

**arauco®**

**SUSTAINABLE  
BOND REPORT  
2023**





renovables  
para una  
vida mejor

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**arauco**<sup>®</sup>

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# This is ARAUCO



## 1. This is ARAUCO

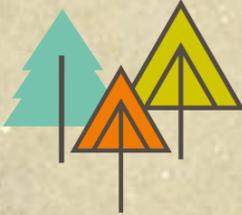
We started out nearly 50 years ago in the south of Chile, developing products based on renewable forest resources which today allow us to offer a wide variety of sustainable quality solutions for the paper, construction, packaging, furniture and energy industries. With our work and innovation, we develop products that inspire the creation of solutions aimed at improving the quality of life of millions of people around the world, with presence in the forestry, pulp, wood, panels and clean and renewable energy businesses.

### OUR PURPOSE

From nature and renewable sources, we contribute to people and the planet.

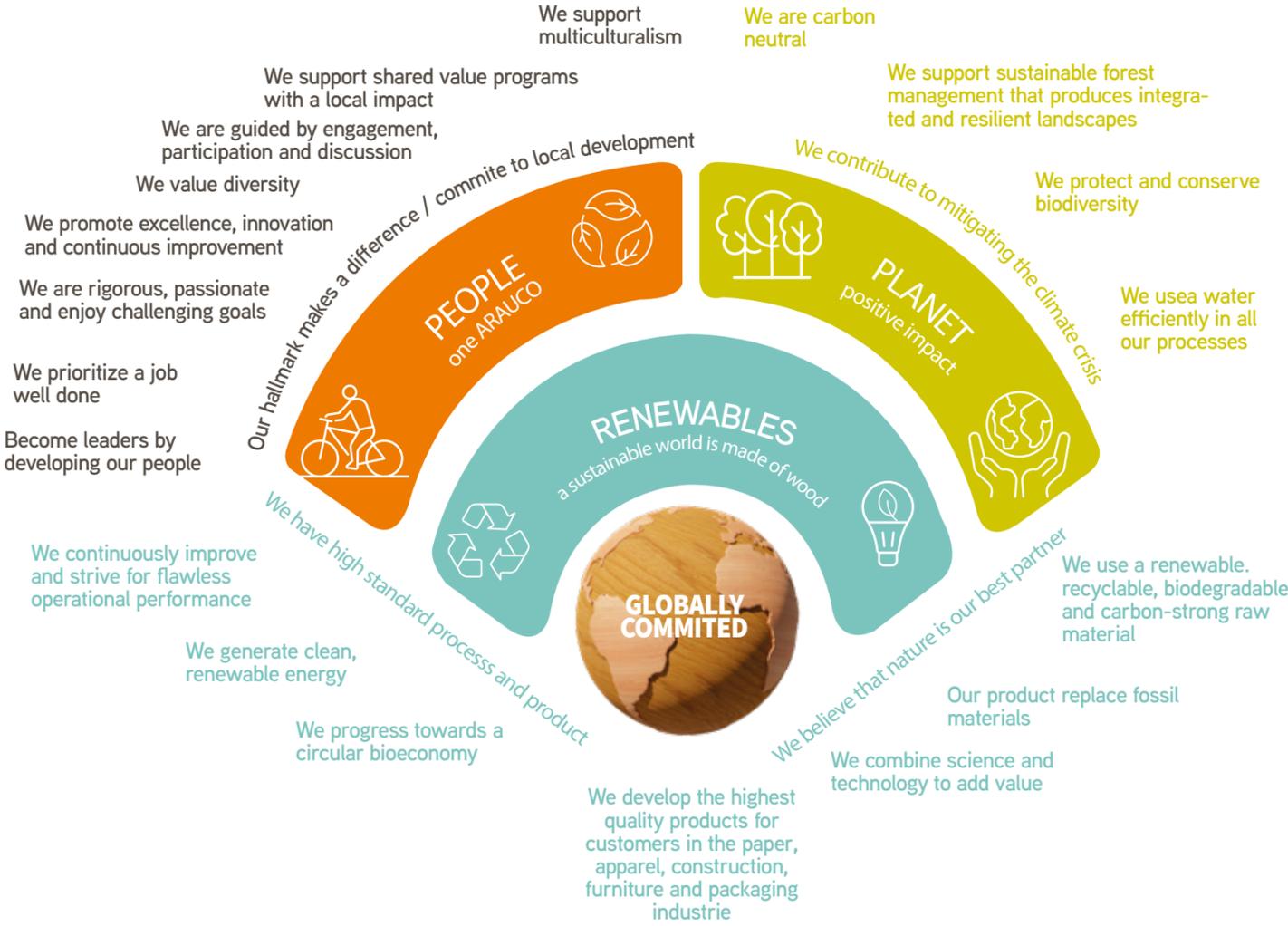


# Value creation through the integral use of the tree

Tree	Product	Uses
	Pulp	Various types of printing and writing papers, tissue paper, packaging papers, filters and fiber cement products, diapers, and feminine hygiene products, among others.
	Wood and panels	Sawn wood products, plywood, remanufactured lumber, and trim with varying degrees of finish, appearance, and value-added processes.
	Energy	Energy from biomass (branches, bark, sawdust, lignin).



## renewables for a better life



# We are ARAUCO



## 2. We are ARAUCO

Our products are made from 100% renewable, recyclable, and biodegradable raw materials. A large portion of our products are substitutes for non-renewable materials that are high in CO2 emissions. We are a global company that produces and manages renewable forest resources, making the commitment to be present in the world through the creation of products that improve people's lives. From our raw material, we develop sustainable and quality solutions for the paper, clothing, construction, packaging, furniture, and energy industries.



### Clients

3,888 worldwide.

**Commercial offices** in 13 countries and 15 with sales representatives.

### Pulp

6 mills in Chile and Argentina .

8 energy plants.<sup>1</sup>

1 mill in Uruguay through a joint operation with Stora Enso, including a power plant<sup>2</sup>

3,8 million tons produced in 2023

### Wood

19 panel mills in Chile, Argentina, Brazil, Mexico, the United States and Canada.

4 power plants in Chile and Argentina.

3 resin mills in Argentina, Brazil, and Mexico.

9 sawmills in Chile and Argentina, including 4 remanufacturing production facilities.

9 panel mills and a sawmill in joint venture with Sonae ARAUCO in Spain.

9.5 million m<sup>3</sup> of wood and panels produced.

### Energy

1,078 MW of installed capacity.

### Forest and plantations

1.7 million hectares in Latin America.

1.1 million productive hectares.

509 thousand hectares of native forest for preservation, protection, and/or conservation.

29% is native forest and protection areas.

157 high conservation value areas.

### 1 R&D Center

in Chile.

### 18,636 direct collaborators.

2,482 collaborating companies with 43,449 employees.

First forestry company certified as **carbon neutral** in the world.

USD 13 million in **social investment**.

USD 66 million in **environmental investment**.

USD 6.012 billion in **sales**.

17% EBITDA margin.

USD 5.471 billion paid to **local suppliers** worldwide.

<sup>1</sup> In 2023 Licancel Pulp Mill, located in Licantén, Maule Region, Chile was indefinitely suspended

<sup>2</sup> Considers 50% of Uruguay's operations, land and plantations through a joint venture between

ARAUCO and Stora Enso (a Swedish-Finnish company).

# Our strategy

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# 3. Our strategy

## Sustainability Strategy

Our approach to sustainability is deeply rooted in the principle of being renewable for a better life. This way, we manage to positively impact the paper, clothing, construction, packaging, furniture, and energy industries.

## Our Sustainability Model

We have designed a sustainability model that includes actions and commitments contributing to the well-being of society and the environment. To achieve this, the management of our plantations and forests is key, as well as the manufacturing of products in a responsible and renewable way.

## Our Strategy

We offer solutions that improve people's quality of life, through a wide range of products and sustainable alternatives.

## Climate Action Plan

### Climate



We are certified as carbon neutral and have taken on additional commitments to reduce emissions by 2030 through the Science Based Targets Initiative (SBT). Moreover, the wood we produce each year removes millions of tons of CO2 from the atmosphere, equivalent to taking 5,000 cars off the road every day. Likewise, with the goal of contributing to the challenge of reducing the planet's temperature, we at ARAUCO have been committed for years of raising our standards and practices.

### Biodiversity



We conserve more than 500,000 hectares of native forest and protected areas in Latin America. Additionally, we safeguard 1,234 threatened species of flora, fauna, and fungi, as part of a commitment to prevent the extinction of biodiversity in the places where we are present, and where our conservation efforts are even more crucial as they are located in biodiversity hotspots.

### Circularity



We develop biodegradable and recyclable products with the potential to replace polyester in the fashion industry. Additionally, we manufacture natural fibers that serve as an alternative to more polluting materials like plastic. Lastly, we are committed to achieving zero non-hazardous solid waste by 2030.

### Water



We maintain a constant commitment to hydrological monitoring, focusing on the development of knowledge for the sustainable management of water resources and ensuring compliance with emission limits to respect the quality of water bodies. This applies both to effluent discharges and the safe supply of water to our facilities, as well as the conservation of water bodies.



## Goals and Commitments



Reduce Scope 1 and 2 emissions by

**40.6%** by 2030 relative to the 2019 baseline.

Reduce Scope 3 emissions by

**35.1%** by 2030 relative to the 2019 baseline.

**95.46%** of its suppliers and customers for emissions covering investments will have science-based targets by 2027.

Every year, we measure our footprint, audit it, and certify our carbon neutrality, which is verified by an independent entity managed by AENOR. For carbon capture, we hold certification from PWC, and for carbon neutrality, from Deloitte.

Before the closure of this report, the company received validation from SBT for its targets to help reduce global warming by 1.5°C. These targets involve reducing its CO2 emissions by more than 1.5 million tons. This is equivalent to removing approximately 330,000 cars from circulation or the annual emissions of 400,000 inhabitants.

## Positive impact on the climate thanks to our forests and the reduction of the carbon footprint:



Our emissions amount to

**4.4**<sup>2</sup>

million tons of CO<sub>2</sub><sup>1</sup>



We have committed to reduce our emissions by more than

**1.5**

million tons by 2030



Our products replace fossil-based alternatives, saving

**-10.5**

million tons of CO<sub>2</sub><sup>2</sup>

1. The negative values indicate the average net removal of CO<sub>2</sub> from the atmosphere.  
2. The carbon emissions for 2023 include Scopes 1, 2, and 3.

These values are still under review for subsequent certifications, so the numbers could vary. The values include all company operations and joint operations of Montes del Plata in Uruguay.



# Framework Categories

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## 4. Framework Categories

Sustainability Bonds are bonds where the proceeds will be exclusively applied to finance or re-finance green projects, social projects or a combination thereof. The Sustainability Bond Guidelines (SBG), administered by the International Capital Market Association (ICMA), recommend alignment of Sustainability Bonds with the four core components of both the Green Bond Principles, 2018 (GBP) and Social Bond Principles, 2018 (SBP), collectively known as “The Principles”. The GBP and SBP outline eligible project categories for green and social projects, respectively. The Principles are voluntary process guidelines that recommend transparency, disclosure and promote integrity for best practices when issuing Green Bonds, Social Bonds and Sustainability Bonds. Our Sustainability Bonds are aligned with the SBG. For more information, please visit

**<https://www.icmagroup.org/green-social-and-sustainability-bonds/>**

The GBP eligible green project categories, and the SBP eligible social project categories selected include:

### Green:

- Sustainable Land Use and Forest Management
- Sustainable Water Management
- Pollution Prevention and Control
- Preservation of Natural Resources and Biodiversity
- Renewable Energy

### Social:

- Affordable Housing
- Access to Essential Services
- Socioeconomic Advancement and Empowerment – Local Entrepreneurship



<sup>3</sup>The four core components for alignment with the GBO are: Use of Proceeds, Process for Project Evaluation and Selection, Management of Proceeds and Reporting.

# KPIs

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# 5.KPIs

**1.7** million hectares in Chile, Argentina, Brazil, and Uruguay constitute our forestry assets.

In total, there are **135,000** hectares of High Conservation Value Areas (HCVAs) distributed throughout our forestry assets.

More than **51,000** people were benefited in 42 communities through the Water Challenge program.

**29%** of this land correspond to native forests and protected conservation areas of high social and environmental value, safeguarded for future generations.

**61%** of non-hazardous industrial solid waste was valorized in 2023 in Pulp and Energy.

**51%** of non-hazardous industrial solid waste was valorized in 2023 in Wood Products Business in Chile and Argentina.

**131.6** million trees were planted in Chile, Argentina, Brazil, and Uruguay in 2023.

More than **50** programs at a global level.

More than **120,000** children benefited in Education.

We have an energy injection capacity to the power grid of **436 MW**

**87%** of ARAUCO's energy consumption comes from renewable sources, with only 13% coming from non-renewable sources.

More than **43,000** people participate in the open forest program, where the Company opened some of its forests to develop community-driven activities in 2021, based on participation and discussion. The aim is for neighbors to enjoy the environmental, social and cultural values of forests, while encouraging them to protect and conserve nature.

**8,506** hectares of native forest are in process of restoration in Chile, and 4,120 in Argentina.

**93%** of our forestry assets is certified. Collaboration in the construction of **2,460** houses delivered to date.



# Figures Summary

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# 6. Figures Summary

The table below summarizes the amount allocated to eligible green and social projects, categorized as defined on our Sustainability Bond Framework. The following projects are completed. **Figures are in UF<sup>4</sup>, as of May 28, 2024.**

Projects	Third quarter 2022
Sustainable Land Use and Forest Management	5.042.038
Sustainable Water Management	145.517
Pollution prevention and control	269.913
Access to Essential Services	191.625
Total (UF)	5.649.093



<sup>4</sup> The UF is a unit of account that is linked to, and adjusted daily to reflect changes in the Chilean consumer price index Reported by the *Instituto Nacional de Estadísticas* (Chilean National Institute of Statistics).

# Categories

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## 7. Categories

# Sustainable land use and forest management

Allocated amount as of September 2022:

**UF 5.042.038**

Expenditures related to sustainable forest management of certified plantations, including the acquisition, planting and maintenance of seedlings up to harvest and the development of species hybrids to improve the productivity of plantations, and the development and/or promotion of programs for fire prevention or control, including implementation of local education and other short- and long-term fire prevention programs.

Trees represent one of the strongest existing strategies to advance in climate change mitigation and they are the foundation of all ARAUCO's business areas. The forestland in Chile, Argentina, Brazil, and Uruguay is managed under Responsible Forest Management practices and is primarily intended to meet the company's own industrial needs.

ARAUCO's forests are sustainably managed, and production processes are certified to the highest global standards. Native forests and high social and environmental value areas are duly protected.



In 2022, in Chile, Argentina, Brazil, and Uruguay, ARAUCO had **1.7** million hectares (4.1 million acres) of forests, with 30% designated as native forest and conservation areas of significant social and environmental importance, diligently preserved for future generations.

In 2022, as of September, ARAUCO approximately planted **35** million of pine and eucalyptus trees and 150,340 native trees in Chile and Argentina, and ongoing efforts were underway to restore 11,662 hectares (28,817.4 acres) of native trees.



# Sustainable water management

Allocated amount as of September 2022:  
**UF 145.517**

Expenditures related to sustainable water management, including the reduction of water consumption in industrial processes, conducting studies relating to the development and implementation of systems facilitating reuse of water in industrial processes and innovation in connection with the reuse of wastewater, and/or the development and installation of technologies and systems to improve the quality of treated water and effluent; the reduction of organic content; the development and implementation of plans for monitoring the quality of effluents and the receiving waters and their ecosystems.

In a water scarcity scenario, a priority for ARAUCO is efficiently using water. Therefore, managing water supplies and effluents is essential. We have a system that monitors water levels in water-basins and we have

implemented checks and mitigation measures. Water monitoring examines the quality of water bodies, to check for any effluent discharges, to secure water supplies for mills and to conserve water bodies. Effluent monitoring, critical equipment maintenance at effluent treatment mills and adequate instrumentation, all ensure the efficient and appropriate management of liquid waste.

A principal objective during 2022 was to develop initiatives to reduce water consumption and develop initiatives to ensure water supplies to our pulp and timber mills. Initiatives to use effluents for irrigation have begun. The Company is developing alternatives that recirculate effluents back to processes, and an effluent treatment and recirculation pilot has reached the research stage.



**In 2022**, the rainwater collection operation at the Valdivia pulp and energy mill was created with the aim of describing the methodology for operating the Rainwater system in the Effluent Treatment area, in order to ensure compliance with current environmental legislation.

**Additionally, in 2022**, the Araucária mill in Brazil implemented a wastewater reuse project, through which 424 m<sup>3</sup> were recovered, which until 2021 were sent for co-processing. In addition to reducing waste generation, this initiative mitigated the plant's water consumption.

**On the other hand, in Argentina during 2022**, a program to improve the facilities of the Effluent Treatment Plant was established at the MDF Piray Mill. This program initially included cleaning and maintenance work during the general plant shutdown and the review of operational parameters. It also established a schedule for expert visits for advice and monitoring of improvements.

**In North America in 2022**, a project was carried out at the Moncure panel plant to increase the height of the walls of the wastewater lagoon, thereby enhancing floodplain protection and reducing the environmental risk of spills into a nearby stream

**As of 2022**, due to all of the projects described there was a total net of water consumption of 136,128,694 m<sup>3</sup>, which means a reduction of 15% compared to 2021. Effluents in the same period were 122,412,908 m<sup>3</sup>, which means a reduction of 13% compared to 2021.

# Pollution prevention and control

Allocated amount as of September 2022:  
**UF 269.913**



Expenditures related to pollution prevention or control, including projects that reduce greenhouse gases (GHG) emissions and other atmospheric emissions; projects to improve the treatment of liquid effluents and reduce atmospheric emissions; increased capacity to contain spills through operational controls and/or infrastructure works; rainwater control; projects to improve the management and disposal of industrial waste; plans for monitoring liquid effluents, atmospheric emissions (including sulfur gases), noise, air quality, water quality and ecosystems.

To move towards a circular economy, ARAUCO is working to increase the percentage of reuse of non-hazardous industrial waste to a target of 100% by 2030. This is relevant as it contributes to reducing the final waste disposal, increasing the useful life of deposits, and making the most of the resources in such waste. In the case of the wood business, we are working on evaluating bark (organic waste) from our production processes.

ARAUCO continuously monitors Total Reduced Sulfur (TRS) gas emissions from its pulp mills and maintains operational control to minimize odor events associated with these gases, thus fully complying with the emission standards established by current regulations and environmental qualification resolutions for each mill. In addition, atmospheric emissions of particulate matter are controlled through mitigation equipment such as gas scrubbers and electrostatic precipitators, with an efficiency close to 100%.

Moreover, emissions in the wood plants, in the sawing and remanufacturing processes, are minimized by employing bag filters, which collect sawdust to be used as biomass fuel. Additionally, as part of the Company's investment plan, significant investments continue to be made, either to improve the performance of emission abatement equipment or to install new equipment, such as a new electrostatic precipitator for recovery boiler two at ARAUCO's pulp mill in Chile.

In this sense, the goal is to optimize production and combustion processes to minimize atmospheric emissions. Special attention has been paid to abatement systems through rigorous control, internal reporting, and analysis of the failure causes of these control systems, to address them in a timely and appropriate manner and prevent their recurrence.

Due to the developments in projects to reduce waste, for 2022, the pulp division recovered 60% of its non hazardous waste and the Timber division recovered 47% in Chile, which is between 5-10% more than in 2021. This a great advance for our main goal to reach zero non-hazardous waste for 2030.

At 2022, the Aerodome began operating at the Licantén pulp mill in Chile. This Waste Recovery Center (WRC) can generate products from the waste generated by production processes on this industrial site.

Additionally, ARAUCO consolidated the Waste Recovery Center at the Constitución mill in Chile, by generating an alkaline additive.

The Line 2 Odor Reduction Project was developed at the Arauco Mill in Chile, and the first stage of the Odor Vulnerability Project was developed at the Valdivia Mill in Chile.

With Bioforest, our research center, in the Pulp and Energy area, we investigate the use of different technologies to help reduce CO2 emissions, and our solid waste; in the Wood area, we research processes and technologies that reduce the consumption of synthetic resins in the panel industry.

**Atmospheric emissions**

	● 2021	● 2022
NOx (excluding N <sub>2</sub> O)	9,767.4	6,862.6
SOx	3,336.7	894.3
SO <sub>2</sub>	0	0
CH <sub>4</sub>	-	-
Volatile Organic Compounds (VOC)	10,980	4,694.9
Particulate Matter (PM)	4,154.2	4,524.6
MP10	-	-
H <sub>2</sub> S	-	-
Hazardous Air Pollutants (HAP)	0	0
TRS	1,232.3	139
Hazardous Air Pollutants (HAP)	0	0

Metric tons (t)  
 (\*) Atmospheric emissions include 5 pulp mills in Chile +1 pulp mill in Argentina.  
 (\*\*) VOC and HAP emissions are not measured at pulp mills. Estimated values will be presented based on emission factors from international publications.  
 (\*\*\*) All the panel mills meet VOC emissions standards, and all products are California Air Resources Board (CARB) or E2/E1 certified, meaning they have low formaldehyde (VOC) emissions.  
 Excludes Montes del Plata.

# Access to essential services

Allocated amount as of September 2022:  
**UF 191.625**



Expenditures related to community development and/or access to essential services, including investments in health programs and healthcare services, safety services, projects to expand access to drinking water, sanitation sewage treatment systems, transportation, waste management, development of green areas and coastal waterfront, economic development, education, job training, vocational services and sports programs, among others.

For over thirty years the ARAUCO Educational Foundation (*Fundación Educacional Arauco*) in Chile has contributed to the widespread improvement of the quality of local education by strengthening the core competencies and teaching skills of school principals and teachers in hundreds of schools serving thousands of young students. In 2022, advances were made in different networks:

- Network of libraries and mobile libraries in 19 municipalities to promote reading.
- Orchestra network that encompasses 150 sponsored children. We held our second event in Constitución and supported the Cifan Orchestra tour.
- Integrated method to learn early reading and writing, where 198 first grade teachers participated from 63 schools in 16 municipalities.
- To strengthen the practical abilities of leaders and teachers, over the past 32 years the foundation has supported 34 municipalities, trained more than 5,730 teachers, supported more than 659 schools and benefited more than 120,148 children.
- The PSR (Positive School Record) challenge, a public-private initiative by the ARAUCO Educational Foundation in partnership with the Advanced Educational Research Center at the Universidad de Chile and the Southern Andalién Local Education

Service, has supported 160 directors, teachers, and education professionals across 62 kindergartens, elementary schools, and high schools. This initiative aims to promote positive school records for 13,600 students.

Since 1981, ARAUCO has financially supported three schools: Arauco, Constitución and Cholguán, which combined have over 1,200 students each year. The three establishments are recognized for their levels of academic excellence and their achievements in the comprehensive development of their students, where 2 of the schools ARAUCO supports were among the 100 best schools according to PAES 2022.

Campus ARAUCO combines education and practical training in the workplace through a strategic alliance between ARAUCO and Duoc UC. This initiative aims to generate options for technical and professional education. Approximately 288 students enrolled in 2022, marking a 30% increase from 2021. To date, 650 students have been trained and graduated from Campus ARAUCO.

Water Challenge program provides neighbors with a specialized team to develop water projects for human consumption with the purpose of contributing to improve the living conditions of neighboring communities, generating solutions to facilitate access to water. To date, 104 projects have been developed, including improvements in drinking water systems for communities and schools, engineering designs, hydrogeological studies, etc. These projects have benefitted 50,000 people in 38 municipalities.

The Argentina Young People and Sustainability program targets high school students and unemployed adolescents, encouraging them to develop environmental projects. In 2022, we held 42 workshops in 10 secondary schools and for four groups of unemployed youth in Misiones province, involving 331 students and 74 unemployed young people.

# Disclaimer

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## 8. Disclaimer

Readers are referred to the documents filed by ARAUCO with the United States Securities and Exchange Commission, including its most recent filing on Form 20-F that identifies important risk factors that could cause actual results to differ from those contained in any forward-looking statements, and also to our Sustainability Report (available on our website). All forward-looking statements are based on information available to ARAUCO on the date hereof and ARAUCO does not assume any obligation to update such statements. References herein to "U.S.\$" are to United States dollars. Discrepancies in any table between totals and sums of the amounts listed are due to rounding. This report is unaudited.

Forward-looking statements involve inherent risks and uncertainties. These forward-looking statements are based on current plans, estimates and projections; therefore, readers should not place undue reliance on them. Actual results could differ materially from those projected in such forward-looking statements because of various factors that may be beyond our control, including but not limited to our ability to service our debt, fund our working capital requirements, comply with financial covenants in certain of our debt instruments, fund and implement our capital expenditure programs and maintain our relationships with customers, as well as the effects on us from competition, future worldwide demand for forestry and wood products we produce in the different countries in which we have industrial operations, international prices for forestry and sawn timber, the condition of our forests, possible shortages of energy, including electricity, the state of the economies in the main countries we operate and the world economy generally, the effects of a pandemic or epidemic and any subsequent mandatory regulatory restrictions or containment measures, the relative value of the local currencies in the countries we run manufacturing operations compared to other currencies, inflation, increases in interest rates, the effects of earthquakes, floods, tsunamis or other catastrophic events and changes in our regulatory environment, including our ability to comply with new or stricter environmental regulations and to resolve environmental liabilities. Forward-looking statements in this annual report speak only as of their dates, and we do not undertake any obligation to update or revise any of them, whether as a result of new information, future events or otherwise.



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13 June 2024



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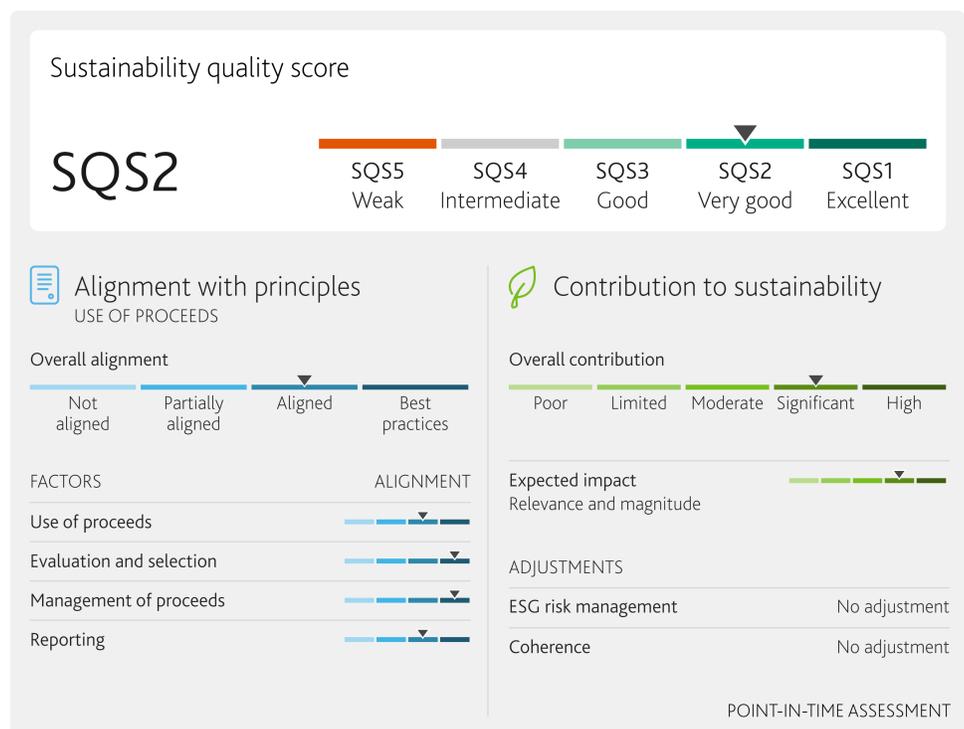
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# Celulosa Arauco y Constitucion S.A.

## Second Party Opinion – June 2023 Sustainability Bond Issuance Assigned SQS2 Sustainability Quality Score

**Summary**

We have assigned an SQS2 sustainability quality score (very good) to Celulosa Arauco y Constitucion S.A.'s (Arauco) sustainability bond issuance dated 13 June 2023. The issuer established its use-of-proceeds issuance to finance projects across three eligible green categories and one eligible social category. The issuance is aligned with the four core components of the International Capital Market Association's (ICMA) Green Bond Principles 2021 (with June 2022 Appendix 1) and Social Bond Principles (SBP) 2023. The issuance demonstrates a significant contribution to sustainability.



## Scope

We have provided a second party opinion (SPO) on the sustainability credentials of Arauco's sustainability bond issuance dated 13 June 2023, including its alignment with the ICMA's GBP 2021 (with June 2022 Appendix 1) and SBP 2023. Under its issuance, Arauco financed projects across three eligible green categories and one eligible social category, as outlined in Appendix 2 of this report.

Our assessment is based on the details of Arauco's June 2023 sustainability bond issuance, as well as the commitments in the company's sustainability bond framework dated October 2019, and our opinion reflects our point-in-time assessment<sup>1</sup> of this information, as well as other public and non-public information provided by the company.

We produced this SPO based on our [Framework to Provide Second Party Opinions on Sustainable Debt](#), published in October 2022.

## Issuer profile

Headquartered in Santiago, Chile, Celulosa Arauco y Constitucion S.A. (Arauco) is engaged primarily in the production of pulp, wood products and forestry products. Arauco is one of the world's largest producers of pulp and wood products in terms of production capacity, and it is among Latin America's largest forest plantation owners. The company has industrial operations in Chile, Argentina, Brazil, Mexico, the US and Canada. Arauco also has industrial operations in Uruguay through a 50% joint operation in the Montes del Plata pulp mill, and in Spain, Portugal, Germany and South Africa, through a 50% joint venture with Sonae, named Sonae-Arauco S.A.

As of 31 December 2023, Arauco had around 1.8 million hectares of forestry assets in Chile, Argentina, Brazil and Uruguay combined. As of LTM December 2023, the company generated \$6.0 billion of total revenue, with about 47% from pulp and 53% from wood products segment.

## Strengths

- » Sustainable land use and forest management projects rely on relevant international forestry certifications
- » Company has implemented comprehensive measures to help mitigate potential environmental and social externalities inherent in its operations
- » Social projects target a vulnerable population in the local context

## Challenges

- » Some impact indicators are measured at company level, with limited granular impact details available for some specific projects
- » Although industrial plantations may demonstrate environmental benefits, pine and eucalyptus monocultures still carry potential environmental risks

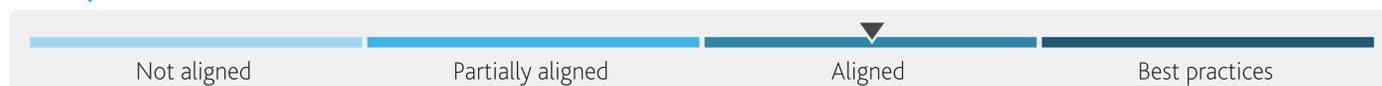
This publication does not announce a credit rating action. For any credit ratings referenced in this publication, please see the issuer/deal page on <https://ratings.moody's.com> for the most updated credit rating action information and rating history.

## Alignment with principles

Arauco's June 2023 sustainability bond issuance is aligned with the four pillars of the ICMA's GBP 2021 (with June 2022 Appendix 1) and SBP 2023:

- Green Bond Principles (GBP)
- Social Bond Principles (SBP)
- Green Loan Principles (GLP)
- Social Loan Principles (SLP)
- Sustainability-Linked Bond Principles (SLBP)
- Sustainability Linked Loan Principles (SLLP)

## Use of proceeds



### Clarity of the eligible categories – ALIGNED

The nature of the expenditures and eligible categories for the June 2023 sustainability bond issuance are disclosed in Arauco's sustainability bond framework. The framework has eight eligible categories, of which five are green and three are social. With respect to the June 2023 sustainability bond issuance, which is the focus of our assessment, only four categories were financed, namely (i) sustainable land use and forest management; (ii) sustainable water management; (iii) pollution prevention and control; and (iv) access to essential services. The first three categories are classified as green and the last category is social.

The projects are located in the South American countries in which Arauco operates, including Chile, Brazil, Argentina and Uruguay. The eligibility criteria are clearly defined for a majority of project categories. However, for the sustainable water management category, there are no minimum eligibility thresholds defined. The target population is clearly defined for social projects.

### Clarity of the environmental or social objectives – BEST PRACTICES

The company has outlined the environmental and social objectives for all four eligible categories. They include pollution prevention and control, natural resource conservation, biodiversity, and access to essential services to underserved population, including drinking water supply and education. The eligible categories are relevant to their respective environmental or social objectives. The company has referenced the United Nations' (UN) Sustainable Development Goals (SDGs) in articulating the objectives of the eligible categories (see Appendix 1).

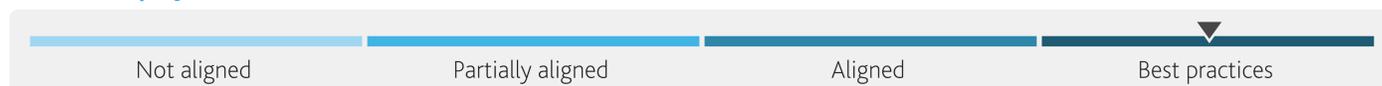
### Clarity of the expected benefits – BEST PRACTICES

The company has clearly defined the expected environmental and social benefits for all eligible categories and they are relevant based on the projects that were financed under each category with the proceeds from the June 2023 sustainability bond issuance. Quantitative benefits have been identified for all of the categories. As reported by Arauco, 100% of the proceeds from the June 2023 issuance were used to refinance projects, following a lookback period of 18 months.

### Best practices identified - use of proceeds

- » Objectives set are defined, relevant and coherent for all project categories
- » Relevant benefits are identified for all project categories
- » Benefits are measurable and quantified for most projects, either ex-ante with clear baselines or with a commitment to do so in future reporting
- » Commitment to transparently disclose the share of proceeds used for refinancing where feasible
- » Commitment to transparently communicate the associated lookback period(s) where feasible

## Process for project evaluation and selection



### Transparency and quality of process for defining eligible projects – BEST PRACTICES

Arauco's decision-making process for determining the eligibility of projects is formalized in its sustainability bond framework. The company's sustainable bond coordination group is comprised of members of the finance department and corporate affairs, among others business units. The committee meets on an annual basis to select the eligible projects. The company will monitor the compliance of financed projects with the eligibility criteria throughout the life of the instrument. In the event a project no longer meets the eligibility criteria, the company will replace the project with another eligible project.

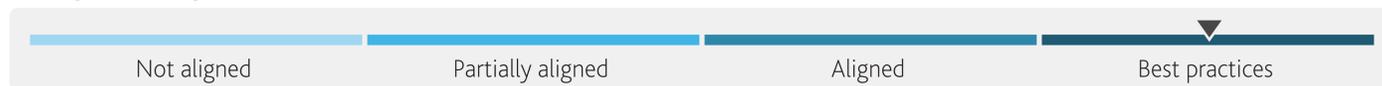
### Environmental and social risk mitigation process – BEST PRACTICES

Arauco discloses publicly its sustainability report and sustainability policies, which cover environmental and social considerations related to the company and its operations. About 93% of the company's productive lands – including lands leased and owned – are certified by internationally recognized forestry standards. The company's pulp mills have ISO certifications, such as ISO 14001 (environmental management system), ISO 9001 (quality management system) and ISO 45001 (occupational health and safety). Arauco's decarbonization targets are also validated by the Science Based Targets initiative (SBTi). Regarding project monitoring, the sustainable bond committee is responsible for monitoring potential ESG controversies associated with the projects until instrument maturity.

### Best practices identified - process for project evaluation and selection

- » The roles and responsibilities for project evaluation and selection are clearly defined and include relevant expertise
- » There is evidence of continuity in the selection and evaluation process through the life of the financial instrument(s), including compliance verification and procedures to undertake mitigating actions when needed
- » The process for project evaluation and selection is traceable
- » Material environmental and social risks for most project categories are identified
- » Presence of corrective measures to address environmental and social risks across projects
- » ESG controversies are monitored

## Management of proceeds



### Allocation and tracking of proceeds – BEST PRACTICES

The company's finance department is responsible for approving the projects selected and ensuring that an amount equal to the net proceeds from bonds issued under the framework are allocated to the eligible assets until proceeds are fully allocated. Considering that the June 2023 sustainability bond issuance was 100% refinancing, the proceeds were immediately allocated to the eligible projects.

### Management of unallocated proceeds – BEST PRACTICES

Given the immediate allocation of the June 2023 sustainability bond proceeds to eligible expenditures, there were no unallocated proceeds or temporary placements of proceeds. In addition, the proceeds were allocated to projects operating since 2022, suggesting that the reallocation of proceeds due to cancelation or postponement is highly unlikely.

### Best practices identified - management of proceeds

- » Broad disclosure of a clearly articulated and comprehensive management of proceeds policy to external stakeholders; bondholders or lenders at a minimum
- » Short allocation period, for example typically less than 24 months

## Reporting



### Transparency of reporting – ALIGNED

Annually, the company will report on the financial, environmental and social benefit indicators related to bonds issued under its framework until full allocation of proceeds. The report will be publicly available on the company's website. The indicators to be disclosed include (i) the amount of net proceeds of the bonds allocated to each eligible project category; (ii) environmental and social performance indicators and (iii) the outstanding amount of proceeds still to be allocated. The company also commits to disclose controversies and material developments related to the projects, if applicable.

The framework includes the commitment to externally verify the financial indicators related to the bonds. The company reports that its 2022 financial statements, which cover the year in which it originally financed the projects later refinanced by the June 2023 issuance, were externally audited. Nevertheless, there is no specific reference to the expenditures related to eligible projects and no specific subsequent external review on the sustainable bond proceeds themselves. In addition, the environmental and social benefit indicators were verified internally only.

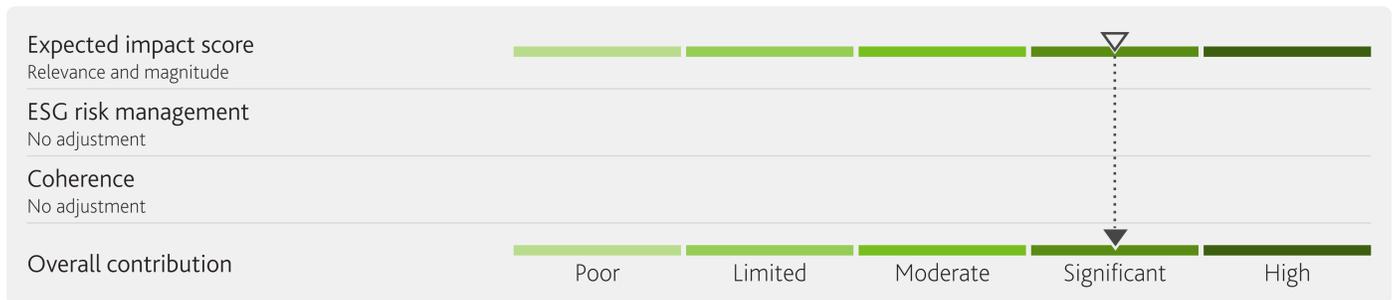
In relation to the June 2023 issuance, the reporting to be published by Arauco will include a brief description of the projects, total allocated amount and general environmental and social performance indicators for each project category.

### Best practices identified - reporting

- » Reporting covers material developments and issues related to the projects or assets
- » Reporting on allocation of proceeds and benefits done at least at eligible category level
- » Exhaustive allocation reporting – balance or % of unallocated funds, types of temporary investments (e.g. cash or cash equivalent) and share of financing vs re-financing

### Contribution to sustainability

The framework demonstrates a significant overall contribution to sustainability.



### Expected impact

The expected impact of the eligible projects on environmental and social objectives is significant. Based on the information provided by the company, there was a higher proportion of proceeds allocated to the sustainable land use and forest management category for the June 2023 sustainable bond issuance. We have therefore assigned a higher weight to this category in our assessment of the issuance's overall contribution to sustainability. A detailed assessment by eligible category is provided below.

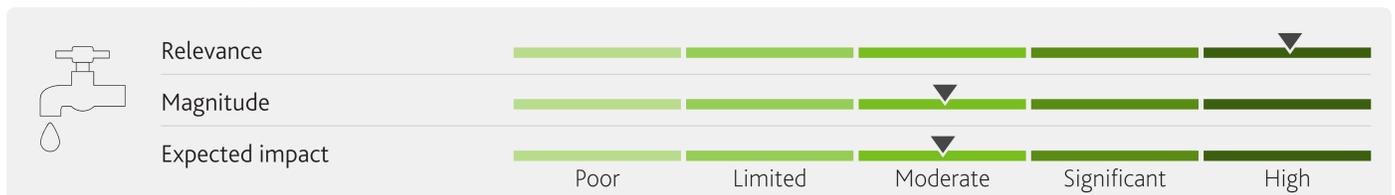
#### Sustainable land use and forest management



The relevance of this category is high given the primary importance of such projects to the company's operations. In the local context, South America has the second largest area of tree plantations globally behind Asia. Tree plantations are concentrated in Brazil, Argentina, Chile and Uruguay. In Latin America, tree plantation are almost exclusively used for industry and, in most cases, focused on pine and eucalyptus monocultures. These plantations often are associated with potential negative externalities, as detailed below, making forestry certifications an important tool to promote better forest management and trade of forest products.

The magnitude of this category is significant. The eligible category includes internationally recognized forestry standards and certifications, which address relevant topics to promote sustainable management of forestry, including environmental and social issues. The certifications require a third party verification. Although we acknowledge that the operations of the company heavily incorporate monocultures of species such as pine and eucalyptus, which may carry potential negative risks including biodiversity loss, soil productivity and fertility loss, risks of promoting pests and diseases, increased wildfire severity, among others<sup>2</sup>, we also recognize some potential benefits from industrial tree plantations, as well as actions the company has taken to mitigate risks. For example, when trees are planted on degraded lands or previously used for agriculture, industrial forests may exhibit biodiversity benefits<sup>3</sup> and hydrological cycle enhancements<sup>4</sup>. Furthermore, the company informed that efforts were being carried out to restore 11,662 hectares of native trees as of September 2022. Arauco has also constructed firewalls and reports that it continuously monitors potential wildfire risks. In addition, the issuer has financed under this category the plantation of native forests, increasing the protection and conservation of areas of high environmental value.

#### Sustainable water management



The category is highly relevant for the core activities of the paper and forest products sector. The sector uses high volumes of water in its production processes which can also present risks of polluting local water bodies when disposing of wastewater. Therefore, it is relevant for the industry to promote the optimization of water use and reutilization, in order to reduce the water footprint of operations and risks of water stress in the locations in which the company operates.

The magnitude of this category is moderate. Projects financed under the category include water reuse projects in pulp mills, projects to reduce water consumption in operations, as well as projects to reduce effluents and chemical inputs to help ensure compliance with regulations where the company operates. According to information provided by Arauco, in 2022 the financed projects contributed, in part, to a 15% reduction in total corporate net water consumption and a 13% reduction in effluents compared to 2021 indicators. Although we acknowledge the positive benefits of projects related to water reuse in the industrial process and reduction of water consumption and effluents, there is limited visibility on the specific contribution of some of the projects financed by the June 2023 issuance to the overall companywide improvements in water consumption and effluent reduction. In addition, there are no public corporate targets in this area to compare with broader industry performance.

**Pollution prevention and control**



The relevance of this category is significant. In terms of non-hazardous waste, pulp and paper production creates considerable amounts of solid and liquid waste with a potential for reuse. The company has set a goal to reuse 100% of its non-hazardous industrial waste by 2030 which will contribute to a reduction in greenhouse gas (GHG) emissions from the production of new paper products, a reduction in the need for fresh timber and a reduction in energy consumption. Nevertheless, eligible projects in the category may not include other hazardous waste associated with the company's operations<sup>5</sup>, narrowing the scope of the category.

The magnitude of this category is significant. Under the category, Arauco has financed projects that increase the revalorization of industrial waste. In 2022, projects financed contributed to enhance the recovery of non-hazardous waste in the company's Licantén and Constitución facilities in Chile. Although this increase might be considered relatively small – about 5% compared to the prior year – we acknowledge that these expenditures also contribute to progressing toward the corporate target of 100% non-hazardous waste recovery by 2030. Additionally, the company financed projects that aimed to reduce sulfur compounds, ensuring the 100% capture and treatment of such compounds in the Arauco and Valdivia mills in Chile. Moreover, the company financed research and development expenditures related to the replacement of synthetic resins and the production of formaldehyde-free medium-density fibre (MDF) boards.

**Access to essential services**



The relevance of this category is moderate. While projects in this category do not address the core business of the company, promoting access to essential services can help improve the socioeconomic development of the local communities in which the company operates.

The magnitude of this category is high. The company has financed under this category several different programs to support communities. The company reported that eligible projects include investments to expand access to drinking water, especially in rural areas, and education initiatives. The target population includes individuals within the 40% most vulnerable classification according to the Chilean socioeconomic classification system.

### ESG risk management

We have not applied a negative adjustment for ESG risk management to the expected impact score. The nature of the company's operations exposes it to some potential environmental and social risks, including exposure to environmental risks related to natural capital, waste and pollution, physical climate risk and water management, as well as health and safety hazards due to the use of large-scale machinery and equipment. However, Arauco has taken steps to manage its potential risk exposures.

In environmental terms, the company possesses an ISO 14001 certification for its operations and has forestry certifications which require measures to address the potential negative externalities associated with its operations, including impacts on biodiversity and local communities, among others. The company is also SBTi certified, demonstrating a comprehensive strategy to reduce its GHG emissions.

Regarding social risks, the company holds an ISO 45001 certification, which addresses health and safety issues within the company's operations. We note that Arauco operates in regions of southern Chile where there is a long-standing land dispute between the indigenous population (Mapuches) and the Chilean government<sup>6</sup>. However, we understand that the company frequently engages with the Mapuche community as a means to minimize potential risks.

### Coherence

We have not applied a negative adjustment for coherence to the expected impact score. Projects financed with the proceeds from the June 2023 issuance align with the company's environmental and social strategy and established targets<sup>7</sup>. On the environmental side, the projects contributed to the pledges related to sustainable forest management and restoration of native forests in Latin America, reduction of water footprint and recovery of non-hazardous waste. On the social side, the projects contributed to the company's objectives related to supporting the development of local communities in which it operates.

## Appendix 1 - Mapping eligible categories to the United Nations' Sustainable Development Goals

The four eligible categories included in Arauco's June 2023 sustainability bond issuance are likely to contribute to four of the United Nations' Sustainable Development Goals (SDGs), namely:

UN SDG 17 Goals	Eligible Category	SDG Targets
GOAL 3: Good Health and Well-being	Pollution Prevention and Control	3.9: Substantially reduce the number of deaths and illnesses from hazardous chemicals and air, water and soil pollution
GOAL 4: Quality Education	Access to Essential Services	4.1: Ensure that all children complete quality primary and secondary education leading to relevant and effective outcomes 4.7: Ensure all learners acquire the knowledge and skills needed to promote sustainable development
GOAL 6: Clean Water and Sanitation	Access to Essential Services	6.1: Achieve universal and equitable access to safe and affordable drinking water for all
	Sustainable Water Management	6.3: Improve water quality by reducing pollution, eliminating dumping and minimizing hazardous chemicals and materials 6.4: Increase water-use efficiency across all sectors and ensure sustainable supply of freshwater to reduce water scarcity
GOAL 15: Life on Land	Sustainable Land Use and Forest Management	15.2: Promote the implementation of sustainable management of all types of forests 15.5: Reduce the degradation of natural habitats and biodiversity loss, and prevent the extinction of threatened species

The United Nations' Sustainable Development Goals (SDGs) mapping in this SPO considers the eligible project categories and associated sustainability objectives/benefits documented in the issuer's financing framework, as well as resources and guidelines from public institutions, such as the ICMA SDG Mapping Guidance and the UN SDG targets and indicators.

## Appendix 2 - Summary of eligible categories in Arauco's June 2023 sustainability bond issuance

Eligible categories	Description	Sustainability objectives	Potential impact reporting metrics listed in the framework	Metrics reported for June 2023 issuance	Amount allocated (Unidad de Fomento - UF)
Sustainable land use and forest management	Expenditures related to sustainable forest management plantations certified by internationally recognized forestry standards, including the acquisition, planting and maintenance of seedlings up to harvest and the development of species hybrids to improve the productivity of plantations, and the development and/or promotion of programs for fire prevention or control, including implementation of local education and other short- and long-term fire prevention programs.	- Natural resource conservation	- Carbon sequestration - GHG emissions reduced/avoided - Increased GHG emission efficiency - Hectares of land afforested/revegetated - Reduced Emissions from Deforestation and Degradation (REDD) - Certified forest area: Hectares of land that have been planted or replanted - Certified third-party forest area: Hectares of wood suppliers' land that have been certified	- During 2022, 35 million of pine and eucalyptus planted under responsibly managed forests (certified forest area).  - During 2022, more than 150,000 native trees planted.	5,042,038
Sustainable water management	Expenditures related to sustainable water management, including the reduction of water consumption in industrial processes, conducting studies relating to the development and implementation of systems facilitating reuse of water in industrial processes and innovation in connection with the reuse of wastewater, and/or the development and installation of technologies and systems to improve the quality of treated water and effluent; the reduction of organic content; the development and implementation of plans for monitoring the quality of effluents and the quality of the waters of the receiving waters and their ecosystems.	- Sustainable use of water	- Cubic meters per tonne of water saved/reduced - Cubic meters per tonne of recycled water used - Cubic meters per tonne of water (provided/cleaned)	- Reduction of 40% in the use of chemical inputs in Piray mill.  - Reuse of wastewater in Brazilian operations (424m3).	145,517
Pollution prevention and control	Expenditures related to pollution prevention or control, including projects that reduce GHG emissions and other atmospheric emissions; projects to improve the treatment of liquid effluents and reduce atmospheric emissions; increased capacity to contain spills through operational controls and/or infrastructure works; rainwater control; projects to improve the management and disposal of industrial waste; plans for monitoring liquid effluents, atmospheric emissions (including sulfur gases), noise, air quality, water quality and ecosystems.	- Pollution prevention and control	- GHG emissions reduced/avoided	- As of 2022, there was an increase of, at least, 5% in the revalorization of non-hazardous waste compared to 2021.  - 100% of capture and treatment of TRS gases in Arauco and Valdivia mills	269,913
Access to essential services	Expenditures related to community development and/or access to essential services, including investments in health programs and healthcare services; safety services; projects to expand access to drinking water, sanitation sewage treatment systems, transportation, waste management, development of green areas and coastal waterfront, economic development, education, job training, vocational services and sports programs, among others.	- Socioeconomic development	- Number/volume of loans provided to target group - Number of new businesses created in low income areas - Number of hours in education/training - Number of people who received education/training - Percentage of students placed in jobs after training - Number of people benefiting from local community development measures	- Approximately 288 students enrolled in 2022 in Campus Arauco, marking a 30% increase from 2021.  - Drinking water projects have benefitted about 2,400 rural families.  - 42 workshops in 10 secondary schools and for four groups of unemployed youth in Misiones province, involving 331 students and 74 unemployed young people.	191,625

## Endnotes

- [1](#) Point-in-time assessment is applicable only on date of assignment or update.
- [2](#) ScienceDirect, [Mixed-species versus monocultures in plantation forestry: Development, benefits, ecosystem services and perspectives for the future](#)
- [3](#) Ciencia & Investigación Forestal - [Manejo forestal sustentable y biodiversidad, 2023](#)
- [4](#) Unesco - [Antecedentes de la relación masa forestal y disponibilidad hídrica en Chile](#), 2019
- [5](#) ScienceDirect, [Pulp and paper industry-based pollutants, their health hazards and environmental risks](#)
- [6](#) BBC News, [Mapuches en Chile: 4 claves para entender el centenario conflicto que enfrenta al pueblo indígena y el Estado](#)
- [7](#) Arauco website, [Sustainability](#)

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