of Natural Gums and Resins). 2020 Export value for Lac; natural gums, resins, gum-resins, balsams and other natural oleoresins reached the highest peak in the latest 5 years (103, 026 USD thousand) (source: trademap)

China - major forest products listed in the China Statistical yearbook 2019: Timber, Rubber (824 093 tonnes), Pine Resin (1 375 367 tonnes), Lacquer (18 882 tonnes), Tung-oil Seeds (348 173 tonnes), Tea-oil Seeds (2 629 796); leader in the international market for bamboo products, mushrooms, pine-nuts.

However, NWFPs still matter both national and international trade

a few examples.....

Sudan – the country, as well as other countries in the gum belt areas, supplies developed countries mostly with raw or roughly processed Arabic Gum which is largely transformed out of the region and re-exported with a higher value added.

Brazil – the country keeps track and reports annually on the production and value - Cashew nuts, Brazil nuts, Erva-mate, Mangaba (fruto), Palmito, Pinhão (fruto), Pequi, Umbu (fruto); distinction among products from native forests and those from managed planted forests.

NWFPs – Available data

Comparable information are available at global scale through the following sources

FAOSTAT - reporting on production, prices and trade of some important agro-forestry products (Beeswax, Blueberries, Brazil nuts, Chestnuts, natural Honey, Kola nuts, Maple sugar and syrups, Game Meat, Mushrooms and truffles, Sheanuts and others).

COMTRADE – Reporting on international trade according to the HS system

CITES – Reporting the international trade for products derived from endangered species

FAO Forest Resource Assessment (FRA)– reporting also on major NWFPs values at country level every five-years and disseminated through the new online platform.

The **FRA** is monitoring the status of the world's forests at five-to-ten-year intervals since 1946. The first report on global forest resources was published in 1948 and the recent assessments have been produced every five years in an attempt to provide a consistent approach to describing the world's forests and how they are changing.

1 FOREST EXTENT, CHARACTERISTICS AND CHANGES

- 1a Extent of forest and other wooded land
- 1b Forest characteristics
- 1c Annual forest expansion, deforestation and net change
- 1d Annual reforestation
- 1e Specific forest categories
- 1f Other land with tree cover

2 FOREST GROWING STOCK, BIOMASS AND CARBON

- 2a Growing stock
- 2b Growing stock composition
- 2c Biomass stock
- 2d Carbon stock

3 FOREST DESIGNATION AND MANAGEMENT

- 3a Designated management objective
- 3b Forest area within protected areas and forest area with long-term management plans

4 FOREST OWNERSHIP AND MANAGEMENT RIGHTS

- 4a Forest ownership
- 4b Management rights of public forests

5 FOREST DISTURBANCES

- 5a Disturbances
- 5b Area affected by fire
- 5c Degraded forest

6 FOREST POLICY AND LEGISLATION

- 6a Policies, legislation and national platform for stakeholder participation in forest policy
- 6b Area of permanent forest estate

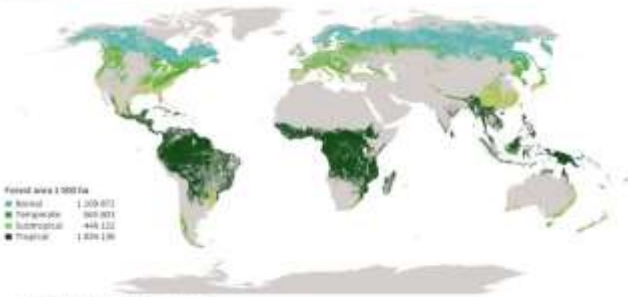
7 EMPLOYMENT, EDUCATION AND NWFP

- 7a Employment in forestry and logging
- 7b Graduation of students in forest-related education
- 7c Non Wood Forest Products

FAO Forest Resource Assessment (FRA)– reporting on major NWFPs values at country level every five-years and disseminated through the new online platform.



The global distribution of forests, by climatic domain



Country Reports 2020

- Afghanistan
- Albania
- Algeria
- American Samoa
- Dominica
- Dominican Republic
- Ecuador
- Egypt
- Libya
- Liechtenstein
- Lithuania
- Luxembourg
- Saint Lucia
- Saint Martin (French Part)
- Saint Pierre and Miquelon
- Saint Vincent and the Grenadines

Platform – Query database accessing to local, regional and global data tables and dashboard
Reporting – Country reports, Key findings & Main report

Maps – Through the geospatial platform Hand in Hand

FRA 2020 Key findings



data visualizations

The Key Findings of FRA 2020 present a synoptic view of the world's forests and the ways in which the resources have changed in the period 1990-2020. Also available as digital report, an innovative resource presenting the main findings from FRA 2020 through responsive

FRA 2020 Main Report



The FRA 2020 Main Report contains the detailed findings of the data analysis, comprising the status of and main trends in each variable.

FAO Forest Resource Assessment (FRA)– reporting on major NWFPs values at country level every five-years and disseminated through the new online platform.

Region	No. of reporting countries	Forest area (2015)	
		(1 000 ha)	% of regional forest area
Africa	39	497 814	76
Asia	20	548 334	89
Europe	33	193 269	19
North and Central America	11	734 863	97
Oceania	10	182 968	99
South America	11	831 070	97
WORLD	124	2 988 316	73

Unique process collecting data on forest resources;
NWFPs data limitation in terms of data completeness and comparability

Japan

Select geographical area

Japan

FRA 2020

Show all

Introduction

1 Forest extent, characteristics and changes

2 Forest growing stock, biomass and carbon

3 Forest designation and management

4 Forest ownership and management rights

5 Forest disturbances

6 Forest policy and legislation

7 Employment, education and NWFP

7a Employment in forestry and logging

7b Graduation of students in forest-related education

7c Non-wood forest products removals and value 2015

8 Sustainable Development Goal 15

National Data

Data sources + type of data source eg NFI, etc

References to sources of information	Variable(s)
Forestry Agency "Basic information on Special Forest Product"	Production of Wild vegetables, Chestnut, Bamboo shoots, Matsutake m Camellia oil, Raw lacquer, Wax

National classification and definitions

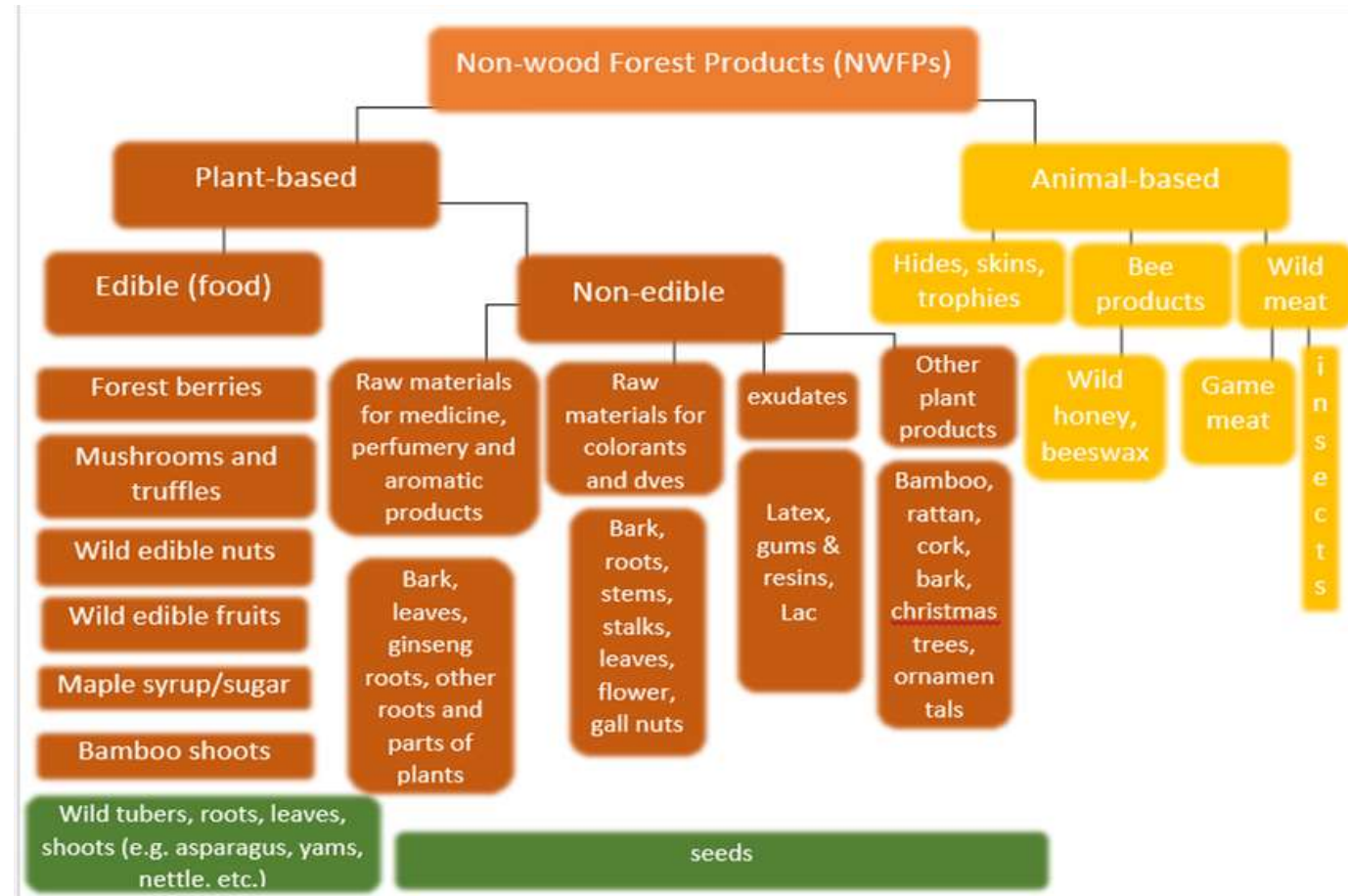
National class	Definition
Special forest products collected from wild, bamboo and bamboo shoots	Special forest products (i.e., products derived from forests other than those produced on agricultural land and greenhouse cultivation,

Original data

	Name of NWFP product	Key species	Quantity	Unit	Value (1000 currency)	NWFP category
1th	Chestnuts	<i>Castanea crenata</i>	16,300	ton	8,524,900	1
		<i>Pteridium aquilinum</i>				
2th	Wild plants and grasses	<i>Osmanthus japonica</i>	16,628.1	ton	8,007,444	1
		<i>Aralia elata</i>				

However, challenges to data collection:

- Diversity of NWFPs compounds



Country examples of how NWFPs are defined/described in select policies, strategies, programmes on forests			
Country	Term	Definition	Source
Fiji	Non-wood forest products	all forest products except woody materials such as timber, fuel wood, charcoal, woodchips, wood pulp and small wood items such as carvings, including but not exclusively, fibres, leaves, fruits, nuts, roots, resins and latexes, honey, bees wax, all types of fungi, minerals, stones and clay;	Forest Bill , 2016
Australia	non-wood products/non-wood forest based activities/non-wood forest products	bush foods, traditional Indigenous medicines and essential oils, native cut flowers and, tourism; eco-tourism, land management, park management, bush tucker and bush medicines, bee keeping, and cultural heritage and site management.	National Indigenous Forestry Strategy (2005)
	Non-wood aspects of forests	wildfire management, recreation, and cultural and heritage values	National Forest Policy Statement (1995)
Nepal	Forest products	<ul style="list-style-type: none"> Timber, firewood, charcoal, catechu, rosin, wood-oil, bark, lac, pipla, pipli (piper longum), or; Tree, leave, fruit, flower, mahwa (bassia longifolia), chiraito (swertia chiretta), Kutki (picorhiza Kurroa) and all kinds of wild herbs, vegetation and different parts or organs thereof, or; Boulder, soil, stone, pebble, sand, or; Bird, wildlife and trophy thereof. 	Forest Act 2049 (1993)
New Zealand	Forest produce or forest product	includes trees and other plants and the produce of trees and other plants, and also includes earth, rock, sand, shingle, and minerals when found in or removed from any forest land or any other land for the time being administered by the Minister	
Bangladesh	Forest produce	Timber as well as a host of other products, including charcoal, wood-oil, resins, wild animals, honey, silk, rocks and minerals, among many others.	

- Vast differences in terminology and definitions make it difficult to assess trends and affects the data comparability

Further challenges to data collection:

- **Unclear boundary** between NWFPs and products from agriculture or horticulture.
- Data scattered and fragmented

↳ NWFPs are **poorly represented in international statistics**

↳ Undefined role of NWFPs for **people**

Inclusion NWFPs in existing survey by refining questionnaires to include NWFPs

Development of tools/guidelines to collect data on NWFPs

Harmonizing terminology and definitions; improving classifications systems

Working methods to add further information and data on NWFPs

NWFPs - FAO work to improve the representativeness of NWFPs in national/international statistics



Inclusion of NWFPs in existing survey

Inclusion of wild food in the FAO assessment on Resilience implemented in Uganda refugee-hosting districts including a section to understand the contribution of wild products to diet (3 824 households interviewed at the end of 2019)

Working with Uni. Ghent – Guidance note for countries to improve accounting of wild foods in food consumption surveys

NWFPS – Implementation of existing guidelines to collect socio-economic data in the forest sector

The Liberia National Household Forest Survey (by the World Bank)

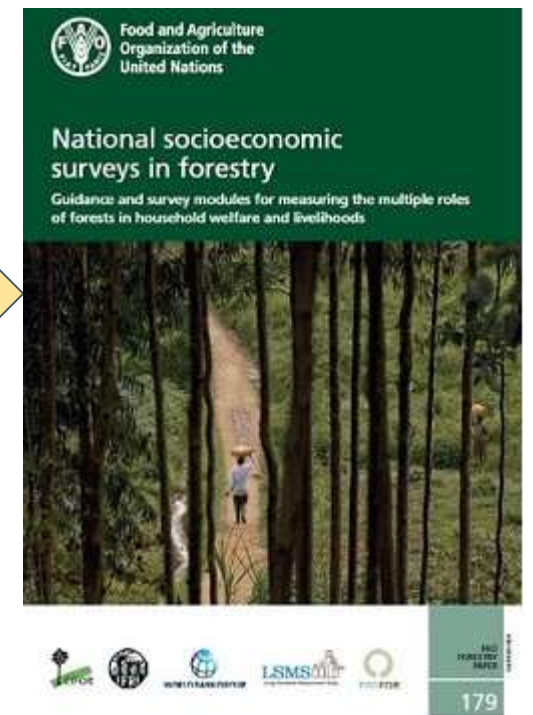
Info & brief here: <https://www.worldbank.org/en/programs/lsmis/brief/lsmis-supported-the-national-household-forest-survey-in-Liberia>;

Microdata available here: <https://microdata.worldbank.org/index.php/catalog/3787/>

“Enable policy makers to understand the economic and social interactions between forests and households residing in the proximity of forests.”

Implementation of existing *ad hoc* guidelines

Understand contributions of forest-related products and environmental services to the subsistence, incomes, employment and coping needs of poor rural households



Available here:
<https://www.fao.org/forestry/forestry-modules/en/>

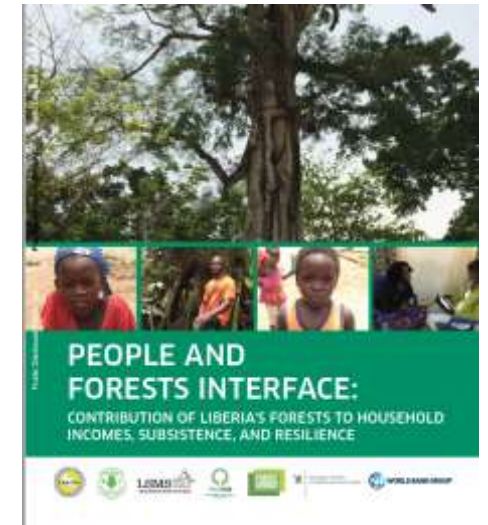
NWFPs – Implementation of existing guidelines to collect socio-economic data in the forest sector

The Liberia National Household Forest Survey (by the World Bank)

The survey focused on forest proximate HHs to get the most information on the full extent of the dependency of HHs on forests.

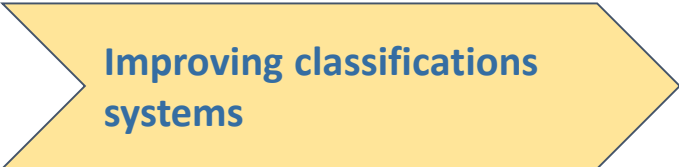
Survey instruments: HH questionnaire administered to **2 986** households and 250 focus groups

- What proportion of total **HH income comes** from forests?
- What **types of forest products** are collected and when?
- What is the **extent of local processing** of forest products?
- How much of the forest products collected or processed is for **self-consumption**, and how much for **sale and trade**?
- Do forests perform a safety net function during and after periods of shocks, caused by events such as pandemics, droughts, fires, and floods?
- What are the local rules governing the use of forests?
- What is the **role of women in decision-making related to forest use at the community level**?
- Who runs forest-based enterprises?
- How important and prevalent are the environmental services from forests?



“World Bank. 2020. People and Forest Interface: Contribution of Liberia’s Forests to Household Incomes, Subsistence, and Resilience. World Bank, Washington, DC. © World Bank. <https://openknowledge.worldbank.org/handle/10986/34438> License: CC BY 3.0 IGO.”

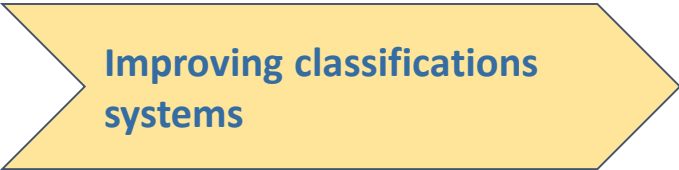
NWFPs - FAO work to improve the representativeness of NWFPs in international classifications



Improving classifications systems

- FAO contributed to the **amendments of the HS** that will enter into force in Jan 2022.
- The HS is the goods nomenclature developed and maintained by the World Customs Organization (WCO) universally used for the collection and dissemination of **international trade statistics**. Cycle revision 5 years.
- New representativeness of NWFPs as the HS 2022 will enable to clearly report the international flows (imports and exports in volumes and values) on:

NWFPs - FAO work to improve the representativeness of NWFPs in national/international statistics



Improving classifications systems

- **Pine-nuts** (with the distinction of in-shell and shelled pine nuts)
- **Mushrooms and truffles** (with the recognition of several genera, like Boletus, Cantharellus, Tuber spp, Shiitake (*Lentinus edodes*) and Matsutake (*Tricholoma matsutake*, *Tricholoma magnivelare*, *Tricholoma anatolicum*, *Tricholoma dulciolens*, *Tricholoma caligatum*);
- “**Insects**” under the class edible products of animal origin;
- “**Bark of African Cherry**” under the class of plant products.

NWFPs – Monitoring the international flows

New import/export volumes and values monitored at the global scale (from 2022):

- Pine-nuts
- Mushrooms and truffles
- Insects
- Bark of African Cherry

Already monitored at the global scale:

- Brazil Nuts
- Kola Nuts
- Chestnuts
- Cork
- Maple products
- Karite
- Bamboo and rattan (27 different products – from raw to industrialized); gum arabic;

National trade data harmonized with the global db:

- Liquorice
- Cordyceps sinensis
-

NWFPs – What's next?

- Compile info on international trade and make data updated and public available
- Continue the work on classification of products used to report the production and value
- Strengthen collaboration with FAO regional/country offices and relevant national Institutions to capture values of local NWFPs



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Thank you

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