PROTOCOL AND JUSTIFICATION OF THE MERGER OF FIBRIA CELULOSE S.A. BY SUZANO PAPEL E CELULOSE S.A.

The management of the companies identified below, as well as the respective companies identified below:

(i) **SUZANO PAPEL E CELULOSE S.A.**, a publicly-held company, enrolled with the CNPJ/MF under No. 16.404.287/0001-55, with head office in the City of Salvador, State of Bahia, at Avenida Professor Magalhães Neto, No. 1752, 10th floor, rooms 1010 and 1011, Pituba, CEP 41810-012, registered in the Board of Trade of the State of Bahia under NIRE 29.300.061.331, herein represented in accordance with its bylaws ("Suzano"); and

(ii) **FIBRIA CELULOSE S.A.**, a publicly-held company, enrolled with the CNPJ/MF under No. 60.643.228/0001-21, with head office in the City of São Paulo, State of São Paulo, at Rua Fidêncio Ramos, No. 302, 3rd and 4th (part) floors, Edifício Vila Olímpia Corporate, Tower B, Vila Olímpia, CEP 04551-010, registered in the Board of Trade of the State of São Paulo under NIRE 35.300.022.807, herein represented in accordance with its bylaws ("Fibria" and, jointly with Suzano, the "Parties" or "Companies"),

For the reasons of and aiming the goals detailed below in conformity with articles 224 and 225 of Law No. 6.404/76, as amended ("Brazilian Corporation Law"), have decided to execute this protocol and justification ("Merger Agreement") for the purposes of the merger of Fibria into Suzano, under the following terms and conditions:

1. INTRODUCTION

1.1. Purpose. The purpose of this Merger Agreement is to substantiate the justifications, terms and conditions of the merger of Fibria, with its subsequent winding up and transfer of its net equity to Suzano ("Merger").

1.2. Justification. After the analysis of the current scenario and status of the companies, the management decided to propose the merger of Fibria into Suzano, believing that the effective integration of the activities of Fibria and Suzano, after the combination of their shareholding basis completed on January 14, 2019, will allow synergy gains as a result of the reduction in logistics and administrative operational costs and risks.

2. APPRAISAL CRITERIA; ADJUSTMENT OF EQUITY VARIATIONS

2.1. Form. Due to the Merger, Suzano will receive all the net equity of Fibria, succeeding it on an universal basis with regard to all of its assets, rights and liabilities, without any discontinuity.

2.2. Transaction Base Date. The reference date of the transaction shall be December 31, 2018 ("Base Date").

2.3. Appraisal Criteria. The assets, rights and liabilities of Fibria's net equity that will be transferred to Suzano will be appraised at its book value.

2.4. Appraiser; Appraisal Report. The officers of the Parties appoint, hereby, *ad referendum* of Suzano ESM and Fibria ESM (as defined below), as the appraiser, under the terms of Section 2.3, PriceWaterhouseCoopers, *Auditores Independentes,* a corporation with head office at Avenida Francisco Matarazzo, No. 1400, Torino Tower, in the City of São Paulo, State of São Paulo, CEP 05001-903, enrolled with the CNPJ/MF under No. 61.562.112/0001-20 ("Appraiser"), responsible to determine Fibria's net equity according to its book value ("Appraisal Report"), which now constitutes and is an integral and inseparable part of this Merger Agreement for any purposes of law, under the terms of Exhibit I.

2.4.1. Considering that Suzano holds one hundred per cent (100%) of the capital stock issued by Fibria and in view of the decision of the Board of Commissionaires of the Security and Exchange Commission of Brazil ("CVM") of February 15, 2018 in the Proceeding SEI No. 19957.011351/2017-21, the valuation report mentioned on Article 264 of the Brazilian Corporation Law shall not be necessary.

2.4.2. Under the terms of Article 227, § 1st of the Brazilian Corporation Law, the appointment of the Appraiser shall be subject to the ratification of Suzano's general shareholders meeting that deliberates about the Merger.

2.4.3. The merger shall not grant the right of withdrawal to dissenting shareholders within the Merger, since the applicable law limits such right to the shareholders of the merged company and Fibria is a wholly-owned subsidiary of Suzano. That being, it is not the case of dissident shareholders and, as a consequence, of reimbursement amount due to Fibria's shareholder due to the Merger.

2.4.4. The Appraiser states that: (i) there is no potential or current conflict or common interest with the Companies' shareholders or, further, as regards to the Merger; and (ii) the shareholders or the directors of the Companies have not directed, limited, impaired or performed any acts which prevented, or may have prevented the access, use or knowledge of information, properties, documents or work methodologies that are material for the quality of their conclusions. The Appraiser was selected for the works described herein due to its wide and renowned experience in preparing reports and appraisals of such nature.

2.4.5. Suzano shall bear all the costs related to the hiring of the Appraiser for preparing the Appraisal Report.

2.5. Net Equity to be Transferred; Capital Changes. Under the terms of the Appraisal Report, the net equity of Fibria for purposes of the Merger is fourteen billion, one hundred and forty-nine million, three thousand, five hundred and ten reais and fifty-five cents (R$14,149,003,510.55), which will be the amount of the net assets to be transferred to Suzano. The Merger will not result in capital increase of Suzano and, consequently, there will be no exchange ratio of shares, since Suzano is the owner of the total capital stock of Fibria.

2.6. Assets of Fibria to be Transferred to Suzano. The totality of the assets and liabilities of Fibria will be transferred to Suzano due to the Merger.

2.6.1. The following include assets and liabilities of Fibria to be transferred to Suzano, which are merely exemplifying and without prejudice to the others contemplated in the equity of the Fibria: (i) all establishments and branches of Fibria, independent if listed or not in Exhibit II to this Merger Agreement, which will be operated by Suzano as from the Merger; (ii) all fixed assets, including, but not limited to any other, all the real estate properties listed in Exhibit III, which are deposited at the headquarters of Suzano; (iii) all personal and/or real guarantees granted and provided by third parties in favor of Fibria; and (iv) all the agreements to which Fibria is a party. In addition, all the employees of Fibria will be transferred to Suzano, as well as the respective labor liabilities related to them.

2.6.2. For clarification purposes, considering that the transaction consists on a Merger, all the assets and rights of Fibria will be of Suzano by universal succession, independent if mentioned or not in this Exhibits to the Merger Agreement.

2.7. Equity Variation. Equity variations occurred between the Base Date and the date of completion of the Merger shall be absorbed by Suzano, including both the positive and negative results arising from changes on that period, considering, in each case, the respective transferred net equity.

3. CONDITION PRECEDENT; CORPORATE APPROVALS; CAPITAL STOCK

3.1. Conditions Precedent. The completion of the Merger, shall be, under the terms of article 125 of Law No. 10,406, of January 10, 2002, as amended, subject to the obtainment of the approval by ANTAQ – National Waterway Transportation Agency ("Condition Precedent") regarding the Merger and the change of Fibria's direct corporate control with respect to the terminals owned by Fibria and/or its subsidiaries, provided that, once the Condition Precedent is verified (or waived by the Companies), (i) any of the Companies may communicate the other about the completion or waiver of the Condition Precedent and (ii) the Companies shall release a notice to the shareholders stating, at least, the date which the Merger shall be completed, which shall correspond to the first day of the month, immediately following the month in which the Condition Precedent was verified or the first day of the month, when the Condition Precedent is verified on the first day of the month.

3.2. Approval Actions. Notwithstanding the provisions of Section 3.1, the completion of the Merger will also depend on the following actions ("Approval Actions"), all interdependent, which shall be coordinated in order to occur, on first call, on the same date:

(i) Extraordinary Shareholders' Meeting of Suzano to (a) approve the execution of the Merger Agreement, (b) ratify the appointment of the Appraiser, (c) approve the Appraisal Report, (d) approve the Merger, under the terms of this Merger Agreement, and (e) authorize the officers to practice all necessary measures required for the completion of the resolutions to be discussed and approved by the shareholders ("Suzano ESM"); and

(ii) Extraordinary Shareholders' Meeting of Fibria to (a) ratify the execution of this Merger Agreement, (b) approve the Merger, under the terms of this Merger Agreement, and (c) authorize the officers to practice all necessary measures required for the completion of the resolutions to be discussed and approved by the Shareholders ("Fibria ESM").

3.2.1. Suzano recognizes that considering that the Merger shall not result in a capital increase, its Byalws shall not be amended to this specific purpose.

3.2.2. The events described herein, as well as the other matters subject to the shareholders of the Parties at Suzano ESM and Fibria ESM that deliberate about the Merger Agreement, are reciprocally dependent businesses, assumed that one business shall not be effective unless the other one also is.

4. OTHER COVENANTS

4.1. *Pro Forma* Financial Statements. Since the Merger constitutes a relevant business, by means of *Orientação Técnica* of *OCPC No.* 06, the managements of the Parties elaborated the *pro forma* financial statements of Article 10 of the CVM Instruction No. 565, of June 15 of 2015, as altered.

4.2. Right of Withdrawal. Considering that Fibria is a wholly-owned subsidiary of Suzano, no right of withdrawal shall be granted.

5. FINAL PROVISIONS

5.1. Succession of Rights and Liabilities. Pursuant to article 227 of the Brazilian Corporation Law, Suzano will assume the assets and liabilities regarding the net equity of Fibria transferred to Suzano, under the terms of this Merger Agreement due to the Merger, without any discontinuity.

5.2. Completion. The management of the Parties shall have the powers to perform all necessary acts, registries and annotations for the completion of the Merger after the approval pursuant to the Actions of Approval, including recognizing the existence of any asset or right to be transferred to Suzano by means of the Merger.

5.3. Disclosure. The applicable documents shall be available to the shareholders of Suzano and Fibria at: (i) their respective social medias as of the date of the call notices of Suzano ESM and Fibria ESM, and/or, as the case may be, (ii) on the Investor Relations sites of Suzano (*https://ri.suzano.com.br/*) and Fibria (*https://ri.fibria.com.br/*) and (iii) on the websites of the Securities and Exchange Commission (CVM) and B3 S.A. – *Brasil, Bolsa, Balcão*.

5.4. Amendment. This Merger Agreement may only be amended by written instrument executed by the Parties.

5.5. Nullity and Inefficiency. A possible statement by any court of nullity or non-effectiveness of any of the provisions set forth in this Merger Agreement shall not impair the validity or effectiveness of the other provisions, which shall be fully complied with, the Companies agreeing to endeavor their best efforts so as to validly reach an agreement to obtain the same effects of the provision having been annulled or having become non-effective.

5.6. Waiver. The failure or delay by any of the Parties in exercising any of its rights under this Merger Agreement shall not be deemed as waiver or novation and shall not affect the subsequent exercise of such right. Any waiver shall produce effects only if specifically granted in writing.

5.7. Irrevocability and Irreversibility. This Merger Agreement is irrevocable and irreversible, and the obligations herein undertaken by the Companies are also binding on their successors at any title whatsoever.

5.8. Assignment. The assignment of any of the rights and obligations agreed to in this Merger Agreement without the prior and express consent, in writing, by the Companies shall be prohibited.

5.9. Execution Instrument. This Merger Agreement, signed in the presence of two (2) witnesses, is an extrajudicial execution instrument in accordance with the civil procedural law, for all legal effects. The Companies since now acknowledge that (i) this Merger Agreement constitutes an extrajudicial execution instrument for all purposes and effects of the Code of Civil Procedure; and (ii) is subject to specific performance in accordance with the applicable law.

5.10. Applicable Law. This Merger Agreement shall be construed and governed by the laws of the Federative Republic of Brazil.

5.11. Court. The Parties and their respective managements elect the Central Court of São Paulo, State of São Paulo, to settle any divergences arising out of this Merger Agreement.

In witness whereof, the directors of the Companies execute this Merger Agreement in three (3) counterparts of the same content and form and for one sole effect, together with the witnesses below.

São Paulo, February 27, 2019.

SUZANO PAPEL E CELULOSE S.A.

Name: Position:	Name: Position:

FIBRIA CELULOSE S.A.

Name: Position:	Name: Position:

Witnesses:

Name: CPF:	Name: CPF:

<u>EXHIBIT I</u>
APPRAISAL REPORT

(A free translation of the original in Portuguese)

Fibria Celulose S.A.

Report on the net book equity value based on the accounting records at December 31, 2018

Report on the net book equity value based on the accounting records

To the Shareholders and Management
Fibria Celulose S.A.

Information on the audit firm

1 PricewaterhouseCoopers Auditores Independentes, a civil partnership established in the capital city of the state of São Paulo, at Av. Francisco Matarazzo, 1400, on the 9th, 10th, 13th, 14th, 15th, 16th and 17th floors, Torre Torino, Água Branca, enrolled in the National Corporate Taxpayers' Register of the Ministry of Finance (CNPJ/MF) under nº 61.562.112/0001-20, originally enrolled in the Regional Accounting Council (CRC) of the State of São Paulo under nº 2SP000160/O-5, with its partnership deed registered at the 4th Registry Office of Deeds and Documents of São Paulo, SP on September 17, 1956, and subsequent amendments registered at the 2nd Registry Office of Deeds and Documents of São Paulo, SP, the last amendment dated July 2, 2018, having been registered at the 2nd Registry Office of Deeds and Documents of São Paulo, SP, on microfilm under nº 147.246, at November 30, 2018, represented by its undersigned partner, Mr. José Vital Pessoa Monteiro Filho, Brazilian, married, accountant, holder of Identity Card nº 2.473.821 SSP/PE, enrolled in the Individual Taxpayers Register (CPF) under nº 856.126.186-68 and the Regional Accounting Council of the State of Pernambuco under nº 1PE016700/O-0, resident and domiciled in the State of São Paulo, with office at the same address of the partnership, was appointed as an expert by the management of Fibria Celulose S.A. ("Company") to proceed with the report of the net book equity value of Fibria Celulose S.A. at December 31, 2018, summarized in Attachment I, in accordance with accounting practices adopted in Brazil. The results of this engagement are presented below.

The objective of the report

2 The objective of the report of the net book equity value at December 31, 2018 of Fibria Celulose S.A. is its merger into Suzano Papel e Celulose S.A.

Management's responsibility for the accounting information

3 Management is responsible for the bookkeeping and preparation of the accounting information in accordance with accounting practices adopted in Brazil, and for such internal control as management determines is necessary to enable the preparation of accounting information that is free from material misstatement, whether due to fraud or error. The main accounting practices adopted by the Company are summarized in Attachment II of the report.

Scope of the work and responsibility of the independent auditors

4 Our responsibility is to express a conclusion on the net book equity value of the Company at December 31, 2018, based on the work performed in accordance with Technical Communication 03/2014 (R1), issued by

PricewaterhouseCoopers, Av. Francisco Matarazzo 1400, Torre Torino, São Paulo, SP, Brasil 05001-903, Caixa Postal 61005 T: (11) 3674-2000, www.pwc.com.br

the Institute of Independent Auditors of Brazil (IBRACON) and approved by the Brazilian Federal Accounting Council through CTA 20/2014 (R1), which establishes that audit procedures be applied to the balance sheet. Therefore, our audit of the related balance sheet of the Company was conducted in accordance with the Brazilian and International Auditing Standards, which require that we comply with ethical requirements and plan and perform the audit to obtain reasonable assurance about whether the net book equity value used for the preparation of our report is free from material misstatement.

5 An audit involves performing procedures to obtain audit evidence about the amounts recorded. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the shareholders' equity, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the balance sheet in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates made by management. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our conclusion.

Conclusion

6 Based on the work performed, we conclude that the amount of R$ 14,149,003,510.55, according to the balance sheet at December 31, 2018, as stated in the accounting records and summarized in Attachment I, represents, in all material respects, the net book equity value of Fibria Celulose S.A., according to accounting practices adopted in Brazil.

Other matters

7 In compliance with the requirements of the Brazilian Securities Commission, we inform that:

(a) in accordance with the professional standards established by the Brazilian Federal Accounting Council, we are not aware of any direct or indirect conflict of interest, nor of any other circumstances that represent conflict of interest, in relation to the services provided by us and which are described above; and

(b) we are not aware of any measure taken by the Company's majority stockholder or managers with the objective of directing, limiting, making difficult or practicing any acts that have or may have compromised the access, use or knowledge of information, assets, documents or work methodologies relevant for the quality of the respective conclusions.

São Paulo, February 22, 2019

PricewaterhouseCoopers
Auditores Independentes
CRC 2SP000160/O-5

José Vital Pessoa Monteiro Filho
Contador CRC 1PE016700/O-0

Attachment I to report on the net book equity value
based on the accounting records
issued on February 22, 2018

Fibria Celulose S.A.

Balance sheet
at December 31, 2018

(A free translation of the original in Portuguese)

Assets	Brazilian Reais
Current	
Cash and cash equivalents	194,111,654.39
Marketable securities	4,278,555,693.55
Derivative financial instruments	210,852,381.30
Trade accounts receivable, net	2,629,382,264.40
Inventory	1,426,523,043.73
Recoverable taxes	196,657,048.45
Dividends receivable	1,907,521.35
Other assets	187,840,465.91
	9,125,830,073.08
Non-current	
Marketable securities	172,890,870.73
Derivative financial instruments	455,324,614.73
Recoverable taxes	1,149,009,822.25
Advances to suppliers	587,253,264.98
Judicial deposits	191,436,229.29
Deferred taxes	761,443,176.81
Other assets	102,948,057.04
Investments	8,610,739,161.92
Biological assets	4,246,532,121.28
Property, plant and equipment	14,557,311,125.70
Intangible assets	4,354,306,800.12
	35,189,195,244.85
Total assets	44,315,025,317.93

Liabilities and Shareholders' equity	Brazilian Reais
Current	
Loans and financing	1,632,189,315.17
Derivative financial instruments	276,406,614.90
Trade payables	933,054,926.15
Payroll, profit sharing and related charges	367,244,184.86
Taxes payable	44,229,282.13
Relates parties	698,002,034.46
Dividends payable	728,910,493.48
Other payables	781,639,383.61
	5,461,676,234.76
Non-current	
Loans and financing	8,180,548,587.47
Derivative financial instruments	126,284,645.45
Relates parties	15,844,736,918.27
Provision for legal proceeds, net	190,513,638.04
Other payables	362,261,783.39
	24,704,345,572.62
Total liabilities	30,166,021,807.38
Shareholders' equity	
Share capital	9,729,006,437.55
Share capital reserve	14,189,921.57
Other reserves	1,619,199,998.42
Statutory reserves	2,786,607,153.01
	14,149,003,510.55
Total liabilities and shareholders' equity	44,315,025,317.93

This Attachment is an integral part and inseparable of the report on the net book equity value based on the accounting records of Fibria Celulose S.A., issued by PricewaterhouseCoopers Auditores Independentes, dated February 22, 2018.

1 Basis of preparation and summary of significant accounting policies

The balance sheet at December 31, 2018 was prepared with the objective of report of the net book equity value at December 31, 2018 of the Fibria Celulose S.A. ("Company") to be used in the merger into Suzano Papel e Celulose S.A.

The balance sheet at December 31, 2018 has been prepared in accordance with accounting practices adopted in Brazil, including the pronouncements issued by the Brazilian Accounting Pronouncements Committee (CPC). The preparation of this balance sheet requires the use of certain critical accounting estimates and also requires management to exercise its judgment in the process of applying accounting policies. The areas involving a higher degree of judgment or complexity, as well as areas where assumptions and estimates are significant to the balance sheet are disclosed in Note 1.19.

The main accounting policies applied in the preparation of this balance sheet are presented below.

1.1 Foreign currency translation

(a) Functional and presentation currency

The Brazilian Real ("Real", "Reais" or "R$") is the functional and presentation currency of the Company.

(b) Transactions and balances

Foreign currency transactions are translated into the functional currency using the exchange rates prevailing at the dates of the transactions or the date of valuation when re-measured. Foreign exchange gains and losses resulting from the settlement of such transactions and from the translation at year-end exchange rates of monetary assets and liabilities denominated in foreign currencies are presented as "Foreign exchange gain (loss) and indexation charges, net" in the Statement of profit or loss.

1.2 Cash and cash equivalents

Cash and cash equivalents include cash, bank deposits, and highly liquid short-term investments, which have original maturities up to 90 days and are readily convertible into a known amount of cash and subject to an immaterial risk of change in value.

1.3 Financial assets

1.3.1 Classification, recognition and measurement

The Company classifies its financial assets in the following categories: (a) amortized cost, (b) at fair value through other comprehensive income and (c) at fair value through profit or loss. The classification depends on the purpose for which the financial assets were acquired.

Regular purchases and sales of financial assets are recognized on the trade date – the date on which Fibria commits to purchase or sell the asset. Financial assets are derecognized when the rights to receive cash flows from the investments have expired or have been transferred but only if Fibria has transferred substantially all risks and rewards of ownership.

(a) Financial assets at amortized cost

Financial assets at amortized cost are financial assets held by the Company (i) in order to receive their contractual cash flow and not to sell to realization a profit or loss and (ii) whose contractual terms give rise, on specified dates, to cash flows that exclusively, payments of principal and interest on the principal amount outstanding.

It includes the balance of cash and cash equivalents, trade accounts receivable, other assets and marketable securities, for investments in agrarian debt securities. Any changes are recognized in income statement.

(b) Financial assets at fair value through other comprehensive income

Financial assets at fair value through other comprehensive income are financial assets held by the Company (i) either to receive their contractual cash flow as the for sale with realization of profit or loss and (ii) whose contractual terms give rise on specified dates, to cash flows constituting, exclusively, payments of principal and interest on the principal amount outstanding. In addition, investments in equity instruments where, on initial recognition, the Company elected to present subsequent changes in its fair value to other comprehensive income, are classified in this category.

This category includes the balance of other investments. Any changes are recognized in the income statement, except for the fair value of investments in equity instruments that are recognized in other comprehensive income.

(c) Financial assets at fair value through profit or loss

Financial assets at fair value through profit or loss are either designated in this category or not classified in any of the other categories.

Financial assets at fair value through profit or loss are the balance of derivative financial instruments, including embedded derivatives, stock options and other securities. Any changes are recognized in the income statement.

1.3.2 Offsetting financial instruments

Financial assets and liabilities are offset and the net amount is reported in the balance sheet when there is a legally enforceable right to offset the recognized amounts and there is an intention to settle on a net basis, or realize the asset and settle the liability simultaneously.

1.3.3 Impairment of financial assets

(a) Assets carried at amortized cost

The Company assesses at the end of each reporting period whether there is objective evidence that a financial asset or group of financial assets is impaired. A financial asset or a group of financial assets is impaired only if there is objective evidence of an impairment as a result of one or more events that occurred after the initial recognition of the asset and that loss event has an impact on the estimated future cash flows of the financial asset or group of financial assets that can be reliably estimated.

The criteria that the Company uses to determine whether there is objective evidence of an impairment loss include:

. significant financial difficulty of the issuer or debtor;

. a breach of contract, such as a default or delinquency in interest or principal payments;

. where Fibria, for economic or legal reasons relating to the borrower's financial difficulty, grants to the borrower a concession that the lender would not otherwise receive;

. it becomes probable that the borrower will enter bankruptcy or other financial reorganization;

. the disappearance of an active market for that financial asset because of financial difficulties;

. observable data indicating that there is a measurable decrease in the estimated future cash flows from a portfolio of financial assets since the initial recognition of those assets, although the decrease cannot yet be identified with the individual financial assets in the portfolio.

The amount of an impairment loss is measured as the difference between the carrying amount of the asset and the present value of estimated future cash flows discounted at the financial asset's original effective interest rate. If the financial asset is impaired the carrying amount of the asset is reduced and a loss is recognized in the Statement of profit or loss.

If, in a subsequent period, the impairment loss decreases and the decrease can be related objectively to an event occurring after the impairment was recognized (such as an improvement in the debtor's credit rating), the reversal of the previously recognized impairment loss is recognized in the Statement of profit or loss.

(b) Financial assets at fair value through other comprehensive income

The Company assesses at the end of each reporting period whether there is objective evidence that a financial asset or a group of financial assets is impaired. In the case of financial assets at fair value through other comprehensive income, a significant or prolonged decline in the fair value of the equity below its cost is also evidence that the assets are impaired. If any such evidence exists for financial assets at fair value through other comprehensive income, the cumulative loss – measured as the difference between the acquisition cost and the current fair value, less any impairment loss on that financial asset previously recognized other comprehensive income – will be recognized in profit or loss.

1.4 Derivative financial instruments and hedging activities

Derivatives are initially recognized at fair value on the date the derivative contract is entered into and are subsequently re-measured at fair value. Changes in fair value are recorded in the Statement of profit or loss.

Embedded derivatives in non-derivative host contracts are required to be separated when their risks and characteristics are not-closely related to those of host contracts and these are not measured at fair value through profit or loss.

Non-option embedded derivative are separated from the host contracts in accordance with its stated or implied substantive terms, so that they have zero fair value on initial recognition.

Even though the Company uses derivatives to mitigate risks, hedge accounting has not been applied in the periods presented.

1.5 Trade accounts receivable

Trade accounts receivable correspond to the amounts receivable from sales made in the course of the Company's normal business, less a provision for impairment, if necessary.

The calculation of the provision is based on a reasonable estimate to cover expected probable losses on the realization of receivables, considering the situation of each customer and the respective guarantees.

We have no historical losses on accounts receivable from our sales of pulp and, for this reason, there is no indication of the need to recognize a provision for estimated credit losses for our accounts receivable. Even though, our Treasury Department examines on a monthly basis the maturity of receivables from domestic and foreign customers and identifies those customers with overdue balances assessing the specific situation of each client including the risk of loss, the existence of contracted insurance, letters of credit, collateral and the customer's financial situation and the legal processes in the event of execution. As a result of this analysis management determines the amount to be recorded as an impairment.

The recognition and reversal of a provision for trade receivables is recorded as "Selling expenses" in the Statement of profit or loss.

1.6 Inventory

Inventory is stated at the lower of average purchase or production cost and the net realizable value. Finished products and work-in-process consist of raw materials, direct labor, other direct costs and general production expenses.

The raw materials derived from biological assets are measured based on their fair value less cost to sell at the point of harvest, when transferred from biological assets to inventory.

Imports in transit are stated at the accumulated cost of each import. The net realizable value is the estimated sales price in the normal course of business, less selling expenses.

1.7 Current and deferred income tax and social contribution

Taxes on income comprise current and deferred tax. Tax is recognized in the Statement of profit or loss, except to the extent that it relates to items recognized in other comprehensive income. In this case the tax is recognized directly in shareholders' equity in other comprehensive income.

The current income tax charge is calculated based on the tax laws enacted or substantively enacted at the balance sheet date in the countries where the Company operates and generates taxable income. Management periodically evaluates positions taken in tax returns with respect to situations in which applicable tax regulation is subject to interpretation. It establishes provisions where appropriate on the basis of amounts expected to be paid to the tax authorities.

Deferred income tax is recognized, using the liability method, on temporary differences arising between the tax bases of assets and liabilities and their carrying amounts. Deferred income tax is determined using tax rates (and laws) that have been enacted or substantially enacted at the balance sheet date and are expected to apply when the related deferred income tax asset is realized or the deferred income tax liability is settled.

Deferred income tax assets are recognized only to the extent that it is probable that future taxable profit will be available against which the temporary differences can be utilized.

Deferred income tax is provided on temporary differences arising on investments in subsidiaries, except where the timing of the reversal of the temporary difference is controlled by Fibria and it is probable that the temporary difference will not be reversed in the foreseeable future.

Deferred income tax assets and liabilities are offset when there is a legally enforceable right to offset current tax assets against current tax liabilities and when the deferred income taxes assets and liabilities relate to income taxes levied by the same taxation authority on the same taxable entity.

1.8 Intangible assets

(a) Goodwill

Goodwill arises on the acquisition of subsidiaries and represents the excess of the consideration transferred over the Company's interest in the net fair value of identifiable assets, liabilities and contingent liabilities acquired and the fair value of the non-controlling interest in the acquired. Goodwill is recorded in intangible assets. Goodwill impairment reviews are undertaken annually or more frequently if events or changes in circumstances indicate a potential impairment. The carrying value of goodwill is compared to the recoverable amount, which is the higher of value in use and the fair value less costs to sell. An impairment charge is recognized immediately as an expense and is not subsequently reversed. Gains and losses on sale of subsidiaries include the accounting value of the goodwill related to the subsidiary sold.

Goodwill is allocated to Cash Generating Units ("CGUs") or groups of CGUs. The allocation is made to the CGUs or group of CGUs which will benefit/from the business combination originating the goodwill. Each CGU or group of CGUs to which the goodwill is allocated represents the lowest level within the entity at which the goodwill is monitored for internal management purposes.

(b) Database

The database represents the technical knowledge accumulated over several years and the database of forestry and industrial technologies originating from the Aracruz Celulose S.A. ("Aracruz") acquisition. These assets are the bases for improvements in the productivity per hectare of eucalyptus and also in the industrial process of pulp production.

The database was recognized at fair value at the acquisition date; it has a definite useful life and is recorded at cost less accumulated amortization. The amortization is calculated on a straight-line basis, at the annual rate of 10%, and recorded in the Statement of profit or loss.

(c) Relationship with suppliers

This relates to the contracts that the Company has for the supply of chemical products, arising from the Aracruz acquisition.

This asset was recorded at fair value on the acquisition date, it has a definite useful life and is subsequently recorded at cost less accumulated amortization. Amortization is calculated on a straight-line basis, at the annual rates of *6.3%*.

(d) Development and implementation of systems (software)

The costs directly attributable to the development and testing of identifiable and unique software, controlled by Fibria, are recognized as intangible assets when the following criteria are met: (i) it is technically feasible to complete the software for it to be available for use; (ii) management intends to complete the software and use or sell it; (iii) there is an ability to use or sell the software product; (iv) it will provide probable future benefits that can be demonstrated; (v) suitable technical, financial and other resources are available to conclude its development and to use or sell it; (vi) the attributable expenditure during its development can be reliably measured.

Software development costs are amortized over their estimated useful lives at an annual rate of 20%.

1.9 Property, plant and equipment

Property, plant and equipment are stated at cost and depreciated on a straight-line basis, in accordance with the estimated economic useful lives of the related assets. Land is not depreciated. The annual average depreciation rates for property plant and equipment as of December 31, 2018, based on their useful life, are as follow:

Buildings	4%
Machinery, equipment and facilities	5.5%
Others	10% to 20%

The cost of major renovations is capitalized if the future economic benefits exceed the performance standard initially estimated for the asset. Renovations are depreciated over the remaining useful life of the related asset.

Repairs and maintenance are expensed when incurred.

Loans and financing costs are capitalized during the period necessary to execute and prepare the asset for its intended use.

The residual values and useful lives of assets are reviewed and adjusted, if appropriate, at the end of each year.

An asset's book value is immediately written down to its recoverable amount if it is greater than its estimated recoverable amount.

Gains and losses on disposals are determined by comparing the proceeds with the book value and are recognized in the Statement of profit or loss.

1.10 Leases

At the inception of an agreement the Company determines whether a contract or set of contracts is or contains a lease when: (i) the performance of the contract is dependent upon the use of that specified asset and, (ii) the contract gives the Company the right of use of the asset.

Leases of property, plant and equipment in which the Company assumes substantially all the risks and benefits of ownership are classified as finance leases. Finance leases are recorded as a financed purchase, initially recognized as property, plant and equipment with a corresponding leasing liability.

Leases in which substantially all of the ownership risks and benefits are retained by the lessor are classified as operating leases.

The minimum payments for operating leases (net of any incentives received from the lessor) are expensed on the straight-line method over the lease term. The contingent values of payment (those that are not a fixed amount but are based in the future amount of a factor such as volume of standing timber) are accounted in the periods where they are incurred.

Operational leases are recognized in profit and loss except for those related to land leased for forest plantations which are capitalized as part of the cost of biological assets.

1.11 Biological assets

Biological assets are measured semi-annually (June and December) at fair value, net of estimated costs to sell. Depletion is calculated based on the total volume harvested. The fair value of the biological assets is estimated by Company's management and the counter entry of the valuation is recorded in the Statement of profit or loss.

Biological assets consist of eucalyptus forests exclusively from renewable plantations and intended for the production of bleached pulp. The cycle of harvesting following replanting occurs between six and seven years.

1.12 Impairment of non-financial assets other than goodwill

Assets that are subject to amortization are reviewed for impairment annually or whenever events or changes in circumstances indicate that the carrying amount may not be recoverable. For the purposes of assessing impairment, assets are grouped at the lowest levels for which there are separately identifiable cash flows (CGUs). Non-financial assets other than goodwill that suffered impairment are reviewed for possible reversal of the impairment at each reporting date.

1.13 Trade payables

Trade payables are obligations to pay for goods or services that have been acquired in the ordinary course of business from suppliers and are recognized initially at fair value and subsequently measured at amortized cost using the effective interest method. In practice, they are usually recognized at the invoiced amount.

1.14 Loans and financing

Loans and financing are initially recognized at fair value, net of transaction costs incurred and are subsequently stated at amortized cost. Any difference between the proceeds and the redemption value is recognized in the Statement of profit or loss over the period of the loans and financing using the effective interest rate method.

1.15 Employee benefits

(a) Pension obligations

The Company participates in pension plans, managed by a private pension entity, which provide post-employment benefits to employees, under defined contribution plans to which the Company pays fixed contributions and for which it has no legal liability to make additional contributions if the fund does not have sufficient assets to honor the benefits due to employees for service in the current and prior periods. Contributions represent net costs and are recorded in the Statement of profit or loss in the period in which they are due.

(b) Health care (post-retirement)

Some of Fibria's subsidiaries used to provide post-retirement health care benefits in the form of a lifetime benefit to a specific group of employees which has since been discontinued and closed to new participants from July 2007.

The liability related to the health care plan for retired employees is stated at the present value of the obligation. Management's estimate of the defined benefit obligation is calculated annually together with independent qualified actuaries. The present value of the defined benefit obligation is determined through discounted future cash outflows.

Changes in the present value of the liabilities of the plan regarding the interest accrued are immediately recognized in the Statement of profit or loss. Actuarial gains and losses are recognized directly in shareholder's equity.

(c) Profit-sharing and bonus plans

Provisions for bonuses and profit-sharing programs are calculated based on qualitative and quantitative targets established by management and are recorded with a charge to the Statement of profit or loss.

1.16 Contingent assets and liabilities

Assets, previously treated as contingent, are recognized only when there is evidence that realization is virtually certain, generally when favorable, final and unappealable court decisions have been obtained and for which the value can be measured.

Contingent liabilities are provided to the extent that the Company expects that is probable that it will disburse cash and the amount can be reliably estimated. Tax and civil proceedings are accrued when losses are assessed as probable and the amounts involved can be reliably measured. When the expectation of loss is possible, a description of the processes and amounts involved is disclosed in the notes to the financial statements. Labor proceedings are provisioned based on the historical percentage of disbursements. Tax and civil contingent liabilities assessed as remote losses are not accrued.

1.17 Asset retirement obligations

These primarily relate to future costs for the decommissioning of industrial landfill and related assets. A provision is recorded as a long-term obligation against fixed assets. The provision and the corresponding asset are initially recorded at fair value, based on the present value of estimated cash flows for future cash payments discounted by an adjusted risk-free rate. The long-term obligation accrues interest using a long-term discount rate. The asset is depreciated on a straight-line basis over the useful life of the principal. Depreciation is recorded in the Statement of profit or loss.

1.18 Dividend distribution

Dividend distribution to the Company's shareholders is recognized as a liability based on the Company's by-laws and in the dividend policy. Any amount that exceeds the minimum mandatory dividend is highlighted in the statement of changes in shareholders' equity as "Additional dividends proposed" until approval by the shareholders at the general meeting.

1.19 Critical accounting estimates and assumptions

The Company makes estimates concerning the future based on assumptions. The resulting accounting estimates will, by definition, seldom equal the related actual results. Management believes that the estimates and assumptions that may have a significant risk of causing a material adjustment to the carrying amounts of assets and liabilities within the next financial year are those addressed below.

(a) Deferred tax assets and deferred tax liabilities

The Company recognizes deferred tax assets and liabilities based on the temporary differences between the financial statement carrying amounts and the tax basis of assets and liabilities. If we or one of our subsidiaries operate at a loss or are unable to generate sufficient future taxable income, or if there is a material change in the actual effective tax rates or time period within which the underlying temporary differences become taxable or deductible, our deferred tax asset could be reduced and, then the effective tax rate would increase.

The Company has had a history of recurring taxable income, which has recently been offset by net operating loss carryforward assets. The Company's management believes, based on projections of income approved at the appropriate levels, that it is probable the deferred tax asset will be fully realized.

(b) Employee benefits

The current value of the obligations under the healthcare plan depends on a number of factors that are determined based on actuarial calculations using various assumptions. The discount rate is one of the assumptions used in determining the net cost (revenue) of the actuarial obligations due, which is based on returns offered by Brazilian Government Bonds, which are denominated in the currency in which the benefits will be paid and that have terms to maturity similar to the terms of the obligations of the healthcare plan.

(c) Fair value of derivatives and other financial instruments

The fair value of financial instruments that are not traded in an active market is determined by using valuation techniques. Fibria uses judgment to select a variety of methods and make assumptions that are mainly based on market conditions existing at the end of each reporting period.

Any changes to the assumptions used for calculations involving the fair value of financial instruments could significantly affect the financial position of the Company.

(d) Biological assets

The calculation of the fair value of biological assets takes into consideration various assumptions which require a high degree of judgment. Any changes in these assumptions, would have an impact on the discounted cash flow result, resulting in an appreciation or devaluation of these assets.

The main assumptions used by Management to calculate the fair value of the biological assets and the correlation between changes in such premises and the fair value of the biological assets, are described as follows:

Assumptions used	**Impact on fair value of the biological assets**
Actual planted area (hectare)	Increase of the premise, increase the fair value
Average annual growth (IMA) - m^3/hectare	Increase of the premise, increase the fair value
Net average sale price - R$/$m^3$	Increase of the premise, increase the fair value
Remuneration of own contributory assets - %	Increase of the premise, decrease the fair value
Discount rate - %	Increase of the premise, decrease the fair value

For the assumption called "actual planted area", we consider that the immature forests (up to two years from the date of planting) are maintained at historical cost, as a result of the Management's understanding that during this period, the historical cost of biological assets approximates their fair value.

The assumption regarding the "net average sale price" of biological assets (measured in R$/$m^3$) is supported only in market prices research, in order to maximize the usage of external and independent data to measure the fair value of the forests.

(e) Review of the useful lives and recoverability of long-lived assets

The Company reviews its long-lived assets to be held and used in its activities for impairment. Whenever events or changes in circumstances indicate that the carrying value of an asset or group of assets may not be recoverable on the basis of future cash flows. The Company reduces the net book value if the carrying amount exceeds the recoverable amount.

(f) Contingent assets, contingent liabilities and legal obligations

The Company is currently involved in certain labor, civil and tax proceedings. The provision for legal proceeds is recorded based on Management's evaluation and on the advice of internal and external legal counsel, and are subject to a high level of judgment. The Company evaluates individually a substantial part of the process in which is involved.

(g) Goodwill impairment

The Company performs impairment tests at least annually, or more frequently when events or changes in circumstances may indicate that the carrying amount of cash-generating units to which goodwill has been allocated might not be recoverable. The recoverable amount of CGUs is determined based on calculations of the value in use, which involves significant estimates.

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