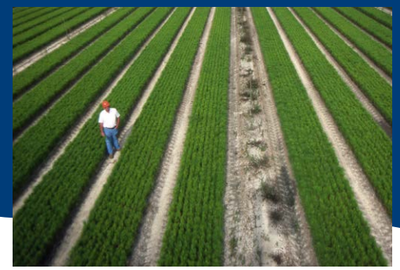
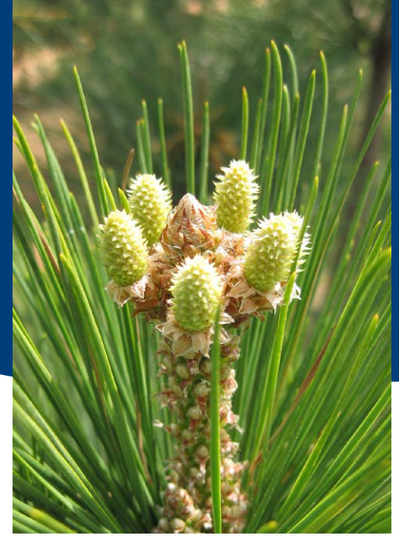
Rayonier
More than trees™

Carbon Report

Issued March 2021

OVERVIEW





Rayonier grows and manages an abundant and renewable resource that provides many benefits to society: *trees*

This uniquely positions Rayonier (NYSE: RYN) to offer natural climate change solutions. The trees we manage not only remove more carbon than we emit in our operations, but even after harvesting, help to store carbon through the wood-based products others create from our trees.

We have approached our carbon impact analysis from both a "balance sheet perspective" (i.e., a snapshot of the total accumulated carbon stored in our forests at year-end 2019) and an "income statement perspective" (i.e., our annual carbon impact in 2019, calculated as carbon sequestered by our forests less carbon emitted in our operations less carbon removed/transferred to our customers through harvest activity). With respect to carbon removed/transferred through harvest activity, we have further estimated the longer-term storage benefits associated with the conversion of trees into end-use forest products.

WITHIN THIS REPORT, WE DISCLOSE OUR ESTIMATE OF:

- **Total carbon stored by our portfolio as of December 31, 2019**
- **Net carbon impact of our forestry and corporate activities in 2019, including:**
  - Carbon sequestered by our forests during 2019
  - Carbon emissions associated with our business (scope 1, 2 and 3)
  - Carbon removed/transferred from our forests through 2019 harvest activity
- **Projected carbon storage benefit of timber harvested and converted to forest products in 2019**
- **Carbon storage potential of forest products conversion over multiple harvest cycles**

CARBON STORED BY OUR PORTFOLIO

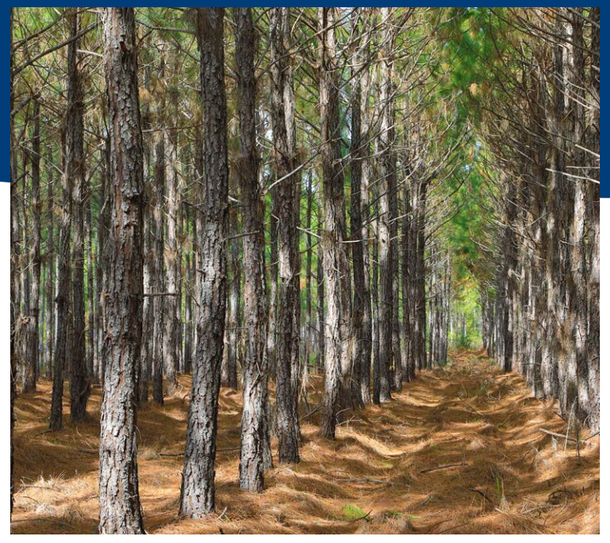
Forests play a critical role in the carbon cycle, using carbon not only for growth but storing it as well. When estimating the **carbon stored** in our forests, Rayonier includes overstory trees, understory vegetation, coarse woody debris and forest floor, as well as the soil on our land.

The amount of carbon stored in Rayonier's trees varies considerably across the portfolio depending on species, growth conditions and age.

Carbon Stored in Rayonier Forests[1]
Metric Tons of CO_2 Equivalents[2]

REGION	FOREST[5]	SOIL	TOTAL ECOSYSTEM
U.S.[3]	333,924,965	292,858,000	626,782,965
N.Z.[4]	52,855,224	52,082,742	104,937,966
TOTAL	**386,780,189**	**344,940,742**	**731,720,931**

NET CARBON IMPACT OF OUR FORESTS



Our evaluation of climate change and Rayonier's role in addressing it begins with the basic premise that our underlying assets offer a natural climate change solution. Accordingly, we have measured our net carbon impact — i.e., the amount of carbon sequestered by our forests after considering our corporate and forestry-related emissions as well as the portion removed through harvest activity. Our analysis demonstrates that we generated net positive carbon sequestration in 2019.

2019 CARBON IMPACT

Carbon Sequestered[1]:	**14,905,916 $MtCO_2$-e**
Carbon Emissions[6]:	**(343,837) $MtCO_2$-e**
Carbon Removed/Transferred Through Harvest[7]:	**(8,821,676) $MtCO_2$-e**
Total Net Carbon Sequestered:	**5,740,403 $MtCO_2$-e**

Carbon removed/transferred through harvest is retained in end-use forest products (see page 8).

CARBON SEQUESTERED BY OUR FORESTS

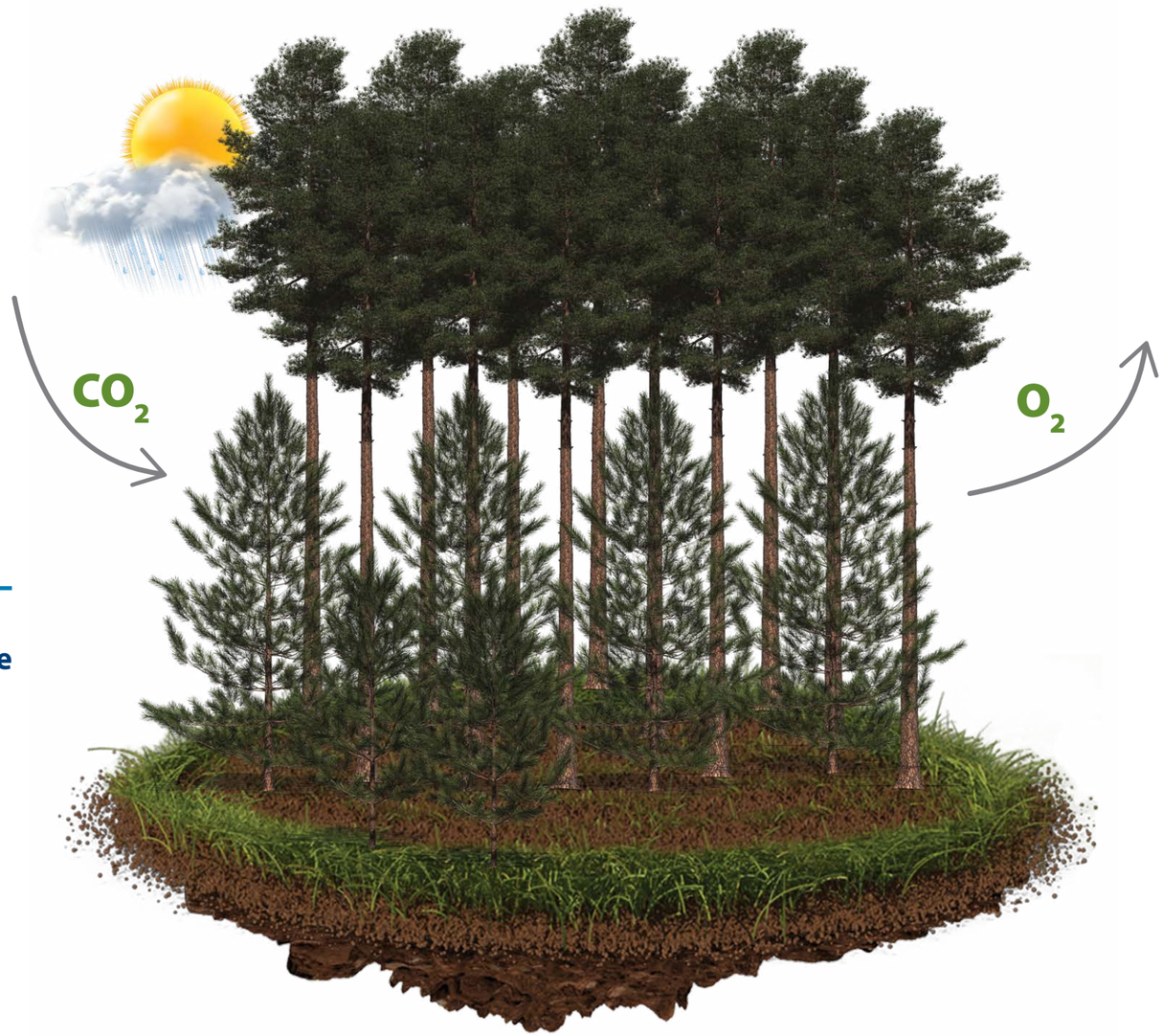
Sustainably managed working forests provide many environmental benefits — including **carbon sequestration**. Through photosynthesis, trees absorb carbon dioxide (CO_2) and convert it to stems, branches, leaves/needles and roots, while also emitting oxygen. Importantly, younger trees generally sequester carbon at a higher rate than mature trees.

In order to calculate the net carbon impact of our forests in 2019, we start by calculating carbon sequestration.

CARBON SEQUESTERED[1] BY RAYONIER'S FORESTS DURING 2019

11,459,917 (U.S.)[3]
3,445,999 (N.Z.)[4]

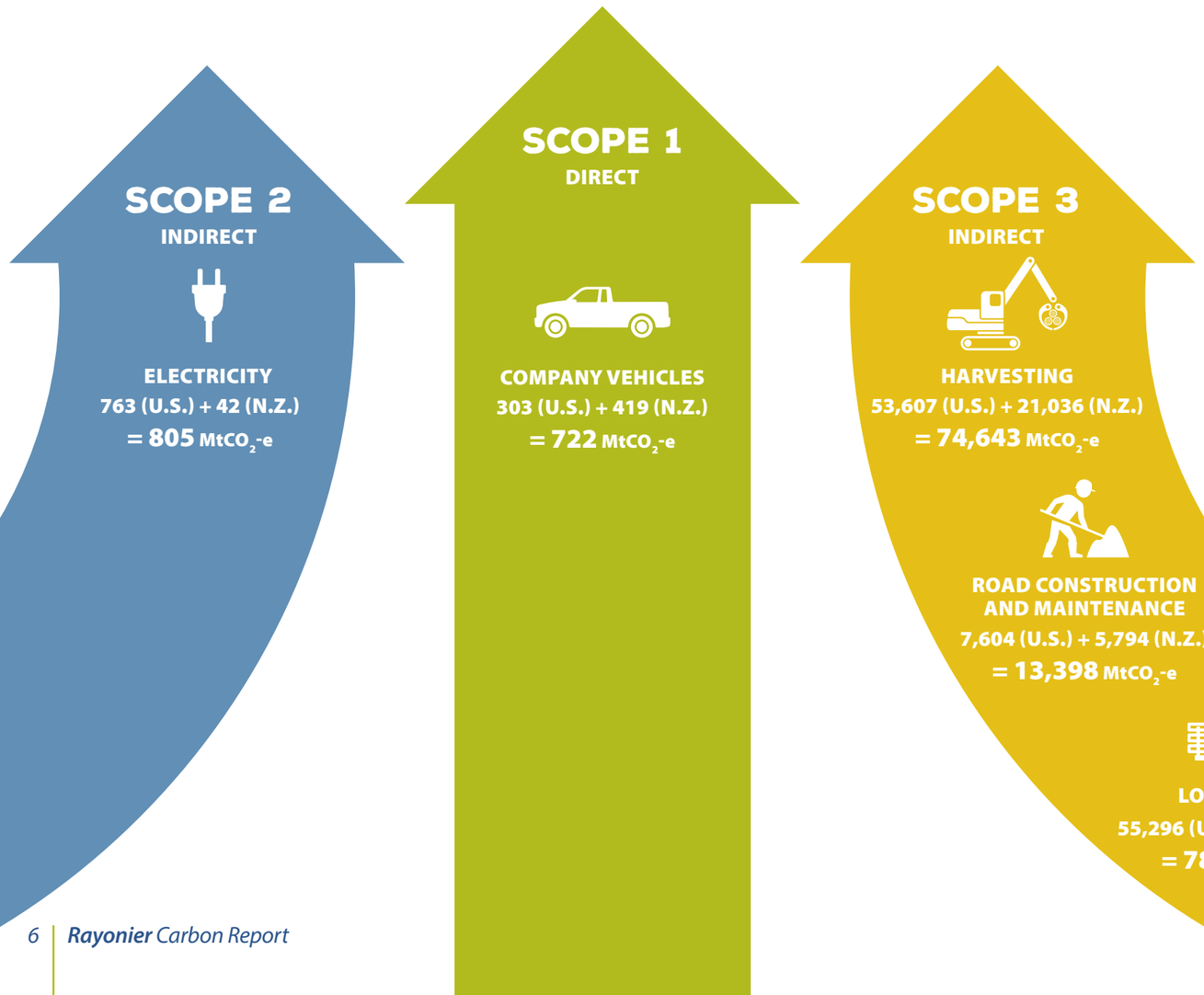
14,905,916 $MtCO_2$-e



For context, the 14.9 million metric tons of CO_2 equivalents sequestered by our forests in 2019 is comparable to the annual carbon emissions of approximately 930,000 people in the United States, or taking approximately 3.2 million vehicles off the road annually.[8]

EMISSIONS ASSOCIATED WITH OUR BUSINESS

CARBON EMITTED[6] BY RAYONIER IN 2019 » 222,340 (U.S.) 121,497 (N.Z.) = **343,837** $MtCO_2$-e



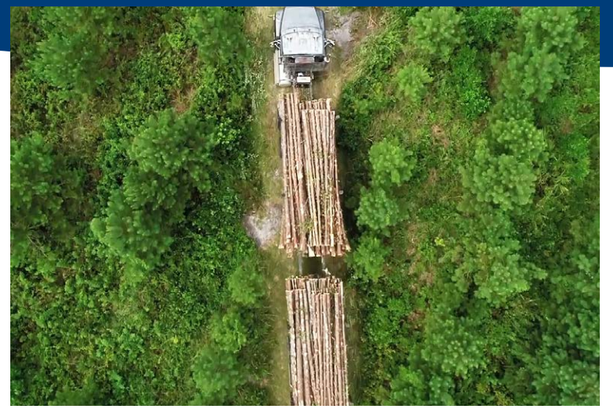
We have measured our impact on the environment by calculating the **emissions** associated with our corporate and forestry-related operations during 2019.

We have estimated and broken down **scope 1** (direct emissions from company-owned and controlled resources), **scope 2** (indirect emissions from electricity purchased) and **scope 3** (indirect emissions in the value chain — i.e., harvest and transport of our trees, silviculture activities, forest management and business travel).

Calculating Rayonier's controlled emissions is a key component in measuring our net carbon impact.

Emissions were broken down in accordance with the EPA Greenhouse Gas Emissions scope 1, 2 and 3 and calculated based on the fuel consumed and CO_2 emissions from gas, diesel and Jet A fuels. We have included the scope 3 emissions we believe are most relevant to our business and can be calculated based on the information available to us.

CARBON REMOVED/TRANSFERRED THROUGH HARVEST ACTIVITY



When we **harvest** our trees, we remove/transfer a portion of the carbon contained in our forests. After our trees are harvested, we then replant our forests and start the process of growing trees and sequestering carbon all over again.

To measure the net carbon impact of Rayonier's forestry operations, we have estimated the amount of carbon removed/transferred from our forests through 2019 harvest activity.

CARBON REMOVED/ TRANSFERRED[7] THROUGH RAYONIER'S 2019 HARVEST ACTIVITY

7,048,133 (U.S.)[9]
1,773,543 (N.Z.)[10]

8,821,676 $MtCO_2$-e

Our estimates are based on Rayonier's actual harvest volume for the year and will fluctuate year-to-year depending on several factors, including the age and species of the trees harvested.

CARBON STORAGE BEYOND OUR FORESTS

The carbon storage benefits of Rayonier's forests continue even after trees are harvested, as carbon can remain sequestered for several decades within the end-use **forest products** produced from such trees, including lumber, plywood and paper.

After trees are harvested, the cycle begins again — new trees are planted, absorbing carbon at a faster rate than the mature trees that they replaced — all while the harvested timber continues to store carbon within end-use forest products.

PROJECTED CARBON STORAGE BENEFIT OF HARVESTED TIMBER

We have estimated our 2019 harvest volumes by product and destination. This analysis shows the carbon that remains stored in end-use forest products well after the timber has left our forests.

Importantly, life cycle assessment studies have demonstrated the additional benefit of carbon storage in wood-based building products — fewer greenhouse gas emissions (in construction and in use) as compared to other building materials, such as concrete and steel.

2019 Harvest Activity: Projected Carbon Stored in Forest Products[11]

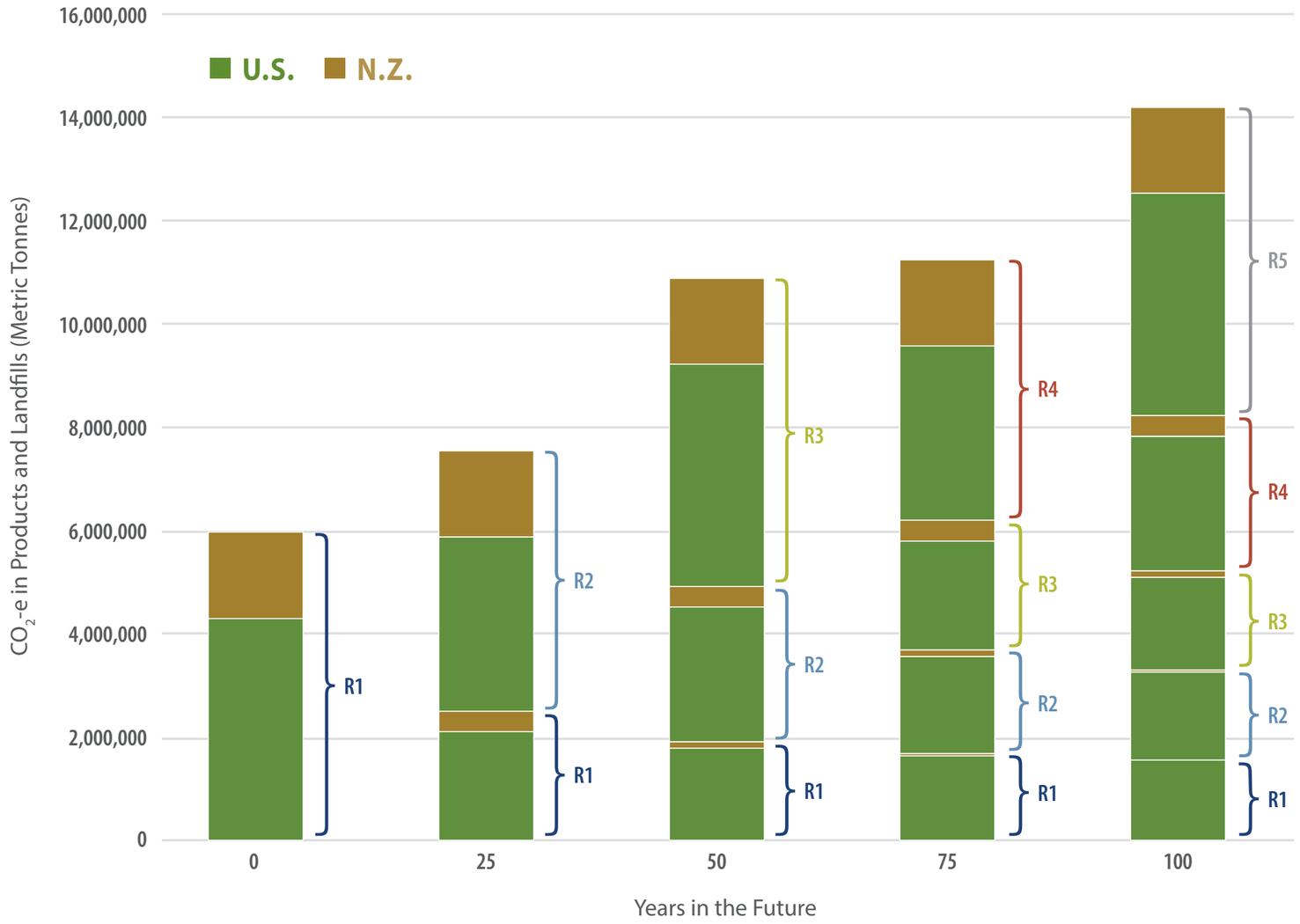
Metric Tons of CO_2 Equivalents[2]

REGION	PRODUCT DESTINATION	CARBON REMOVED/ TRANSFERRED DURING 2019 HARVEST	2019 HARVEST CONVERTED TO PRODUCT[16]	YEARS IN THE FUTURE					
				5	10	25	50	75	100
U.S.	DOMESTIC[12]	6,796,407	4,070,978	3,152,105	2,622,700	2,084,130	1,788,138	1,646,641	1,563,406
U.S.	EXPORT[13]	251,726	230,682	116,398	65,210	20,142	5,401	1,900	714
N.Z.	DOMESTIC[14]	869,483	834,339	707,406	575,451	309,956	110,494	39,389	14,042
N.Z.	EXPORT[15]	904,060	826,218	576,347	367,427	95,199	10,025	1,056	111
TOTAL		8,821,676	5,962,217	4,552,256	3,630,788	2,509,427	1,914,058	1,688,986	1,578,273

CARBON STORAGE OVER MULTIPLE HARVEST CYCLES

The forest products derived from our timber can store carbon for an extended period of time — and over multiple harvest cycles, the net impact is an increase in the amount of carbon stored. The adjacent chart illustrates the positive impact actively managed working forests have on carbon storage over a 100-year time frame encompassing multiple rotations.

Carbon storage is estimated based on the half-life of the products produced from our timber as determined by the Intergovernmental Panel on Climate Change (IPCC). The difference in the estimated carbon storage benefits associated with the timber harvested from New Zealand and the United States is largely attributable to the half-life of the products in use in the different markets.



The adjacent chart assumes a 25-year rotation ("R") for southern pine in the U.S. and for radiata pine in New Zealand, and a 50-year rotation for southern hardwoods and Pacific Northwest species.

FOOTNOTES AND SOURCES

(1) Carbon sequestered and stored was calculated based on 2.2 million acres (907,318 hectares) in the U.S. and 295,000 acres (119,433 hectares) in New Zealand. Calculation does not include acres held for real estate development activity by Rayonier TRS Holdings Inc. or the impact of non-corporate real estate activities. Carbon sequestered and stored was calculated based on hardwood and softwood forest types by age class for each of our regions: U.S. South, U.S. Pacific Northwest and New Zealand. Our New Zealand calculations reflect a fully consolidated estimate, although Rayonier owns only a 77% interest in this entity.

(2) $MtCO_2$-e = metric tons CO_2 equivalent using the EPA Greenhouse Gases Equivalencies Calculator—Calculations and References. https://www.epa.gov/energy/greenhouse-gases-equivalencies-calculator-calculations-and-references

(3) U.S. carbon sequestered and stored was calculated based on carbon yield tables (metric tons/hectares) developed by the U.S. Forest Service in *"Methods for Calculating Forest Ecosystem and Harvested Carbon with Standard Estimates for Forest Types in the United States—GTR NE-343."* https://www.nrs.fs.fed.us/pubs/gtr/ne_gtr343.pdf

(4) N.Z. carbon sequestered and stored was calculated based on regional default carbon yield tables (CO_2 –e/ha) developed by the N.Z. Ministry for Primary Industries and used as the basis of calculating carbon sequestration and emission liabilities under N.Z.'s Emission Trading Scheme. Estimate includes both productive and non-productive areas. Estimates of carbon in non-productive areas were derived through the application of the methodology outlined in N.W.H. Mason, F.E. Carswell, J.McC. Overton, C.M. Briggs and G.M.J. Hall, February 2012. Estimation of current and potential carbon stocks and Kyoto-compliant carbon gain on conservation land. Department of Conservation Te Papa Awawhai. https://www.doc.govt.nz/globalassets/documents/science-and-technical/sfc317.pdf

(5) Represents overstory trees, understory vegetation, coarse woody debris and forest floor.

(6) Carbon emissions in 2019 reflect the fuel emitted from company vehicles (Scope 1 Direct), purchased electricity from the Rayonier corporate headquarters along with our field offices (Scope 2 Indirect) and fuel associated with harvest machinery, road construction/maintenance, log trucking, ocean freight, silviculture (site preparation, planting, weed control, fertilization and pre-commercial thinning) and business travel (Scope 3 Indirect). Estimate does not include the impact of non-corporate real estate activities. Emissions were broken down in accordance with the EPA Greenhouse Gas Emissions Scope 1, 2 and 3 and calculated based on the fuel consumed and CO_2 emissions from gas, diesel and Jet A fuels.

(7) Carbon removed/transferred in harvested timber was calculated based on Rayonier's 2019 harvest volumes in each of our regions, U.S. South, U.S. Pacific Northwest and New Zealand, as reported on our 2019 Form 10-K.

(8) Per capita and vehicle CO_2 emissions calculated based on conversions provided by the EPA. Inventory of U.S. Greenhouse Gas Emissions and Sinks. 1990-2018. US Environmental Protection Agency, EPA 430-R-20-002. https://www.epa.gov/sites/production/files/2020-04/documents/us-ghg-inventory-2020-main-text.pdf

(9) Carbon removed/transferred in U.S. harvested timber was calculated based on conversion of harvest volume green weight to oven dry weight using data in the U.S. Forest publication *"Specific Gravity and Other Properties of Wood and Bark for 156 Tree Species Found in North America – RN NRS-38"*. Carbon content of the oven dry wood was calculated using the EPA Greenhouse Gases Equivalencies Calculator—Calculations and References. https://www.nrs.fs.fed.us/pubs/rn/rn_nrs38.pdf and https://www.epa.gov/energy/greenhouse-gases-equivalencies-calculator-calculations-and-references

(10) Carbon removed/transferred in N.Z. harvested timber was calculated based on regional default carbon yield tables (CO_2 –e/ha) developed by the N.Z. Ministry for Primary Industries and used as the basis of calculating carbon sequestration and emission liabilities under N.Z.'s Emission Trading Scheme. Note: Only productive areas have been included in this calculation. https://www.teururakau.govt.nz/dmsdocument/4762-A-guide-to-Look-up-Tables-for-Forestry-in-the-Emissions-Trading-Scheme

(11) Carbon stored in harvested forest products was calculated based on Rayonier's 2019 harvest volumes within each of our regions, U.S. South, U.S. Pacific Northwest and New Zealand, then sorted by product type and destination with half-life assumptions.

(12) Carbon stored in U.S. harvested forest products for domestic use, including carbon stored in landfills, was calculated based on the U.S. Forest Service publication *"Methods for Calculating Forest Ecosystem and Harvested Carbon with Standard Estimates for Forest Types in the United States—GTR NE-343"*. https://www.nrs.fs.fed.us/pubs/gtr/ne_gtr343.pdf

(13) Carbon stored in U.S. harvested forest products for export use was based on the half-life of forest products from logs exported to China, India and Korea as reported by Manley and Evison (2017) in *"Quantifying the carbon in harvested wood products from logs exported from New Zealand"*. https://ir.canterbury.ac.nz/handle/10092/16312

(14) Carbon stored in N.Z. harvested forest products for domestic use was based on the IPCC harvested forest products categories and half-life methodology as outlined by Wakelin et al (2020) *"Estimating New Zealand's harvested wood products carbon stocks and stock changes"*. https://link.springer.com/article/10.1186/s13021-020-00144-5#citeas

(15) Carbon stored in N.Z. harvested forest products for export use was based on the half-life of forest products from logs exported to China, India and Korea as reported by Manley and Evison (2017) in *"Quantifying the carbon in harvested wood products from logs exported from New Zealand"*. https://ir.canterbury.ac.nz/handle/10092/16312

(16) Calculated to assume decay of carbon once converted into various forest products.