Emissions, mitigation of and adaptation to climate change

Implementing actions focused on minimizing the emissions discharged into the atmosphere. This is done by prioritizing energy efficiency, using alternative types of energy, implementing clean technologies and efficiently using supplies in the production, distribution and logistics operations.

Solar panels at the Pastas Business facilities in Colombia.

Management approach [GRI 3-3]	Progress achieved in 2022 [GRI 3-3]
Achieving a resilient sourcing and mitigating risks in the value chain.	• **Installation of 5.000 devices** to identify bovines in the Llanos Orientales (Eastern Plains) of Colombia. • **Measurement of the carbon footprint** and estimation of reduction due to the implementation of leading livestock practices in 42 ranches in Colombia. • **Measurement of the carbon footprint** in 550 coffee plantations to assess the reduction of emissions from agricultural practices. • **Implementation of the C4D cooperation project** - Partners of the Americas to collect primary information on the carbon footprint and carbon uptake in the cocoa chain. • **Publication in Chile** of the *Handbook of good agricultural practices with a focus on conservation agriculture*, together with the National Agricultural and Livestock Research Institute (INIA).
Achieving sustainable operations and logistics.	• **Reduction of 11,3%** in scope 1 and 2 emissions with respect to 2020. • **99,98% increase** in renewable electrical energy in Costa Rica, which represents 8,13% of the total consumption. • **Consolidation of a portfolio** of projects for financial assessment and execution during the decade. • **Transition to a sustainable mobility** with the conversion to natural gas of 39 vehicles in Novaventa and six heavy-duty vehicles in Costa Rica and Guatemala, plus the acquisition of two electric vehicles at Comercial Nutresa, which reduce 79,6 tons of CO_2eq. per year. • **7% reduction in gCO2eq./ton·km** from the logistics and development of capabilities for suppliers in the Biscuits Business.
Innovating in terms of carbon-efficient products, services and experiences.	• **Recycling of refrigerant gas** from Novaventa machines to avoid 32 tons of CO_2eq. associated with CFC (substances derived from saturated hydrocarbons) into the atmosphere. • **Maintaining the carbon neutral certification** of Tosh, Evok, Livean and Zuko, thus reducing their footprint by 31,1% and offsetting 22.660 tons of CO_2 eq.
Making responsible investments for the climate.	• **Subscription of sustainable credit** in Colombia linked to compliance with the greenhouse gas (GHG) goal. • **COP 1 billion** invested for the conservation of paramos through the planting of one million trees.
Contributing to the adaptation to climate change, risk management and culture transformation.	• **Implementation of the Sustainable Corporate Mobility Plans** (PMES) with active mobility initiatives, flexible work modalities, promotion of public transport and business routes.

Risks and opportunities

[GRI 3-3]

Grupo Nutresa recognizes the physical, regulatory and financial risks associated with climate change. For this reason, it has committed to leading actions throughout its value chain to reduce greenhouse gas (GHG) emissions, increase the productivity of natural resources, implement adaptation measures to climate changes and regenerate ecosystems to conserve biodiversity.

One of the aspects with the greatest risks is the increase in emissions and global temperature, which puts the life of the human species and the planet's ecosystems at stake. This generates, in turn, an opportunity to have a more active role as private companies and join efforts with different sectors to contribute to the measures to reduce emissions and adapt to climate change provided by regulatory instruments, in addition to the Nationally Determined Contributions (NDC) in the Strategic Region. Some countries are expected to establish reporting and verification systems, as well as sector-based maximum emission limits and the implementation of leading agricultural practices.

On another note, the transition towards the consumption of cleaner fuels, refrigerants, products and services with less environmental impact also represents an opportunity to boost the economy and create new job opportunities. The same happens with changes in consumer preferences towards carbon-efficient products, which will cause changes in the design concepts.

Finally, aspects such as agriculture for conservation and the generation of capital associated with sustainable practices continue to be opportunities to improve the relationship between production systems and ecosystems in order to establish trust-based relationships between suppliers and adopt leading practices.

Future challenges

Both industrial operations and the value chain are being impacted by the climate change. Therefore, it is necessary to continue implementing adaptation measures, with emphasis on the transition to renewable energy sources and value chains with less environmental impact. To achieve this, the Company moves forward in the strategies and commitments for 2030 through five pillars that address various fronts of climate action.

Employee from the Cold Cuts Business in Colombia.

In responsible sourcing, the Organization will study scope 3 greenhouse gas (GHG) emissions through prioritization of the bovine, pigs, cocoa and coffee chains, where it has incorporated plans and actions for the adaptation and mitigation of the climate change. In operations and sustainable logistics, it will promote eco-efficiency and the energy transition.

In order to make progress in the energy transition towards renewable energy sources, the Organization will spend time searching for alternatives to replace the energy derived from the combustion of natural gas, which represents 54,6% of the energy usage. In addition, it will continue with the formulation of energy generation projects from biomass, the embracement of new technologies and the improvement of energy efficiency in thermal processes to obtain energy from renewable sources (zero carbon emissions) that are 100% reliable and with a competitive cost-benefit ratio.

For the climate action management, it will maintain the embracement of the framework of the Task Force on Climate-related Financial Disclosures (TCFD) and the adaptation of climate governance within the corporate governance structure. Moreover, it will strengthen responsibilities at all levels to make progress in the embracement of new technologies, the structuring of emission reduction projects and the development of products with less impact on the carbon footprint.

Outstanding practices and recognitions

Adaptation of industrial operations to climate change through the energy transition

Grupo Nutresa moves forward in several measures that allow it to adapt to climate change from the processes of its value chain. In the case of sustainable operations, the energy transition will serve to migrate to energy sources with less environmental impact. In Colombia, 100% of the electrical energy is certified (I-REC, certified energy with EPM) as renewable, that is, it has no associated CO2 emissions. In the operations of the Strategic Region, the Organization has made progress towards renewable sources of electrical energy through negotiation processes and its own generation projects (solar energy), thus reaching 14%. Regarding thermal energy, it has been mostly covered with fossil sources and biomass, the latter being a key element for industrial operations. The technological improvements and the substitution of fuels in the operations in Tresmontes Lucchetti, Chile, have reduced the dependence on natural gas. Biomass represents 14,6% of the total energy usage of food production operations and 25,7% of the thermal energy.

Mitigation of GHG emissions through eco-efficiency measures

Tresmontes Lucchetti replaced the use of some liquefied petroleum gas (LPG) fuels with natural gas in burners, in addition to making improvements in biomass combustion (boiler that uses coffee grounds, tea dust and wood chips) and investments in new and more efficient refrigeration equipment. With this, the non-renewable energy consumption indicator improved by more than 24,9% between 2022 and 2020. For its part, the Retail Food Business made investments in combustion equipment (new boiler), in fuel change (LPG to natural gas) and in refrigeration equipment with less environmental impact. Thanks to this, in the last two years it achieved a significant growth of (+15,9%) between 2022 and 2020 in the energy efficiency of non-renewable sources, which contributes to the reduction of GHG emissions and the improvement of the operating conditions in production plants.

Management of GHG emissions in the bovine and dairy chains, key to agricultural and livestock production

Through a research project with the Universidad Nacional de Colombia, in Medellín, 42 ranches of livestock suppliers in different areas of the country were characterized for the calculation of the carbon footprint. This is the first study to document primary data on livestock ranches directly related to the Organization. In the case of the dairy chain, and in partnership with the World Wide Fund for Nature (WWF), it published two handbooks on the leading administrative and environmental practices, specifically on water and climate change. With these initiatives, the Organization develops capabilities to reduce GHG emissions in the production chains linked to its operation.

Material topic details

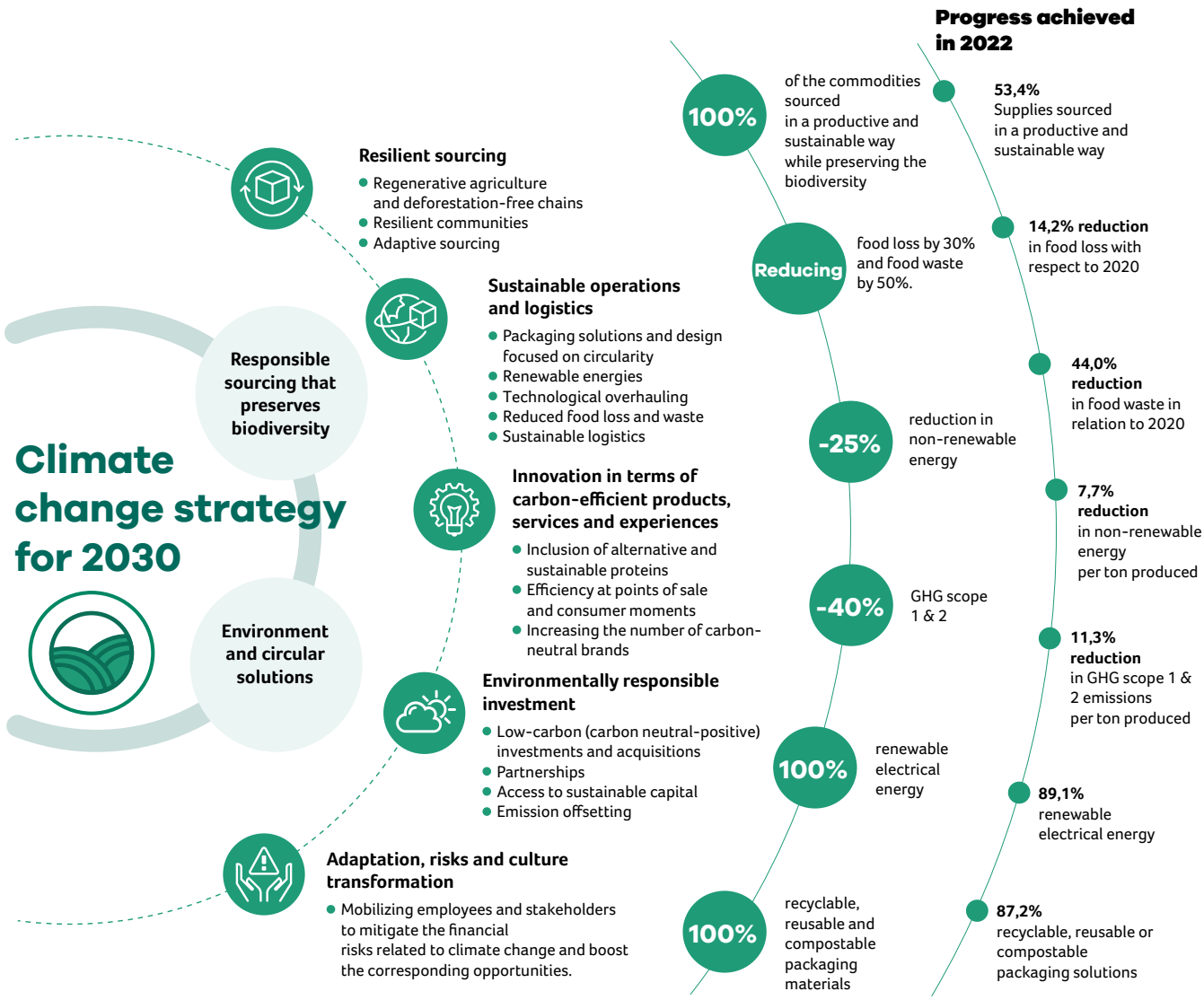
The Organization has historically been committed to climate action, both in the mitigation of GHG emissions and in measures to adapt to extreme events associated with climate change.

In 2020, Grupo Nutresa launched a climate change strategy in which, through five pillars, it addresses the main processes that may be affected: Resilient sourcing; Sustainable operations and logistics; Innovation in terms of carbon-efficient products, services and experiences; Environmentally responsible investments; and adaptation, risks and transformation of the culture.

Grupo Nutresa has set the goal of reducing 40% of its emissions scope 1 and 2, in terms relative to its production. To accomplish this goal, by 2030 it has also set to achieve 100% renewable electric power sourcing, a 25% reduction in non-renewable energy consumption and the design of 100% of its brand packaging to be 100% recyclable, reusable or compostable.

Below is the progress for 2022 of these goals:

- Reduction of 40% in GHG emissions scope 1 and 2: -11,3%.
- Reduction of non-renewable energy consumption: -7,72%.
- Sourcing of 100% renewable electrical energy: 89,05%.
- 100% of the brand packaging to be recyclable, reusable or compostable: 87,2%.



Resilient sourcing

The management of emissions from the production of raw materials is vital. Agriculture, including livestock production, is responsible for at least 17% of the global GHG emissions. Therefore, the evaluation of the carbon footprint of the most relevant raw materials, as well as the identification and implementation of the leading practices to reduce the carbon footprint, are matter of interest to the Organization.

During 2022, the Company carried out studies in the beef, pork, coffee and cocoa chains in order to determine the carbon footprint for the most representative production systems. This identification included the prioritization of leading practices to be disclosed and implemented by suppliers. In addition, the Organization published handbooks on livestock farming and milk production, where climate change is a relevant element for the producers' development of capabilities.

Energy efficiency

Internal energy consumption

[GRI 302-1] [GRI 302-3] [FB-PF-130a.1] (SDG 12.2)

Total energy consumption in industrial operations is made up of renewable energy (thermal and electrical) and non-renewable energy. Thermal renewable energy, for its part, comes mainly from the use of biomass (coffee grounds, tea dust, wheat husk and wood chips) and some solar energy applications for water heating. This energy represents 14,8% of the total energy usage and increased 1% compared to 2021, mainly due to investments in biomass combustion equipment in the Tresmontes Lucchetti Business, Chile, and due to the reduction of the coffee grounds used in the Coffee Business.

Electric power in industrial operations in Colombia is renewable and is supplied by EPM at all facilities. This energy represents 19,7% of the total energy usage and had an increase of 3,4% compared to 2021. The electric power in the operations of the Strategic Region, which represents 28,3% of the energy usage, comes 89,05% from renewable sources. In 2022, the Organization expanded the coverage of renewable electric power supply by 5,6% in relation to 2021.

Non-renewable thermal energy corresponds to the use of fossil fuels (natural gas, LPG, diesel and others). This is the main source of energy, and represents 56,8% of Grupo Nutresa's energy usage, while natural gas occupies 49,7%. In 2022, the total consumption of thermal energy had a reduction of -3,75% due to the impact of the optimization projects in the Business Units:

- **Coffee:** roasting process.
- **Ice Cream and Retail Food:** control and technological overhaul of boilers.
- **Tresmontes Lucchetti:** fuel replacement.
- **Biscuits:** operational efficiencies.

Employee from the Coffee Business in Colombia.

Internal energy consumption

[GRI 302-1] [GRI 302-3] [FB-PF-130a.1] (SDG 12.2)

Electric power consumption (GWh) | Non-renewable (GWh) | Renewable (GWh)
Total energy consumption (GWh) | **Consumption intensity (kWh / t.p.)**

Colombia

2022	**704,4**	**685,2**
2021	666,2	695,9
2020	597,7	667,4
2019	562,5	654,6

Peru

2022	**22,5**	**1.306,4**
2021	22,5	1.325,0
2020	20,3	1.326,8
2019	20,3	1.272,6

Costa Rica

2022	**40,0**	**714,8**
2021	41,5	713,7
2020	43,5	755,7
2019	41,3	780,8

Mexico

2022	**14,4**	**453,8**
2021	14,0	483,9
2020	12,8	473,2
2019	12,4	445,5

Chile

2022	**135,5**	**1.339,8**
2021	135,2	1.407
2020	130,7	1.359,8
2019	127,2	1.304,3

Dominican Republic

2022	**7,4**	**624,4**
2021	7,0	654,9
2020	5,7	732,7
2019	6,2	642,7

Panama

2022	**7,3**	**1.600,8**
2021	8,1	1.570,3
2020	8,9	1.678,9
2019	8,7	1.678,0

United States

2022	**49,2**	**848,1**
2021	35,7	705,0
2020	42,3	781,6
2019	-	-

Colombia - Restaurants*

2022	**61,2**	**2,1**
2021	54,6	2,9
2020	42,4	2,6
2019	56,9	1,5

* Consumption intensity for restaurants (tons of CO_2 eq./million main courses).

Employee from the Pastas Business in Colombia.

Reduction in energy consumption
[GRI 302-4]

Energy consumption per ton produced had a reduction of 2,2% compared to 2021 thanks to investments in new refrigeration technologies, optimization of electric power consumption, photovoltaic solar energy installations, and optimization of thermal processes.

Reductions in energy requirements of products and services [GRI 302-5]

Sustainable operations - GHG emissions

As a result of the different fronts of the climate change strategy, the Company has consolidated a -11,3% reduction of GHG emissions scope 1 and 2, which places an emission of 107,55 tons of CO_2 eq./t.p and equivalent to 129.148 tons of CO_2 eq. and 11.598 tons of CO_2 eq. for scope 1 and 2, respectively. This is mainly due to the reduction in refrigerant leaks and the decrease in the consumption of thermal energy and electric power.

Scope 1 and 2 emissions
[GRI 305-1] [GRI 305-2] [GRI 305-4]

Extending the commitment to the supply chain and based on a life cycle analysis, Grupo Nutresa calculated the scope 3 emissions of its operations, which stands at 31.352,38 tons of CO_2 eq. in the assessed categories, for a total carbon footprint in the logistics operations of 51.094,80 tons of CO_2eq. in 2022. [GRI 305-3] [FB-MP-110a.2]

Scope 1 and 2 emissions

[GRI 305-1] [GRI 305-2] [GRI 305-4]

Scope 1 emissions (tons of CO_2 eq.) | Scope 2 emissions (tons of CO_2 eq.)

Total scope 1 and 2 emissions (kg of CO_2 eq.) | **Total scope 1 and 2 emissions (kg of CO_2 eq./t.p.)**

Colombia

2022	**96.313,0**	**93,7**
2021	77.505,1	80,9
2020	75.039,1	84,1
2019	72.463,9	84,3

Peru

2022	**4.848,0**	**281,7**
2021	4.281,4	251,6
2020	4.183,9	273,5
2019	4.251,1	266,6

Costa Rica

2022	**7.595,0**	**135,6**
2021	11.283,8	194,0
2020	11.515,1	200,0
2019	10.860,5	205,5

Mexico

2022	**5.990,0**	**188,4**
2021	5.462,1	188,3
2020	6.584,5	243,4
2019	5.176,0	186,1

Chile

2022	**9.870,0**	**97,6**
2021	10.984,9	114,4
2020	13.857,2	144,2
2019	16.194,7	166,0

Dominican Republic

2022	**4.481,0**	**376,3**
2021	3.583,0	333,6
2020	2.961,1	380,6
2019	3.338,2	343,6

Panama

2022	**1.792,0**	**393,5**
2021	2.027,4	390,9
2020	2.027,4	382,5
2019	1.970,1	378,3

United States

2022	**10.530,0**	**181,5**
2021	11.931,6	235,8
2020	10.823,4	199,9
2019	-	-

Colombia - Restaurants*

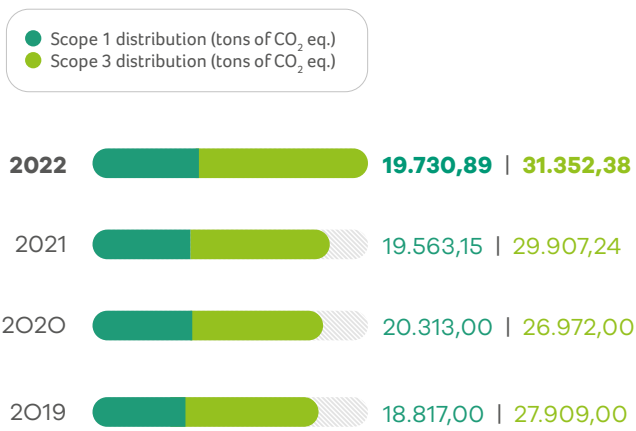
2022	**11.123,0**	**384,7**
2021	10.002,0	534,4
2020	8.684,0	532,2
2019	10.804,5	281,0

* Consumption intensity for restaurants (tons of CO_2 eq./million main courses).

Employees from
Opperar Colombia.

Sustainable logistics

Regarding the emissions generated by sourcing, in 2022 Grupo Nutresa caused 51.094,80 tons of CO_2 eq., made up of 38,6 scope 1 and 61,38 scope 3. [GRI 305-3]



No causation of carbon tax

Taking on the commitment of the Grupo Nutresa brands, in 2022, 79,63 tons of CO_2 eq. were offset to avoid carbon taxes.

Air quality

[GRI 305-6][GRI 305-7] [FB-FR-110b.1] [FB-FR-110b.2] [FB-FR-110b.3]

The air pollutant emissions amounted to 68,1 tons of particulate material, 7,1 tons of SO2, 527,1 tons of NOx, 9,7 tons of COV [GRI 305-7] [TR-RO-120a.1], and the emissions of ozone-depleting substances totaled 191,6 kg of CFCs. This is due to a control of each of the emission sources and the replacement of potential ozone-depleting refrigerants.

Innovation in carbon-efficient products, services and experiences

Carbon neutral products

[FB-FR-430a.1]

With the ratification of the Carbon Neutrality Commitment, Grupo Nutresa consolidates four carbon neutral brands: Livean, Zuko, Evok and Tosh, which offset 22.660 tons of CO_2 eq. Additionally, the Tosh Fest is a carbon neutral event.

Business assets

Upgrading of the portfolio of business assets with a more environmentally friendly refrigerant

The Ice Cream Business purchased 8.655 freezers and upgraded 34,8% of the portfolio of business assets with R290 refrigerant, an environmentally friendly product that generates a 99,9% reduction in potential tons of CO_2.

Environmentally responsible investment

Grupo Nutresa signed a sustainable financing with Bancolombia for COP 300.000 million, linked to climate change metrics and packaging circularity. Under this figure, the Company is committed to contributing to the preservation of the planet through the fulfillment of goals on climate change and circular economy in Colombia and its Strategic Region. In turn, it also contributes to the fulfillment of the United Nations Sustainable Development Goals, to the national goals for the reduction of greenhouse gases and to the current partnerships.

CLICK HERE
to learn more

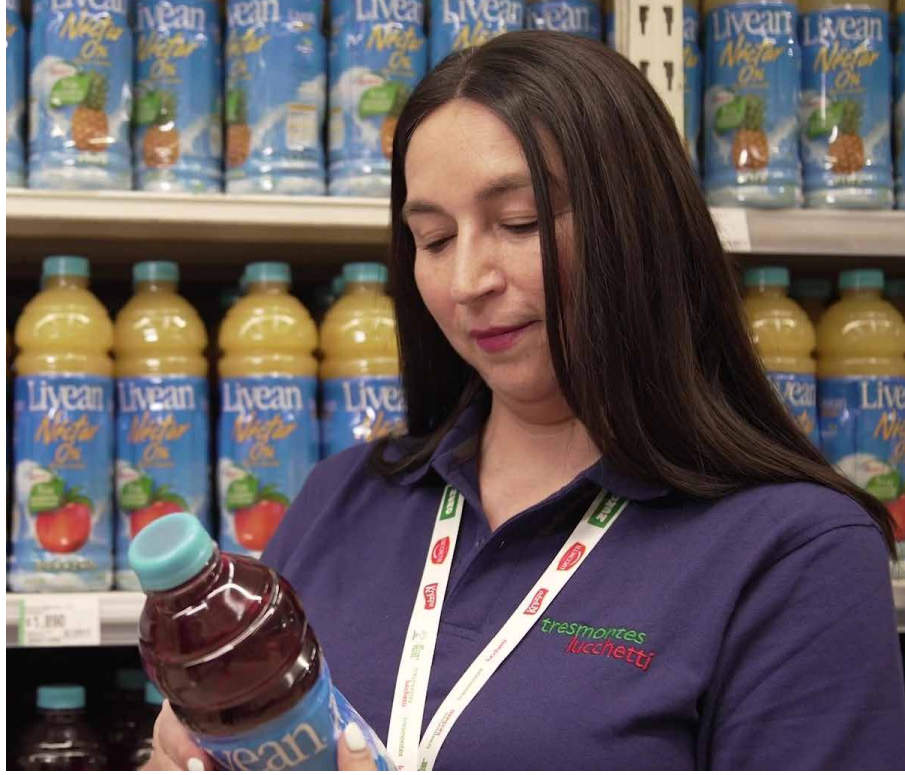
Risks, adaptation and transformation of the culture

Climate change represents a risk to the fulfillment of humanity's objectives. According to the results of COP 27, Conference of the Parties, held in Egypt in 2022, the global policies implemented allow us to estimate that the increase in the average temperature of the planet is well above 1,5°C. It is expected that extreme weather events will increase in the coming years.

On the other hand, the current social and political dynamics add elements of uncertainty for the sourcing of energy and fertilizers. The countries will increase the level of demand for compliance with the Greenhouse Gases Reduction Commitment. In the Strategic Region, the commitments include the reduction of national emissions by around 50% by 2030 and 90% by 2050, the creation of carbon markets and sector-based measures for mitigation and adaptation.

The Organization implemented the TCFD Standard, with which it ensures the actions so that the governance can supervise the financial risks derived from climate change, implement a strategy consistent with its impacts, besides mitigation and adaptation activities, identify and assess financial risks and implement challenging goals for climate action. Since 2021, Grupo Nutresa reports its progress in the implementation of the TCFD recommendations.

CLICK HERE
to learn more



Livean, a carbon-neutral brand in Chile.