

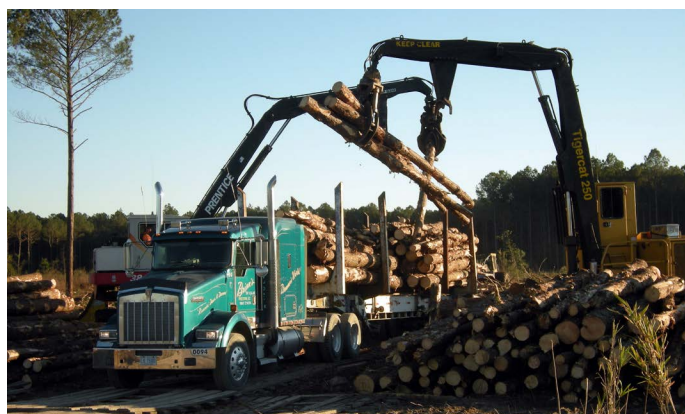
# Economic Contribution of the Forest Sector in North Carolina, 2020

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The year 2020 was the first year of the COVID-19 pandemic, which created significant challenges across all aspects of the forest sector including supply chains, labor conditions, and transportation. Economic contribution analysis suggests that in 2020, the pandemic had substantial effects on the forest sector in North Carolina. Compared to 2019, the North Carolina forest sector sustained close to a \$2 billion loss in total economic activities in 2020, with a 6.7% decline in the total forest-based employment.

- In 2020, the forest sector in North Carolina—including forestry and logging operations, sawmills, furniture mills, and the pulp and paper industries—**directly** contributed **\$20.6 billion** in industry output, which was nearly 2% of the statewide economic output. The forest sector directly employed about 70,200 with a payroll of \$4.3 billion and a value added (gross state product) of \$6.0 billion.
- With direct, indirect, and induced effects, the forest sector in North Carolina made a **total** contribution of **\$32.8 billion** in industry output to the North Carolina economy, which supported more than **138,100** full-time and part-time jobs with a payroll of \$8.3 billion.
- Compared to 2019, the **total economic output** in 2020 was **down 6.1%**, and **total employment dropped** by **6.7%**. Primary and secondary solid wood products industries lost about 9,000 jobs.
- The total value added, equivalent to the gross domestic product, dropped 6.0% to **\$12.7 billion**, which occurred predominantly in logging, as well as the primary and secondary solid wood products industries.
- The forest sector in 2020 ranked **second** among manufacturing sectors, which was slightly behind the food manufacturing sector in the state.
- Every job created in the forest sector generated another **0.97** jobs in North Carolina.
- On average, every dollar created in the forest sector contributed an additional sixty cents to the North Carolina economy.
- The forest sector in North Carolina directly generated about **\$19.5 million** in state and local taxes and **\$826.1 million** in federal taxes. Compared to 2019, state and local taxes declined by **93%** in response to government subsidies, stimulus payments, and other tax support in the midst of the pandemic. In 2020, the forest sector received \$111.4 million in subsidies for production and imports.
- International exports from the North Carolina forest sector totaled about **\$1.2 billion, which was down 14%** from 2019.



## Economic Contribution of the North Carolina Forest Sector, 2020<sup>1</sup>

Table shows the direct, total, and change in contributions of the forest industry operations to employment, labor income, gross state product, and industry output. (Values, based on multi-industry contribution analysis, are reported in 2020 dollars.)

Contribution	Industry Operation	Employment <sup>2</sup> (jobs)	Labor Income <sup>3</sup> (million \$)	Gross State Product <sup>4</sup> (million \$)	Industry Output <sup>5</sup> (million \$)
<b>Direct Contribution<sup>6</sup></b>	Forestry operations	816	40.70	45.72	58.26
	Logging	5,113	171.30	174.77	335.15
	Primary solid wood mills <sup>7</sup>	5,964	366.01	522.94	1,750.68
	Secondary solid wood mills <sup>8</sup>	40,864	2,201.41	2,821.22	8,296.96
	Primary paper and paperboard mills	4,682	496.11	922.50	3,614.47
	Secondary paper and paperboard mills	12,748	1,013.54	1,543.64	6,515.77
	<b>Total</b>		<b>70,187</b>	<b>4,289</b>	<b>6,031</b>
<b>Total Contribution<sup>9</sup></b>	Forestry operations	1,020	50.98	63.96	90.76
	Logging	6,765	246.22	299.84	564.53
	Primary solid wood mills	12,209	736.86	1,129.62	2,859.87
	Secondary solid wood mills	71,756	4,019.88	5,813.73	13,796.86
	Primary paper and paperboard mills	15,921	1,193.13	2,085.23	5,814.85
	Secondary paper and paperboard mills	30,431	2,050.59	3,266.61	9,698.63
	<b>Total</b>		<b>138,102</b>	<b>8,298</b>	<b>12,659</b>
<b>Change in Total Contribution from 2019</b>	Forestry operations	8.8%	4.6%	2.1%	2.1%
	Logging	1.1%	-20.3%	-23.1%	-15.7%
	Primary solid wood mills	-12.2%	-4.1%	-14.8%	-15.3%
	Secondary solid wood mills	-9.1%	-3.7%	-9.6%	-9.9%
	Primary paper and paperboard mills	-2.6%	4.3%	2.2%	-0.1%
	Secondary paper and paperboard mills	-2.5%	4.6%	1.3%	0.3%
	<b>Total</b>		<b>-6.7%</b>	<b>-1.3%</b>	<b>-6.0%</b>

<sup>1</sup> Economic contribution numbers, based on multi-industry contribution analysis, are reported in 2020 dollars. The method of internal adjustments to the IMPLAN software was used, and more details about the analysis method can be obtained from Parajuli et al. (2018). IMPLAN sectors included 15, 16, 19 (partial), 132, 133, 134, 135, 136, 137, 138, 139, 140, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 365, 366, 367, 370, 371, and 373.

<sup>2</sup> Employment includes both full-time and part-time jobs.

<sup>3</sup> Labor income includes all forms of employment income, including employee compensation (wages and benefits) and proprietor income.

<sup>4</sup> Gross State Product (value added) is the difference between industry output and the cost of intermediate inputs. It consists of compensation of employees, taxes on production and imports less subsidies, and gross operating surplus.

<sup>5</sup> Industry output is the total annual value of production by industry.

<sup>6</sup> Direct contribution is a series of production changes or expenditures made by producers and consumers as a result of an activity.

<sup>7</sup> Primary mills, such as sawmills and pulp mills consume wood in a round or log form before producing a value added product.

<sup>8</sup> Secondary mills, such as furniture and paper mills, use wood-based products to produce value added products.

<sup>9</sup> Total contribution is the sum of direct, indirect, and induced contribution effects generated by the sector.

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