

# Canfor and Canfor Pulp's Scope 3 Greenhouse Gas (GHG) 2022 Base Year Report

Version 1.0

Canfor Corporation and Canfor Pulp Products Inc. 101-161 East 4<sup>th</sup> Avenue, Vancouver, BC, V5T 1G4

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## 1 Overview

### 1.1 Organizational Information

Organization Name	Canfor Corporation and Canfor Pulp Products Inc.
Corporate Address	101-161 East 4 <sup>th</sup> Avenue, Vancouver, BC, V5T 1G4

# 2 GHG Reporting Principles and Inventory Boundary

### 2.1 GHG Inventory Overview

This GHG inventory overview describes the procedures for compiling a corporate-wide scope 3 methodology. Canfor Corporation, hereafter referred to as "Canfor" has structured their GHG inventory to follow the accounting and reporting guidelines of The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard, Revised Edition (the "GHG Protocol") (1) and the GHG Protocol Corporate Value Chain (Scope 3) Standard, an amendment to the GHG Protocol Corporate Standard (2), published by the World Resources Institute (WRI) and the World Business Council for Sustainable Development (WBCSD). This protocol is the international accounting tool most widely used by government and business leaders to understand, quantify, and manage GHG emissions.

	Pulp Operations	Wood Products Operations: Canada	Wood Products Operations: U.S.	Vida Operations	Total
Scope 3 Non- Biogenic Emissions	1,659,942√	1,024,109	1,150,219	1,075,576	4,909,846√
Scope 3 Biogenic Emissions*	724,817√	1,648,043	2,661,232	2,202,030	7,236,122√

Table 1: 2022 Scope 3 Emissions Overview (tonnes of CO<sub>2</sub>e)

\*Scope 3 biogenic emissions do not include land-use emissions

### 2.2 Reporting Period

Canfor's 2022 scope 3 GHG inventory represents past and future life-cycle emissions relating to activities in the 2022 calendar year from January 1<sup>st</sup> through to December 31<sup>st</sup>.

### 2.3 Organizational Boundaries

Canfor uses the operational control approach for the estimation of GHG emissions across all international facilities that Canfor owns or is the majority shareholder of and has operational control over. The GHG inventory boundaries were established across all facilities based on ownership and control.

Canfor organizes the GHG inventory according to geographic business units (Canfor Pulp Products Inc. [Canfor Pulp], Canadian Forest Products Ltd. [WPC], Canfor Southern Pine Inc. [CSP], and Vida AB [Vida]). Each facility within Canfor's operational control has been categorized into one of eleven facility types: sawmills, pulp mills, pellet mills, glued laminate (glulam) facilities, remanufacturing (reman) facilities, packaging facilities, Vida Building Products, New South Express transportation division, offices, and woodlands camps and other.

### 2.4 Data Quality

Canfor followed the methods for assessing data quality in the GHG Protocol's *Corporate Value Chain* (*Scope 3*) *Accounting and Reporting Standard* outlined in Table 1. Each scope 3 category was assessed by a total score that combines the weighted score of each of the five indicatory categories.

Indicator	Poor	Fair	Good	Very Good
Category	(Weight: 1)	(Weight: 2)	(Weight: 3)	(Weight: 4)
Technology	Data where technology is unknown	Data generated using a different technology	Data generated using a similar but different technology	Data generated using the same technology
Time	Data with more than 10 years of difference or the age of the data are unknown	Data with less than 10 years of difference	Data with less than 6 years of difference	Data with less than 3 years of difference
Geography	Data from an area that is unknown	Data from a different area	Data from a similar area	Data from the same area
Completeness	Data from less than 50 percent of sites for shorter time or representativeness is unknown	Data from less than 50 percent of sites for an adequate time to even out normal fluctuations or more than 50 percent of sites but for a shorter time period	Data from more than 50 percent of sites for an adequate time to even out normal fluctuations	Data from all relevant sites over an adequate time to even out normal fluctuations
Reliability	Non-qualified estimate	Non-verified data partly based on assumptions, or a qualified estimate (e.g. by a sector expert)	Verified data partly based on assumptions or non-verified data based on measurements	Verified data based on measurements

Source: Corporate-Value-Chain-Accounting-Reporing-Standard\_041613\_2.pdf (ghgprotocol.org)

### 2.5 Global Warming Potentials

Canfor utilizes the Global Warming Potentials (GWPs) published by the Intergovernmental Panel on Climate Change (IPCC) Fifth Assessment Report (AR5) for the 2022 scope 3 inventory, unless emissions factors for activity were provided in tonnes of CO2 equivalent.

### 2.6 Uncertainty

The quantification of GHG emissions is subject to uncertainty due to the inherent limitations of the calculation methodologies and the assumptions being made in lieu of specific measurements. GHG emissions are, to the extent possible, calculated based on directly measured or metered activity data. Where such data cannot be metered directly from equipment, Canfor utilizes scientifically supported quantification methodologies and assumptions that are supported by governments and research-oriented industry associations.

Processes without direct energy metering as an output of combustion present difficulty in accurately quantifying emissions, including spend-data for purchased goods and services and end-of-life processes. In these cases, methods published by the U.S. Environment Protection Agency (EPA) and IPCC were utilized. Uncertainties are addressed through documenting assumptions and continuous improvement in data sourcing, emission factor selection, and calculation methodology.

# 3 Emission Categories

This section provides an overview of the status of Canfor's emissions quantification for the fifteen Scope 3 emissions categories outlined in the GHG Protocol. It also provides a roadmap for Canfor through recommendations on identifying data requirements, setting boundaries, and outlining quantification methodologies for each category.

Scope 3 Category	Pulp Operations	Wood Products Operations: Canada	Wood Products Operations: U.S.	Vida Operations	Total
Upstream Categories					
1. Purchased Goods and Services	125,735	293,353	67,113	48,140	534,341
2. Capital Goods	9,034	29,093	10,812	9,108	58,047
3. Fuel and Energy Related Activities	75,420	28,442	29,144	10,030	143,036
4. Upstream Transportation and Distribution	120,233	99,703	59,840	153,059	432,835

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Table 3: 2022 Scot	oe 3 Non-Biodenic	Emissions Caledones	Connes of CO2e1
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5. Waste Generated in Operations	1,081	2,215	1,543	881	5,720
6. Business Travel	1	320	41	3	365
7. Employee Commuting	1,093	2,685	4,355	1,934	10,067
8. Upstream Leased Assets	Not Applicable	196	Not Applicable	Not Applicable	196
Downstream Categories					
9. Downstream Transportation and Distribution	9	76	990	3,163	4,238
10. Processing of Sold Products	625,685	132,230	486,250	279,982	1,524,147
11. Use of Sold Products	Not Applicable	17,519	36,081	26,446	80,046
12. End-of-Life Treatment of Sold Products	701,651	410,055	454,050	542,830	2,108,586
13. Downstream Leased Assets	Not Applicable				
14. Franchises			Not Applicable		
15. Investments	Not Applicable	8,222	Not Applicable	Not Applicable	8,222
Total Non-Biogenic	1,659,942	1,024,109	1,150,219	1,075,576	4,909,846

### 3.1 Purchased Goods and Services

Description	Upstream emissions from the extraction, production, and transportation of goods and services purchased or acquired by the reporting company in the reporting year.				
Significance	Below   Major source of emissions   Data Quality   Fair				
2022 Emissions (tCO2e)	534,341	2022 Emissions (Bio-tCO2e)	-		
Percentage of Er	nissions Calculated Using Supplier Data	0%			

#### Data Source:

#### Non-Fibre Related Goods and Services

Annual spend data from Canfor's general ledger for WPC, CSP, and Canfor Pulp. Spend categories were associated with a relevant 2017 North American Industry Classification System (NAICS) Code.

Production data for CSP was used as a proxy for Vida. CSP was selected because the two businesses most aligned in their upstream purchases of goods and services.

#### Fibre Related Goods and Services

Fuel consumption for forestry equipment for WPC, CSP, and Vida. Fuel consumption for WPC and Vida was determined using fuel economies developed in collaboration with transportation partners. CSP utilized an average fuel consumption rate for equipment from prior studies conducted on forestry equipment in the U.S..

Annual spend data from Canfor's general ledger for Canfor Pulp. Spend categories were associated with a relevant 2017 North American Industry Classification System (NAICS) Code.

#### **Quantification Methodology:**

#### Non-Fibre Related Goods and Services

Emission factors from the U.S. Environmental Protection Agency's (EPA) Supply Chain Environmental and Economic Input-Output (EEIO) dataset were used for a spend-based method. Spend data was converted to 2021 USD for comparability with data in the EEIO dataset. Emission factors were applied to the associated spend categories' NAICS Codes.

Emissions for Vida were estimated using CSP's intensity of tCO2e for purchased goods and services to production data as a proxy applied to Vida's production data.

#### Fibre Related Goods and Services

Emission factors for fuel combustion came from Canada's National Inventory Report (NIR) 1990-2020, U.S. EPA's Emission Factors Hub, and the Swedish Environmental Protection Agency for WPC, CSP, and Vida, respectively, were applied to the volume of fuel combusted.

Emission factors from the U.S. EPA's Supply Chain EEIO dataset were used for a spend-based method for Canfor Pulp. Spend data was converted to 2021 USD for comparability with data in the EEIO dataset. Emission factors were applied to the associated spend categories' NAICS Codes.

#### **Calculation Boundary:**

This category covers spend data in Canfor's general ledger that is coded to purchased goods and services. Spend data coded to scope 1 and 2 fuels, capital projects, and upstream and downstream services present in other Scope 3 categories was excluded to avoid double counting. Canfor Pulp's fibre purchases from Canfor operated facilities were also excluded to avoid double-counting. The supply chain emission factors in the U.S. EPA's Supply Chain EEIO dataset relating to transportation were excluded from this category and utilized under category 4.

Purchased goods that Canfor facilitated on behalf of a customer or contract and were not utilized in Canfor's manufacturing processes were excluded from this category.

- U.S. EPA's Supply Chain EEIO dataset
- Canada's National Inventory Report (NIR) (1990-2020)
- U.S. EPA's Emission Factors Hub
- Industrial Design & Engineering Materials (Idemat) Eco-Costs Database

### 3.2 Capital Goods

Description	Upstream (i.e., cradle-to-gate) emissions from the extraction, production, and transportation of capital goods purchased or acquired by the reporting company in the reporting year.					
Significance Immaterial source of emissions			Data Quality	Fair		
2022 Emissions (tCO2e)		58,047	2022 Emissions (Bio-tCO2e)	-		
Percentage of Data	Emi	ssions Calculated Using Supplier	0%	-		

#### Data Source:

Annual spend data from Canfor's general ledger. Spend categories were associated with a relevant 2017 NAICS Code.

Production data for CSP was used as a proxy for Vida. CSP was selected because the two businesses most aligned in their upstream purchases of goods and services.

#### **Quantification Methodology:**

Emissions for WPC, CSP, and Canfor Pulp, were estimated using a spend-based method from the U.S. EPA's Supply Chain EEIO dataset. Spend data was converted to 2021 USD for comparability with data in the EEIO dataset. Emission factors were applied to the associated spend categories' NAICS Codes.

Emissions for Vida were estimated using CSP's intensity of tCO2e for capital projects to production data as a proxy applied to Vida's production data.

#### **Calculation Boundary:**

This category covers spending in Canfor's general ledger that is coded to capital projects. All other spend data, including spend data associated with purchased goods and services, was excluded to avoid double-counting. The supply chain emission factors in the U.S. EPA's Supply Chain EEIO dataset relating to transportation were excluded from this category and utilized under category 4.

#### **Selection of Emissions Factors:**

• U.S. EPA's Supply Chain EEIO dataset

### 3.3 Fuel-and Energy-Related Activities Not Included in Scope 1 or 2

Description	Em pur	Emissions from the extraction, production, and transportation of fuels and energy purchased in the reporting year.					
Significance Minor source of emissions			Data Quality	Very Good			
2022 Emissions (tCO2e)		143,036	2022 Emissions (Bio-tCO2e)	-			
Percentage of Emissions Calculated Using Supplier Data			0%				

#### Data Source:

Fuel volumes combusted and electricity consumption recorded in the CY2022 scope 1 and scope 2 GHG inventories.

#### **Quantification Methodology:**

Emission factors for the upstream processing and distribution of combustible fuels published by the Department for Environment, Food & Rural Affairs (DEFRA) were applied to scope 1 fuels and for the upstream processing of raw materials used for the generation of scope 2 electricity and purchased steam for CSP and Vida. Emission factors from GHGenius were utilized for WPC's and Canfor Pulp's scope 1 fuels and for the upstream processing of raw materials used for the generation of scope 2 electricity.

The fuel mix for electricity generation was derived from Canada's National Inventory Report (NIR) for WPC and Canfor Pulp, U.S. EPA's eGRID for CSP, and the International Energy Agency for Vida. Emission factors for the upstream processing of nuclear fuel were derived using coal as a proxy. Coal was selected because the two materials as the principles of mining the two materials are most similar compared to other raw fuel materials.

Emission factors for the transmission and distribution (T&D) loss of electricity was derived from countryspecific T&D loss percentages published by the World Bank and applied against the electricity consumption in Canfor's scope 2 inventory.

#### **Calculation Boundary:**

All scope 1 and scope 2 fuels were included except for the volumes of biomass fuels that were created within Canfor operated facilities to avoid double-counting.

- DEFRA's GHG Conversion Factors
- World Bank's Electric Power Transmission and Losses database
- U.S. EPA's eGRID
- International Energy Agency
- Canada's (NIR) (1990-2020)
- GHGenius

### 3.4 Upstream Transportation and Distribution

Description	Emissions from the transportation and distribution of products purchased in the reporting year, between a company's suppliers, and its own operations in vehicles not owned or operated by the reporting company. Downstream third-party transportation that is purchased by Canfor is included in this category as outlined in the GHG Protocol Corporate Value Chain (Scope 3) Standard,						
Siç	gnificance	Major source of emissions	Data Quality	Good			
2022 E	Emissions (tCO2e)	432,835	2022 Emissions (Bio-tCO2e)	-			
Percentage of Data	Emissions (	Calculated Using Supplier	13%				

#### Data Source:

#### Transportation and Distribution of Non-Fibre Purchased Goods

Annual spend data from Canfor's general ledger for WPC, CSP, and Canfor Pulp. Spend categories were associated with a relevant 2017 NAICS Code.

Production data for CSP was used as a proxy for Vida. CSP was selected because the two businesses most aligned in their upstream purchases of goods and services.

#### Transportation and Distribution of Purchased Fibre

Fuel consumption for log transportation equipment using fuel economies developed in collaboration with transportation partners for WPC and Vida.

Ton-miles of transported logs and chips for CSP and Canfor Pulp. CSP applied a weighted average distance travelled from forest to each facility in combination with the tonnage shipped. Canfor Pulp tracked distances and tonnage shipped from the origin facility to the Canfor Pulp facility for each shipment.

#### Transportation and Distribution of Sold Goods Arranged by Canfor

Internal records for product deliveries that document the carriers, modes, distances, and weight of shipments.

#### **Quantification Methodology:**

#### Transportation and Distribution of Purchased Goods

Emissions were calculated using the supply chain emission factors in the U.S. EPA's Supply Chain EEIO that correspond to the 2017 NAICS Codes corresponding to the General Ledger spend categories for WPC, CSP, and Canfor Pulp.

Emissions for Vida were estimated using CSP's intensity of tCO2e for purchased goods and services to production data as a proxy applied to Vida's production data.

Transportation and Distribution of Purchased Fibre

Emission factors from Canada's (NIR) and the Swedish Environmental Protection Agency for WPC and Vida, respectively, were applied to the volume of fuel combusted.

Emission factors from EPA's Smartway and carriers for CSP and Canfor Pulp were applied to the tonmiles of product shipped.

#### Transportation and Distribution of Sold Goods Arranged by Canfor

Emission factors from EPA's Smartway and EPA's Emission Factors Hub for ground transportation, Clean Cargo for marine shipping, and carrier-specific factors where available were applied to each shipment based on the corresponding mode utilized by WPC, CSP, and Canfor Pulp.

Average fuel economies for land-based shipments developed in collaboration with transportation partners for Vida were applied to each shipment base on the mode utilized and combined with emission factors from the Swedish Environmental Protection Agency. Clean Cargo emission factors were utilized for Vida's marine shipping.

#### **Calculation Boundary:**

The transportation and distribution of products purchased by Canfor and shipped from suppliers in vehicles that are not owned or leased by Canfor. The supply chain emission factors in the U.S. EPA's Supply Chain EEIO dataset relating to purchased goods and capital goods were excluded from this category and utilized under category 1.

The transportation and distribution of products between Canfor facilities by vehicles that are not owned or leased by Canfor.

Outbound transportation and distribution services that are purchased or arranged by Canfor.

Canfor's upstream transportation of fibre from forest to mill includes backhaul emissions because those transportation vendors complete multiple, continuous deliveries over the period of their contact.

The upstream transportation of purchased goods that Canfor facilitated on behalf of a customer or contract and were not utilized in Canfor's manufacturing processes were excluded from this category.

- Canada's NIR (1990-2020)
- Clean Cargo Global Ocean Container GHG Emission Intensities
- U.S. EPA's Emission Factors Hub
- U.S. EPA's SmartWay Performance Rankings
- DEFRA's GHG Conversion Factors
- Swedish Environment Protection Agency Emission Factors and Heating Value Submission
- Carrier-Specific Information

### 3.5 Waste Generated in Operations

Description	Em cor dis	Emissions from third-party disposal and treatment of waste generated in the reporting company's operations in the reporting year. This category includes emissions from the disposal of both solid waste and wastewater.				
Significance Immaterial source of emissions		Data Quality	Fair			
2022 Emissions (tCO2e)		5,720	2022 Emissions (Bio-tCO2e)	3,943		
Percentage of Emissions Calculated Using Supplier Data		90%				

#### Data Source:

Internal tracking of municipal solid waste (MSW) and process waste sent to offsite disposal and recovery facilities. The treatment of each waste was determined from our waste vendors. Where the disposal method could not be determined, landfilling was the assumed destination.

Production data for WPC was used as a proxy for CSP. WPC was selected because the two businesses most aligned in their waste generation and disposal.

#### **Quantification Methodology:**

Waste was categorized by the material waste categories utilized in the U.S. EPA's Emission Factors Hub. Corresponding emission factors for each material waste category were utilized based on the Canfor's disposal method.

Recycled materials were not given an emission factor in accordance with the GHG Protocol's "recycled content method".

The volume of incinerated biomass waste was paired with emission factors for the combustion of wooden fuels from Canada's NIR, U.S. EPA's Emission Factors Hub, and the Swedish Environmental Protection Agency for WPC, CSP, and Vida, respectively.

Emissions for CSP were estimated using WPC's intensity of tCO2e for waste generated to production data as a proxy applied to CSP's production data.

#### **Calculation Boundary:**

Weight and volume of waste sent to offsite disposal and recovery facilities was utilized.

#### **Selection of Emissions Factors:**

• U.S. EPA's Emission Factors Hub

### 3.6 Business Travel

Description	Em veh pas	nissions from the transportation of employees for business-related activities in hicles owned or operated by third parties, such as aircraft, trains, buses, and ssenger cars.		
Significance Immaterial source of emissions			Data Quality	Good
2022 Emissions (tCO2e)		365	2022 Emissions (Bio-tCO2e)	-
Percentage of Emissions Calculated Using Supplier Data		0%		

#### Data Source:

Transportation data was provided by Canfor's third-party travel agency for WPC, CSP, and Canfor Pulp. Transportation data for WPC, CSP, and Canfor Pulp was used as a proxy for ground travel by Vida.

#### **Quantification Methodology:**

Emission factors from the U.S. EPA's Emission Factors Hub were utilized based on the transportation mode and distance travelled.

Emissions for Vida were estimated using the average intensity of tCO2e from business travel to total number of employees as a proxy applied to Vida's total number of employees. This proxy method was chosen because data for employee business travel was unavailable for Vida.

#### **Calculation Boundary:**

This category covers emissions from all domestic and international flights and rental cars for business purposes by employees from WPC, CSP, and Canfor Pulp. Fuel purchases for travel expensed with Canfor provided fuel-cards for employees using their own vehicles or for leased vehicles by Canfor were excluded in this category because they are included in the scope 1 GHG inventory.

#### **Selection of Emissions Factors:**

• U.S. EPA's Emission Factors Hub

### 3.7 Employee Commuting

Description	Em woi	nissions from the transportation of employees between their homes and their orksites during the reporting year in vehicles that are not owned by the company.				
Significar	nce	Immaterial source of emissions	Data Quality	Poor		
2022 Emissions (tCO2e)		10,067	2022 Emissions (Bio-tCO2e)	-		
Percentage of Emissions Calculated Using Supplier Data		0%				

#### Data Source:

The number of employees commuting to-from a Canfor facility.

#### **Quantification Methodology:**

All employees were assumed to commute twice a day, five days a week to-from a Canfor facility utilizing a single-occupant vehicle. Average commuting distances are sourced from Statistics Canada for WPC and Canfor Pulp, the U.S. Federal Highway Administration for CSP, and internal records for Vida.

#### **Calculation Boundary:**

This category covers all salaried and hourly employees commuting to their place of work. A standardized number of commuting weeks was applied to account for personal time off.

- U.S. EPA's Emission Factors Hub
- DEFRA's GHG Conversion Factors

### 3.8 Upstream Leased Assets

Description	Em rep inve	Emissions from the operation of assets that are leased by the reporting company in the reporting year and not already included in the reporting company's scope 1 or scope 2 inventories.			
Significance Immaterial source of emissions			Data Quality	Very Good	
2022 Emissions (tCO2e)		196	2022 Emissions (Bio-tCO2e)	-	
Percentage of Emissions Calculated Using Supplier Data		100%			

#### Data Source:

Scope 1 and scope 2 emissions from a leased property associated with WPC.

#### **Quantification Methodology:**

The leaser of the property provided Canfor with their calculated scope 1 and scope 2 emissions. Canfor took 50% of the leased assets' scope 1 and 2 emissions as that is the percentage of the facilities activities dedicated to Canfor.

#### **Calculation Boundary:**

This category covers emissions from the operations of assets that are leased by Canfor. CSP, Canfor Pulp, and Vida are not included in this category as they do not have upstream leased assets.

#### **Selection of Emissions Factors:**

• Site or regionally specific emission factors for energy sources (e.g., electricity and fuels) per unit of consumption (e.g., kg CO2e/kWh for electricity, kg CO2e/L for diesel)

### 3.9 Downstream Transportation and Distribution

Description	Em pro cor	Emissions that occur in the reporting year from transportation and distribution of sold products, that are arranged by the customer, in vehicles and facilities not owned or controlled by the reporting company.			
Significance Immaterial source of emissions		Data Quality	Fair		
2022 Emissions (tCO2e)		4,238	2022 Emissions (Bio-tCO2e)	-	
Percentage of Emissions Calculated Using Supplier Data		0%			

#### Data Source:

Internal records for product deliveries that document the weight of the shipments that customers picked up.

Distances for WPC, CSP, and Canfor Pulp were derived using a great circle approach and assumed to all be with a truck. Vida calculated the shipment distance from the source facility to the destination facility and then applied a fuel economy that was developed in collaboration with transportation partners.

#### **Quantification Methodology:**

A standardized great circle for all customer pick-ups was applied to the weight of shipped product to determine the mileage and number of shipments paired with CO<sub>2</sub> emission factors from EPA's SmartWay and CH<sub>4</sub> and N<sub>2</sub>O emission factors from EPA's Emission Factors Hub for WPC, CSP, and Canfor Pulp.

Average fuel economies for shipments developed in collaboration with transportation partners for Vida were applied to each shipment base on the mode utilized and then combined with emission factors from the Swedish Environmental Protection Agency.

#### **Calculation Boundary:**

This category covers emissions from the transportation of product that is pick-up by the customer from a Canfor facility and paid for by the customer. The majority of downstream transportation of goods to customers is paid for by Canfor. These shipments are excluded from this category and placed in Category 4.

- U.S. EPA's Smartway
- **DEFRA's GHG Conversion Factors**
- Canada's NIR (1990-2020)

### 3.10 Processing of Sold Products

Description	Em the	nissions from the processing of intermediate products sold in the reporting year by e manufacturers subsequent to sale by the reporting company.				
Significance Major source of emissions		Major source of emissions	Data Quality	Good		
2022 Emissions (tCO2e)		1,524,147	2022 Emissions - (Bio-tCO2e)			
Percentage of Emissions Calculated Using Supplier Data		<1%				

#### Data Source:

Sales data was queried to determine the customer segment and volume of sold residuals and intermediate products from each facility operated by Canfor.

#### **Quantification Methodology:**

Emission factors from a variety of life-cycle assessments (LCAs) were utilized and applied to the quantity of sold product.

Emissions were allocated to the intermediary products sold by Canfor to a downstream customer; primarily pulp and paper<sup>1</sup>, pellets<sup>2</sup>, other wood products<sup>3, 4, 5</sup> manufacturers.

#### **Calculation Boundary:**

The boundary for further processing is the downstream purchaser of Canfor's raw material or intermediate good. Dimensional lumber and product segments, such are animal bedding and landscaping material, have been determined to have no further processing. Hog and bark not destinated to pellet mills was determined to have no further processing and placed under category 11 as fuel feedstock for combustion.

The same data source was used for category 10 and 11. To avoid double-counting, data was delineated by customer segment and product type to account for which products had emissions associated with further processing, use, or no further emissions until end-of-life.

- Tomberlin, K., Venditti, R., and Yao, Y. (2020)<sup>1</sup>
- Pokhrel et al,. (2022)<sup>2</sup>
- Athena Sustainable Materials Institute (2018)<sup>3</sup>
- Idemat Eco-Costs Database<sup>4</sup>
- Customer-specific emission factors<sup>5</sup>

### 3.11 Use of Sold Products

Description	Em rep	nissions from the use of goods and services sold by the reporting company in the porting year.				
Significar	nce	Immaterial source of emissions	Data Quality	Good		
2022 Emissions (tCO2e)		80,046	2022 Emissions (Bio-tCO2e)	4,698,223		
Percentage of Emissions Calculated Using Supplier Data		0%				

#### Data Source:

Sales data was queried to determine the volume and customer segment of sold residual and intermediate products from each facility operated by Canfor.

#### **Quantification Methodology:**

Emission factors for the combustion of wooden products from Canada's NIR, U.S. EPA's Emission Factors Hub, and the Swedish Environmental Protection Agency were used for WPC, CSP, and Vida, respectively, and applied to the volume of product sold.

#### **Calculation Boundary:**

This category includes emission from the combustion of Canfor's manufactured products, raw materials sold as combustion material, and intermediate products further processed into fuels. All other products sold by Canfor are not expected to have any associated emissions during their use.

Canfor Pulp does not sell products for combustion purposes and therefore does not have emissions in this category.

The same data source was used for category 10 and 11. To avoid double-counting, data was delineated by customer segment and product type to account for which products had emissions associated with further processing, use, or no further emissions until end-of-life. **Selection of Emissions Factors:** 

- Canada's NIR (1990-2020)
- U.S. EPA's emission factors
- Swedish Environmental Protection Agency's emission factors and heating values

### 3.12 End-of-Life Treatment of Sold Products

Description	Em cor	missions from the waste disposal and treatment of products sold by the reporting ompany in the reporting year at the end of their life.			
Significance Major source of en		Major source of emissions	Data Quality	Fair	
2022 Emissions (tCO2e)		2,108,586	2022 Emissions (Bio-tCO2e)	2,533,955	
Percentage of Emissions Calculated Using Supplier Data		0%			

#### Data Source:

The volume and type of product sold and country of destination. **Quantification Methodology:** 

The Intergovernmental Panel on Climate Change's (IPCC) methane generation potential equation was utilized to quantify total future lifetime emissions of sold products that were disposed of in the reporting year. Default rates for carbon content and degradable organic carbon published in Chapter 2 of IPCC's 2019 Refinement to the 2006 IPCC Guidelines for National Greenhouse Gas Inventories. Default and country specific MSW landfill, gas capture, and diversion rates for countries that Canfor's customers operate in were utilized in the methane generation potential equation.

Recycled materials were not given an emission factor in accordance with the GHG Protocol's "recycled content method".

The volume of incinerated biomass waste was paired with emission factors for the combustion of wooden fuels from Canada's NIR for WPC and Canfor Pulp, U.S. EPA's Emission Factors Hub for CSP, and the Swedish Environmental Protection Agency for Vida.

#### **Calculation Boundary:**

This category includes all products except those that were sold for the use as a fuel.

The destination country of sale was assumed to be the country of the product's end-of-life.

#### **Selection of Emissions Factors:**

• IPCC's 2019 Refinement to the 2006 IPCC Guidelines for National Greenhouse Gas Inventories

### 3.13 Downstream Leased Assets

Description	Em lea Sco	nissions from the operation of assets that are owned by the reporting company and ased to other entities in the reporting year that are not already included in Scope 1 or cope 2.				
Significa	nce	Not applicable	Data Quality	-		
2022 Emissions (tCO2e)		Not calculated	2022 Emissions (Bio-tCO2e)	-		
Percentage of Emissions Calculated Using Supplier Data		-				

#### Data Source:

This category is not applicable. Canfor does not have downstream leased assets.

### 3.14 Franchises

Description	Em cor	missions from the operation of franchises owned or controlled by the reporting ompany during the reporting year that are not included in Scope 1 or Scope 2.			
Significance Not ap		Not applicable	Data Quality	-	
2022 Emissions (tCO2e)		Not calculated	2022 Emissions (Bio-tCO2e)	-	
Percentage of Emissions Calculated Using Supplier Data		-			

### Data Source:

This category is not applicable. Canfor does not have franchises.

### 3.15 Investments

Description	Em not	missions associated with the reporting company's investments in the reporting year, ot already included in scope 1 or scope 2.				
Significar	nce	Immaterial source of emissions	Data Quality	Very Good		
2022 Emissions (tCO2e)		8,222	2022 Emissions (Bio-tCO2e)	-		
Percentage of Emissions Calculated Using Supplier Data		100%				

#### Data Source:

Volume of fuels combusted from Houston Pellet Limited Partnership (HPLP).

#### **Quantification Methodology:**

Emission factors from Canada's NIR were applied to the fuels combusted at HPLP. Canfor's 60% share of HPLP was applied to HPLP's scope 1 and 2 emissions; consistent with an equity share approach.

#### **Calculation Boundary:**

This category covers emissions from the HPLP. There are no other operational investments made by Canfor.

#### Data Quality:

Very Good.

#### **Selection of Emissions Factors:**

• Canada's NIR (1990-2020)

## 4 References

Athena Sustainable Materials Institute (2018): 1 (athenasmi.org)

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Clean Cargo Global Ocean Container GHG Emission Intensities: <u>Clean\_Cargo\_-</u> <u>2022\_Global\_Ocean\_Container\_Greenhouse\_Gas\_Emission\_Intensities\_2023-06.pdf (smart-freight-centre-media.s3.amazonaws.com)</u>

DEFRA's GHG Conversion Factors:

view.officeapps.live.com/op/view.aspx?src=https%3A%2F%2Fassets.publishing.service.gov.uk%2Fgover nment%2Fuploads%2Fsystem%2Fuploads%2Fattachment\_data%2Ffile%2F1083855%2Fghgconversion-factors-2022-full-set.xls&wdOrigin=BROWSELINK

EPA Smartway: carrierPerfDataEPA.xlsx (live.com)

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IPCC's 2019 Refinement to the 2006 IPCC Guidelines for National Greenhouse Gas Inventories: Publications - IPCC-TFI (iges.or.jp)

Pokhrel et al,. (2022): Life Cycle Assessment (LCA) of Wood Flour and Pellets for Manufacturing Wood-Plastic Composites (WPCs) (usda.gov)

Swedish Environmental Protection Agency's emission factors and heating values submission 2023: <u>efbilaga-klimat-20230130-reviderad.xlsx (live.com)</u>

Tomberlin, K., Venditti, R., and Yao, Y. (2020): <u>Life cycle carbon footprint analysis of pulp and paper</u> grades in the United States using production-line-based data and integration :: BioResources (ncsu.edu)

U.S. EPA's Emission Factors Hub: Emission Factors for Greenhouse Gas Inventories (epa.gov)

U.S. EPA's Supply Chain Greenhouse Gas Emission Factors v1.2 by NAICS-6: <u>Supply Chain Greenhouse</u> Gas Emission Factors v1.2 by NAICS-6 - Catalog (data.gov)

World Bank's Electric Power Transmission and Losses: <u>Electric power transmission and distribution</u> <u>losses (% of output) | Data (worldbank.org)</u> Appendix 1: Independent Practitioner's Limited Assurance Reports



#### INDEPENDENT PRACTITIONER'S LIMITED ASSURANCE REPORT

To the management of Canfor Corporation.

We have undertaken a limited assurance engagement on certain performance metrics of Canfor Corporation (the "Entity"), included in the accompanying 2022 Scope 3 Base Year Report (the "Report") for the year ended December 31, 2022.

The scope of our limited assurance engagement, as agreed with management, comprises the following performance metrics (collectively, the "subject matter information") and criteria:

#### Table

Subject Matter Information	Units*	Criteria	
Scope 3 non-biogenic GHG emissions	4,909,846 Tonnes CO <sub>2</sub> e	<ul><li>The GHG Protocol;</li><li>The Corporate Value Chain (Scope 3)</li></ul>	
Scope 3 biogenic emissions	7,236,122 Tonnes CO₂e	Accounting and Reporting Standard; and, • Internally developed criteria.	

\* The figures are consolidated and include entities that are under the operational control of Canfor Corporation which include Canadian wood products operations, U.S. wood products operations, Canfor Pulp Products Inc. and Vida Group.

The subject matter information can be found on page 2 of the Report.

Other than as described in the preceding paragraph, we did not perform assurance procedures on the remaining information included in the Report, and accordingly, we do not express a conclusion on this information.

There are no mandatory requirements for the preparation or presentation of the subject matter information. As such, the Entity has applied the Greenhouse Gas Protocol - Corporate Accounting and Reporting Standard (Revised Edition); the Corporate Value Chain (Scope 3) Accounting and Reporting Standard; and internally developed criteria in relation to the subject matter information. The criteria are further described in the Report ("applicable criteria").

#### Management's Responsibility

Management is responsible for the preparation and presentation of the subject matter information in accordance with the applicable criteria.

Management is also responsible for such internal control as management determines necessary to enable the preparation and presentation of the subject matter information that is free from material misstatement, whether due to fraud or error. This responsibility includes determining the Entity's objectives in respect of sustainability performance and reporting, identifying stakeholders and material issues, and selecting or developing appropriate criteria.



#### **Our Responsibility**

Our responsibility is to express a limited assurance conclusion on the subject matter information based on the procedures we have performed and the evidence we have obtained. We conducted our limited assurance engagement in accordance with Canadian Standard on Assurance Engagements ("CSAE") 3410 *Assurance Engagements on Greenhouse Gas Statements*. This standard requires that we plan and perform our engagement to obtain limited assurance about whether the subject matter information is free from material misstatement.

A limited assurance engagement involves assessing the suitability of the criteria used by the Entity in preparing the subject matter information in the circumstances of the engagement, assessing the risks of material misstatement, whether due to fraud or error, and responding to the assessed risks as necessary in the circumstances.

We exercised professional judgment and maintained professional skepticism throughout the engagement. Our procedures were designed and performed to obtain evidence that is sufficient and appropriate to provide a basis for our conclusion. In carrying out our engagement, we:

- Evaluated the suitability of the Entity's use of the criteria, as the basis for preparing the subject matter information in the circumstances;
- Through inquiries, obtained an understanding of the Entity's control environment, processes and systems relevant to the preparation of the subject matter information, but did not evaluate the design of particular control activities, obtain evidence about their implementation or test their operating effectiveness;
- Inquired with relevant staff at the corporate level to understand the data collection and reporting processes for the subject matter information;
- Inquired regarding key assumptions, estimates and the appropriateness of the associates methods, policies and procedures;
- Inspected a limited number of items to or from supporting records, as appropriate;
- · Re-performed calculations on a sample basis; and,
- Considered the presentation and disclosure of the subject matter information.

The procedures performed in a limited assurance engagement vary in nature and timing from and are less in extent than for a reasonable assurance engagement. Consequently, the level of assurance obtained in a limited assurance engagement is substantially lower than the assurance that would have been obtained had a reasonable assurance engagement been performed.

#### **Our Independence and Quality Management**

We have complied with the independence and other ethical requirements of relevant rules of professional conduct/code of ethics applicable to the practice of public accounting and related to assurance engagements, issued by various professional accounting bodies, which are founded on fundamental principles of integrity, objectivity, professional competence and due care, confidentiality and professional behaviour.



The firm applies Canadian Standard on Quality Management 1, *Quality Management for Firms that Perform Audits or Reviews of Financial Statements, or Other Assurance or Related Services Engagements* which requires the firm to design, implement and operate a system of quality management, including policies or procedures regarding compliance with ethical requirements, professional standards and applicable legal and regulatory requirements.

#### **Significant Inherent Limitations**

Historical non-financial information, such as that contained in the Report, is subject to more inherent limitations than historical financial information, given the qualitative characteristics of the underlying subject matter and methods used for determining this information. The absence of a significant body of established practice on which to draw allows for the selection of different but acceptable evaluation techniques, which can result in materially different measurements and can impact comparability. The nature and methods used to determine such information, as described in the applicable criteria, may change over time. It is important to read the Entity's reporting methodology which can be found in the Report.

#### Conclusion

Our conclusion has been formed on the basis of, and is subject to, the matters outlined in this report. We believe that the evidence we have obtained is sufficient and appropriate to provide a basis for our conclusion. Based on the procedures performed and evidence obtained, no matters have come to our attention to cause us to believe that the Entity's subject matter information for the year ending December 31, 2022, is not prepared, in all material respects, in accordance with the applicable criteria.

Our conclusion on the subject matter information does not extend to any other information, reports or documents that accompany, are presented with, or contain the subject matter information and our assurance report.

#### **Restriction on Use**

Our report is intended solely for use by Canfor Corporation for the purpose(s) set out in our engagement agreement. Our report may not be suitable for any other purpose(s) and is not intended for use or reliance by any third parties. While KPMG LLP acknowledges that disclosure of our report may be made, in full, by Canfor Corporation in the 2022 Scope 3 Base Year Report, KPMG LLP does not assume or accept any responsibility or liability to any third party in connection with the disclosure of our report.

KPMG LLP

Chartered Professional Accountants April 22, 2024 Vancouver, Canada



#### INDEPENDENT PRACTITIONER'S LIMITED ASSURANCE REPORT

To the management of Canfor Pulp Products Inc.

We have undertaken a limited assurance engagement on certain performance metrics of Canfor Pulp Products Inc. (the "Entity"), included in the accompanying 2022 Scope 3 Base Year Report (the "Report") for the year ended December 31, 2022.

The scope of our limited assurance engagement, as agreed with management, comprises the following performance metrics (collectively, the "subject matter information") and criteria:

#### Table

Subject Matter Information	Units*	Criteria
Scope 3 non-biogenic GHG emissions	1,659,942 Tonnes CO₂e	<ul> <li>The GHG Protocol;</li> <li>The Corporate Value Chain (Scope 3) Accounting and Reporting Standard; and,</li> <li>Internally developed criteria.</li> </ul>
Scope 3 biogenic emissions	724,817 Tonnes CO₂e	

\* The figures are for Canfor Pulp Product Inc. only.

The subject matter information can be found on page 2 of the Report.

Other than as described in the preceding paragraph, we did not perform assurance procedures on the remaining information included in the Report, and accordingly, we do not express a conclusion on this information.

There are no mandatory requirements for the preparation or presentation of the subject matter information. As such, the Entity has applied the Greenhouse Gas Protocol - Corporate Accounting and Reporting Standard (Revised Edition); the Corporate Value Chain (Scope 3) Accounting and Reporting Standard; and internally developed criteria in relation to the subject matter information. The criteria are further described in the Report ("applicable criteria").

#### Management's Responsibility

Management is responsible for the preparation and presentation of the subject matter information in accordance with the applicable criteria.

Management is also responsible for such internal control as management determines necessary to enable the preparation and presentation of the subject matter information that is free from material misstatement, whether due to fraud or error. This responsibility includes determining the Entity's objectives in respect of sustainability performance and reporting, identifying stakeholders and material issues, and selecting or developing appropriate criteria.



#### **Our Responsibility**

Our responsibility is to express a limited assurance conclusion on the subject matter information based on the procedures we have performed and the evidence we have obtained. We conducted our limited assurance engagement in accordance with Canadian Standard on Assurance Engagements ("CSAE") 3410 *Assurance Engagements on Greenhouse Gas Statements*. This standard requires that we plan and perform our engagement to obtain limited assurance about whether the subject matter information is free from material misstatement.

A limited assurance engagement involves assessing the suitability of the criteria used by the Entity in preparing the subject matter information in the circumstances of the engagement, assessing the risks of material misstatement, whether due to fraud or error, and responding to the assessed risks as necessary in the circumstances.

We exercised professional judgment and maintained professional skepticism throughout the engagement. Our procedures were designed and performed to obtain evidence that is sufficient and appropriate to provide a basis for our conclusion. In carrying out our engagement, we:

- Evaluated the suitability of the Entity's use of the criteria, as the basis for preparing the subject matter information in the circumstances;
- Through inquiries, obtained an understanding of the Entity's control environment, processes and systems relevant to the preparation of the subject matter information, but did not evaluate the design of particular control activities, obtain evidence about their implementation or test their operating effectiveness;
- Inquired with relevant staff at the corporate level to understand the data collection and reporting processes for the subject matter information;
- Inquired regarding key assumptions, estimates and the appropriateness of the associates methods, policies and procedures;
- Inspected a limited number of items to or from supporting records, as appropriate;
- · Re-performed calculations on a sample basis; and,
- Considered the presentation and disclosure of the subject matter information.

The procedures performed in a limited assurance engagement vary in nature and timing from and are less in extent than for a reasonable assurance engagement. Consequently, the level of assurance obtained in a limited assurance engagement is substantially lower than the assurance that would have been obtained had a reasonable assurance engagement been performed.

#### **Our Independence and Quality Management**

We have complied with the independence and other ethical requirements of relevant rules of professional conduct/code of ethics applicable to the practice of public accounting and related to assurance engagements, issued by various professional accounting bodies, which are founded on fundamental principles of integrity, objectivity, professional competence and due care, confidentiality and professional behaviour.



The firm applies Canadian Standard on Quality Management 1, *Quality Management for Firms that Perform Audits or Reviews of Financial Statements, or Other Assurance or Related Services Engagements* which requires the firm to design, implement and operate a system of quality management, including policies or procedures regarding compliance with ethical requirements, professional standards and applicable legal and regulatory requirements.

#### **Significant Inherent Limitations**

Historical non-financial information, such as that contained in the Report, is subject to more inherent limitations than historical financial information, given the qualitative characteristics of the underlying subject matter and methods used for determining this information. The absence of a significant body of established practice on which to draw allows for the selection of different but acceptable evaluation techniques, which can result in materially different measurements and can impact comparability. The nature and methods used to determine such information, as described in the applicable criteria, may change over time. It is important to read the Entity's reporting methodology which can be found in the Report.

#### Conclusion

Our conclusion has been formed on the basis of, and is subject to, the matters outlined in this report. We believe that the evidence we have obtained is sufficient and appropriate to provide a basis for our conclusion. Based on the procedures performed and evidence obtained, no matters have come to our attention to cause us to believe that the Entity's subject matter information for the year ending December 31, 2022, is not prepared, in all material respects, in accordance with the applicable criteria.

Our conclusion on the subject matter information does not extend to any other information, reports or documents that accompany, are presented with, or contain the subject matter information and our assurance report.

#### **Restriction on Use**

Our report is intended solely for use by Canfor Pulp Products Inc. for the purpose(s) set out in our engagement agreement. Our report may not be suitable for any other purpose(s) and is not intended for use or reliance by any third parties. While KPMG LLP acknowledges that disclosure of our report may be made, in full, by Canfor Pulp Products Inc. in the 2022 Scope 3 Base Year Report, KPMG LLP does not assume or accept any responsibility or liability to any third party in connection with the disclosure of our report.

KPMG LLP

Chartered Professional Accountants April 22, 2024 Vancouver, Canada