



# Indicator 6.29

## Total and per capita consumption of nonwood forest products, 2018

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### What is this indicator and why is it important?

This indicator is important because knowing the total and per capita consumption of nonwood forest products (NWFPs) provides a common denominator to compare the value of these products with other forest products. Nonwood forest products are harvested from forests for personal use and economic gain and need to be included in the overall valuation of forests. The amount consumed illustrates the relative importance of these products to more “mainstream” forest products. Knowing the total consumption amount of NWFPs is critical to determining sustainable production levels for these goods and is important in understanding associated supply and demand relationships.

Annual or regularly collected data on national-level domestic consumption and prices for NWFPs are not available, although the U.S. Department of Agriculture, Forest Service (national forests) and the U.S. Department of the Interior, Bureau of Land Management collect permitted harvest volumes. These harvest volumes serve as benchmarks to assess overall consumption levels, although they do not include harvest volumes from private lands. Some NWFPs are included in U.S. trade data and have long traditions in international trade. To estimate consumption for this indicator, production data (Indicator 6.26) were adjusted by known trade (Indicator 6.31), and the results were assumed to be equivalent to consumption.

### What does the indicator show?

Federal forest land management agencies primarily generate receipts from two sources: convertible and nonconvertible products. Convertible products include timber and other products that can be converted to units of measure that are comparable to timber. The units of measure for nonconvertible products, such as edible fruits, sap, grasses, and other plant material, are not directly comparable to timber products. Both convertible and nonconvertible products are considered nontimber forest products (NTFPs). Nonwood forest products are a subset of NTFPs that include only nonconvertible categories. The Forest Service nonconvertible product categories include nursery and landscape; arts, crafts, and floral; regeneration and silviculture; edible fruits, nuts, berries, and sap; grass, hay, alfalfa, and forages; and herbs and medicinals. These categories are consistent with the definition of NWFPs used by the Food and Agriculture Organization of the United Nations. Other nonconvertible products not specifically classified, as well as all convertible categories (posts and poles; Christmas trees; and fuelwood) complete the range of NTFPs.

The values of imports and exports were obtained using the U.S. International Trade Commission DataWeb (USITC DataWeb 2020). Major commodities are classified by Harmonized Tariff Schedule (HTS) codes and aggregated values can be estimated through database queries. Table 29-1 presents the total wholesale value of NWFPs, adjusted

**Table 29-1—Trade, wholesale value, and total trade-adjusted wholesale value of U.S. nonwood forest products, 2004–2018.**

Value description	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
<i>millions of 2019 U.S. dollars</i>															
Adjusted imports <sup>a</sup>	934	751	890	877	884	839	767	913	964	937	1,065	1,236	1,548	1,631	1,947
Adjusted exports	450	418	509	610	661	616	676	833	950	800	882	862	904	964	824
Net trade	484	333	381	267	223	223	91	80	14	137	183	375	644	666	1,123
Wholesale value of NWFPs from Forest Service and BLM	284	232	342	377	260	176	271	252	253	330	219	250	238	176	172
Total trade-adjusted NWFPs wholesale value	768	565	723	644	483	399	362	331	266	467	402	624	881	842	1,296

BLM = U.S. Department of the Interior, Bureau of Land Management; NWFP = nonwood forest products.

<sup>a</sup> Excluding imported Christmas trees.

for trade for 2004 through 2018 (in constant 2019 U.S. dollars). Imports exceeded exports in every year and by over 100 percent in 2018. Net NWFP trade (i.e., the difference between imports and exports) was estimated to be \$1.12 billion in 2018. This is an increase of over 700 percent from 2013, due in part to a major increase in imports.

In 2018, the total wholesale value of NWFPs, adjusted for trade, was estimated at approximately \$1.3 billion. This represents total consumption of NWFPs, which includes the difference between imports and exports (i.e., \$1.12 billion) plus the total estimated wholesale value of domestic production (i.e., \$172.14 million). From 2004 through 2018, total consumption of NWFPs increased approximately 70 percent, due primarily to a sharp increase in imports that started around 2012. Exports and imports in 2012 were very close, diverging in subsequent years. The total wholesale value of NWFPs adjusted for trade for the 15-year period (2004–2018) was approximately \$9.05 billion.

Per capita consumption is estimated as the ratio of adjusted wholesale value to population (table 29-2). For example, in 2004, total wholesale value of NWFPs adjusted for trade was estimated at \$767.61 million while the U.S. population was 293 million, resulting in an estimated per capita consumption of \$2.62. In 2018, the per capita consumption of NWFPs, adjusted for trade, was estimated at \$3.97. Over the 15-year period (2004–2018), per capita consumption of NWFPs ranged from a low of \$0.85 in 2012 to a high of \$3.97 in 2018, adjusted for trade.

**Table 29-2—U.S. population and per capita consumption of nonwood forest products adjusted for trade in wholesale 2019 U.S. dollars, 2004–2018.**

Year	Population as of July 1, 2020 (millions)	Per capita consumption (dollars)
2004	293.05	2.62
2005	295.75	1.91
2006	298.59	2.42
2007	301.58	2.14
2008	304.37	1.59
2009	307.01	1.30
2010	309.33	1.17
2011	311.58	1.06
2012	313.87	0.85
2013	316.13	1.48
2014	318.30	1.26
2015	320.64	1.95
2016	322.94	2.73
2017	324.99	2.59
2018	326.69	3.97

## What has changed since 2013?

Since 2013, many factors regarding total and per capita consumption have changed. U.S. imports of NWFPs increased over 100 percent, while exports increased less than 5 percent. Total wholesale value of NWFPs decreased almost 50 percent from 2013 to 2018, while total wholesale value, adjusted for trade, increased almost threefold.

Per capita consumption changed over the past reporting period as well. Estimated U.S. population increased approximately 3 percent between 2013 and 2018. The total per capita annual consumption of NWFPs during this period increased more than 100 percent.

## **Why can't the entire indicator be reported at this time?**

A significant assumption in estimating trade values for NWFPs is that the commodities recorded represent all products. This assumption is imperfect as many NWFPs are not classified under a specific HTS code but are combined with other commodities. Because of this, the total consumption values may be underestimated. Further, harvest volumes used in estimation may not reflect actual harvests, as only permitted harvests from Forest Service and Bureau of Land Management are recorded.

## **References**

U.S. International Trade Commission Interactive Trade DataWeb (USITC DataWeb). 2020. Using data retrieved from the U.S. Bureau of the Census. <https://dataweb.usitc.gov>. [Date accessed: April 23, 2020].

Chamberlain, James. 2024. Indicator 6.29: total and per capita consumption of nonwood forest products, 2018. FS-1217-Indicator-6.29. Washington, DC: U.S. Department of Agriculture, Forest Service, Washington Office. 4 p. <https://doi.org/10.2737/FS-1217-Indicator-6.29>.

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