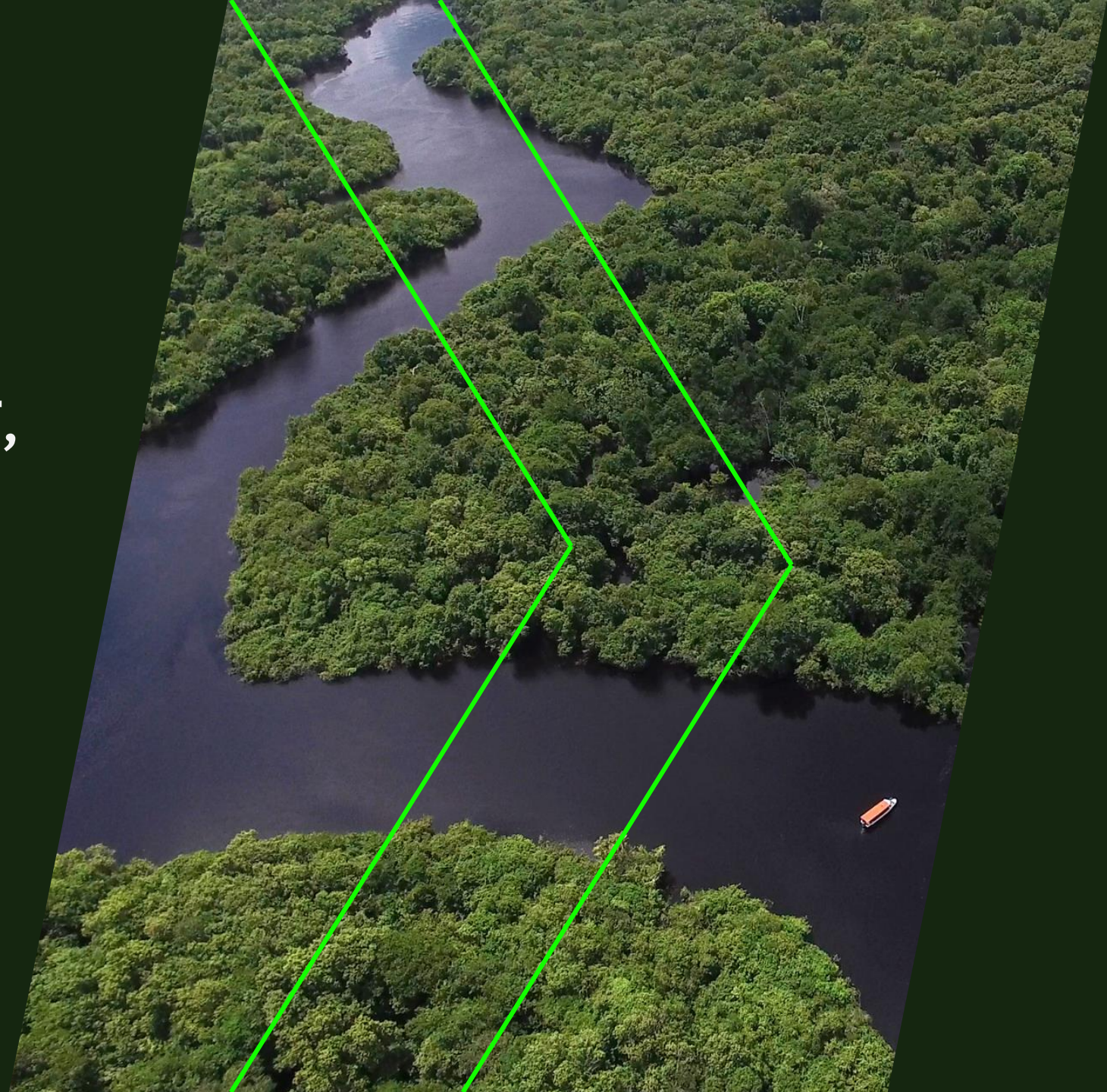


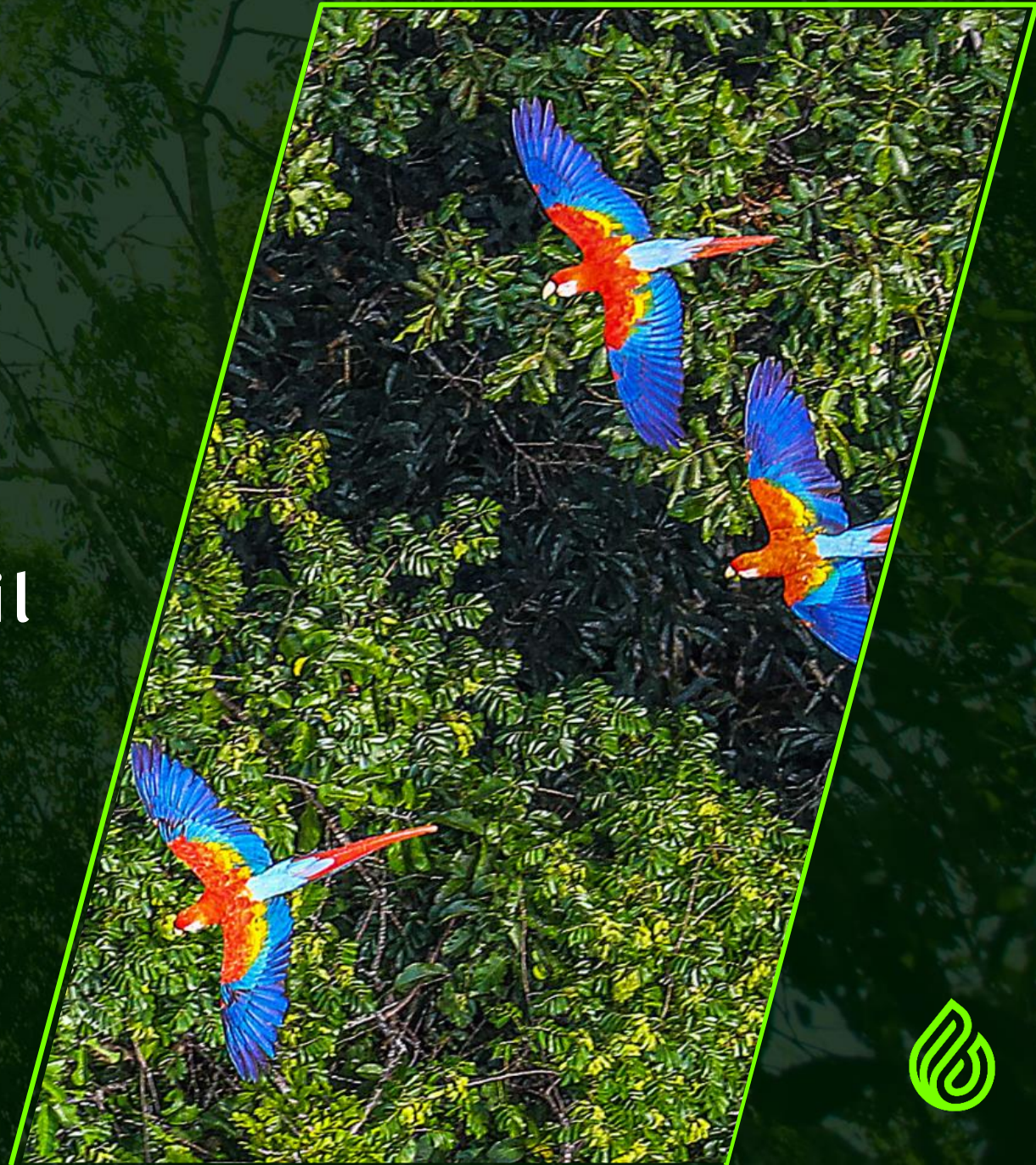
PRESERVING THE PRESENT, CARING FOR THE FUTURE



NOVEMBER 2022



Vertical integration for SAF | HVO production in Brazil



We are creating the future of clean energy



WHY

Leverage **sustainability** and **socio-economic** development connected to the global demand for more **sustainable businesses**



HOW

A **vertical business model** respecting the **environment**, valuing **excellence**, transparency, **simplicity** and **team**



WHAT

We replace **fossil fuels** with **renewable fuels** originated from **palm cultivation** in degraded areas and **generate energy** in the **Amazon**



Our operations in the Amazon...



Largest oil palm producer in Latin America with more than **68,000 hectares**.



Clean energy in the **Isolated Systems**, serving more than **110,000 energy consumers**.



Integrated business model, from the beginning to the end of the **value chain**.

40

powerplants PPA contracts

6^{+K}

direct employees in 2022

+178^{MW}

energy generation capacity



A vertical business model that adds value and allows arbitration throughout the value chain...

- 1** Vegetable oil:

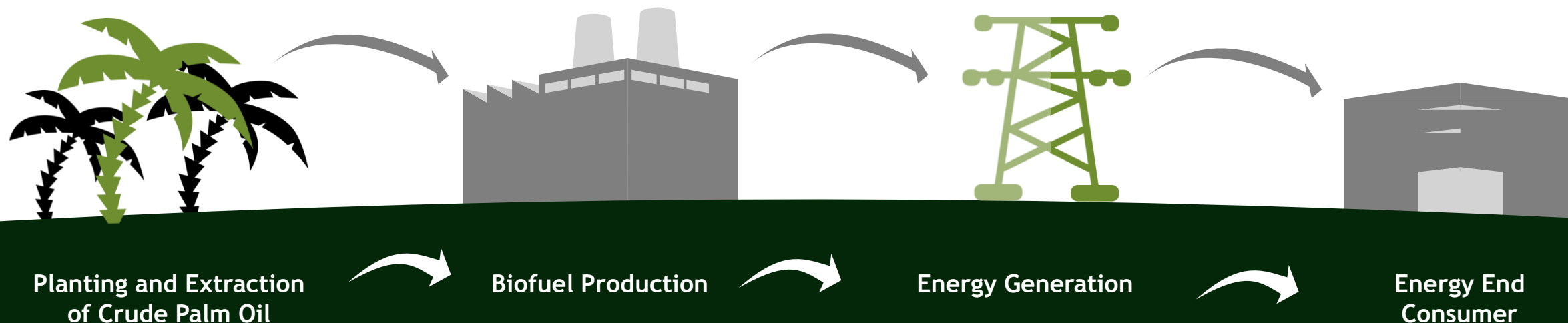
 - Biofuel production
 - Vegetable oil as fuel
 - Commodity trading
 - Biochemistry
 - Raw material for the food sector

2 Biofuel:

 - Raw material for powerplants
 - Long term contract

3 Energy:

 - **Trade-off (1)** between the biofuel cost production and the diesel price
 - **Trade-off (2)** between the vegetable oil cost and the fuel prices



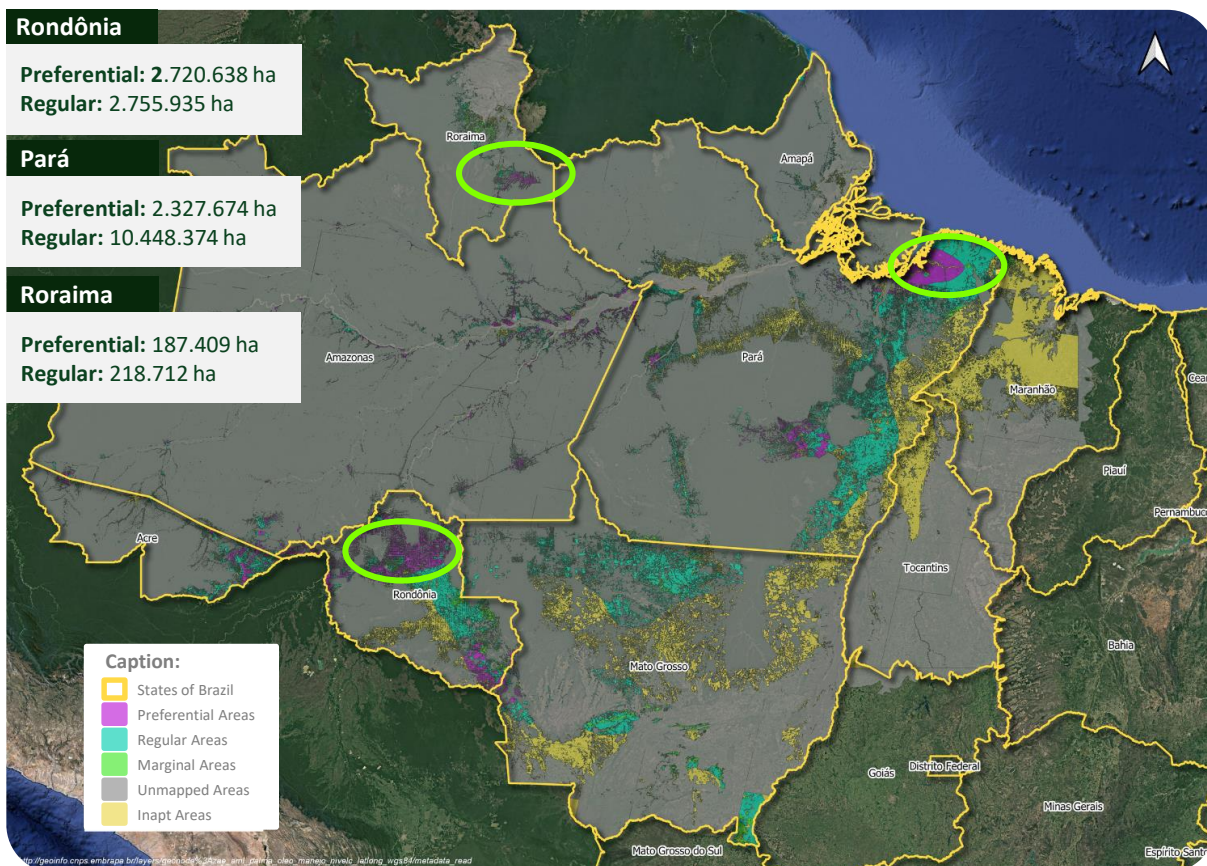
Sustainable chain development



31 million hectares suitable for planting: AEZ delimited areas support reforestation...

Deforested areas authorized for planting

Decree No. 7,172 of May 7, 2010.



Oil palm potential

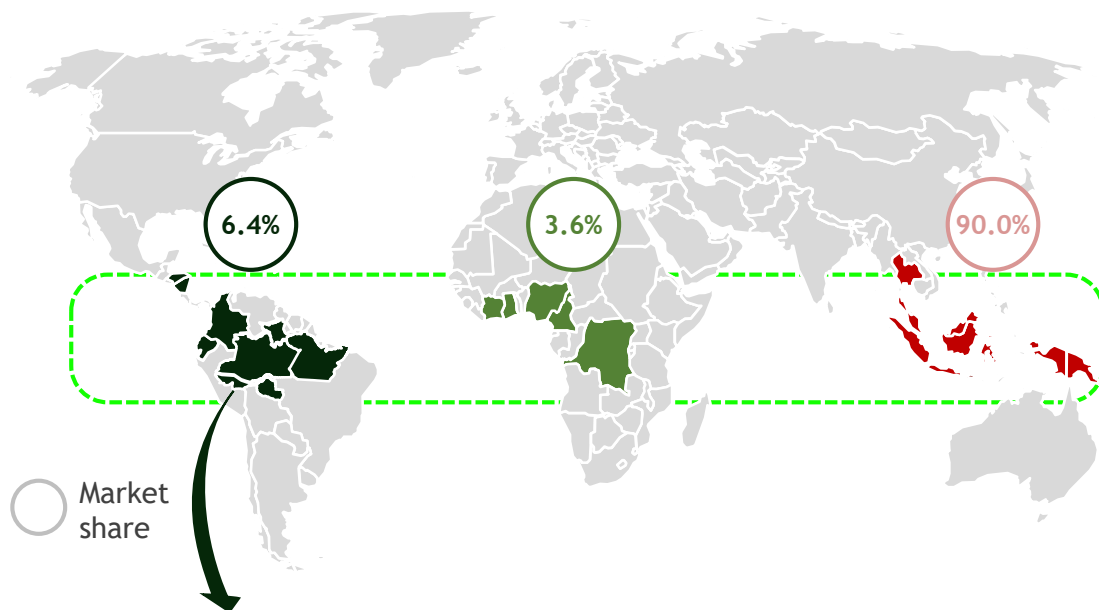
- ✓ Perennial and robust culture, with more than 35 years of production.
- ✓ High yield of palm oil per hectare.
- ✓ Non-mechanical harvest.

Productivity of Fresh Fruit Bunch

FFB (Fresh Fruit Bunch) ton per ha/year



Latin America presents great potential for oil palm expansion and represents 6% of the market...

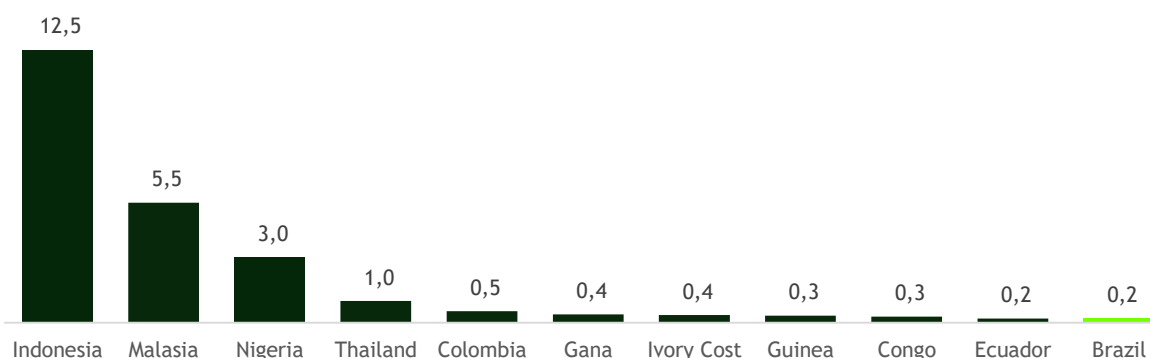


Latin America

- Land available for production expansion
- Environmental regulations
- Local consumer market
- Excellent weather conditions
- Good logistics infrastructure for export and proximity to large markets (USA and Europe)

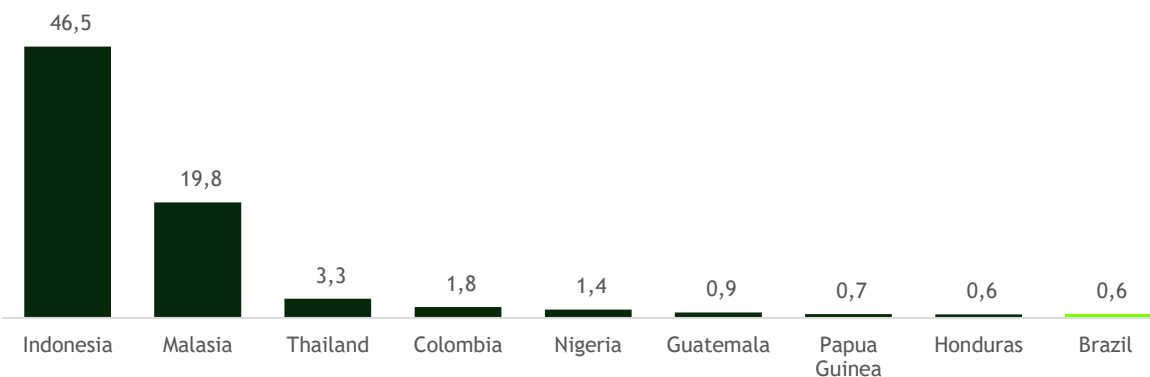
Planted area

Millions of hectares



Palm oil production

Millions of tonnes



Alternative to decarbonisation



S500 fossil diesel refining causes acid rain in the Amazon region...

S500 production

The extraction, refining and consumption of fossil fuels affects the **environment on a large scale**, along with deforestation and burning.

One of the most relevant **global problems** associated with air pollution is **acid rain**. The rain pH is usually **slightly acidic**, approximately equal to 5.65, due to gases dissolution, especially CO₂.

Both changes in **soil characteristics** due to their washing by **acid rain**, as well as changes in large water masses by **increased concentrations of metals and toxic particles**, can have irreversible ecological consequences.



Green Diesel



Produces H₂O and steam



CO₂ reduction up to 90% in its life cycle, no sulphur.



Fossil Diesel



Generates rain Acid



CO₂ and sulphur emission

Decarbonizing the air transport sector requires significant expansion of SAF supply...

Structural change

The Brazilian market, with its consumption of about 7 billion liters of aviation fuel per year, contributes to an **annual emission** about **18 million tonnes of CO²**.

The transition to **alternative fuels** is relevant, as the country is committed to **CORSIA**.

SAF accounts for only **1% of global aviation fuel consumption**.



Measures for CO² mitigation

Measures

2021

2040



Operational improvements

53%

17%



Aircraft technology

26%

39%



Biofuel and CORSIA

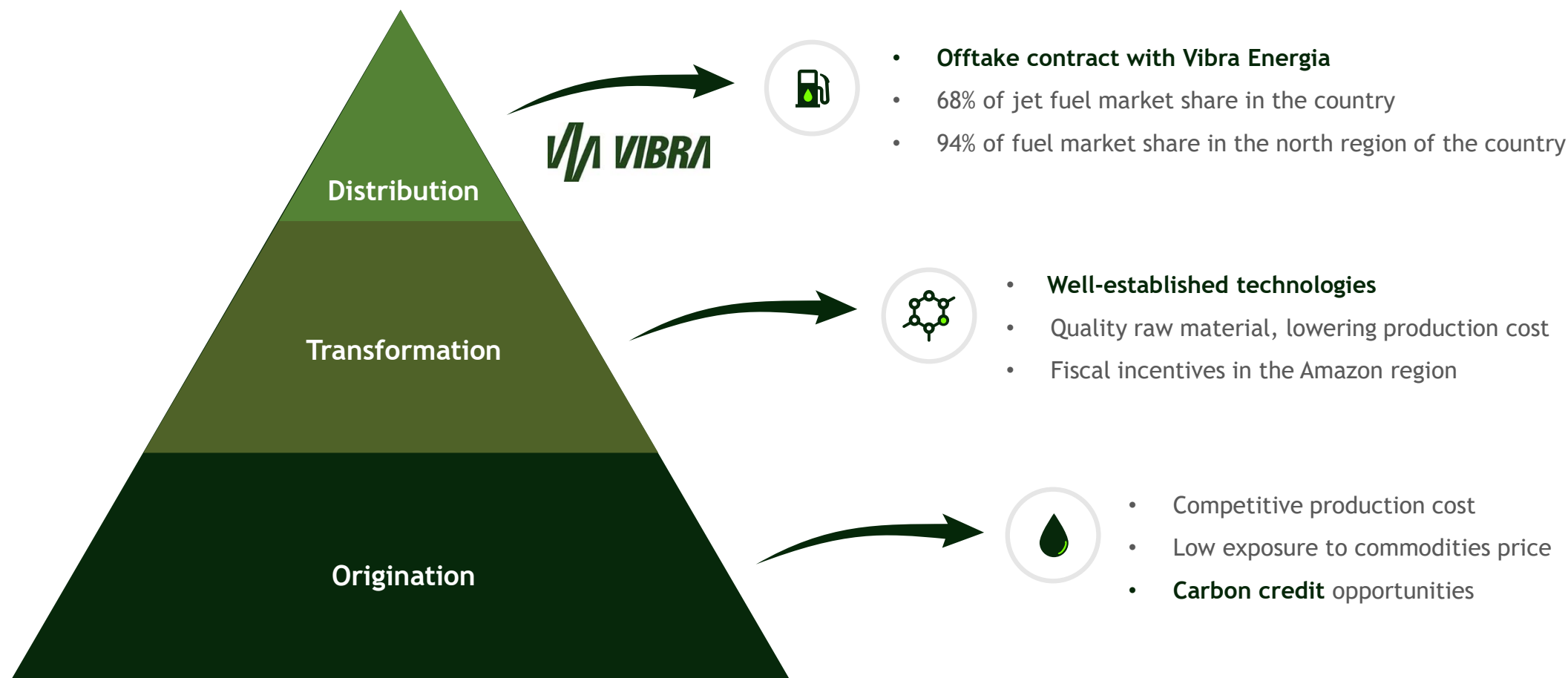
21%

44%

The future of biofuels



A vertical solution for SAF and HVO in the Brazilian Amazon...



A large revitalization of the Amazon through the expansion of oil palm planting...

The **oil palm production** will be carried out initially in **São João da Baliza, Roraima** municipality with a population close to 8,000 inhabitants. Its economy is mostly structured by the service sector, accounting for 79% of the state GDP, followed by the industry sector, accounting for 15%, and by the agriculture sector, accounting for 5%.


100 K

hectares of
planted area

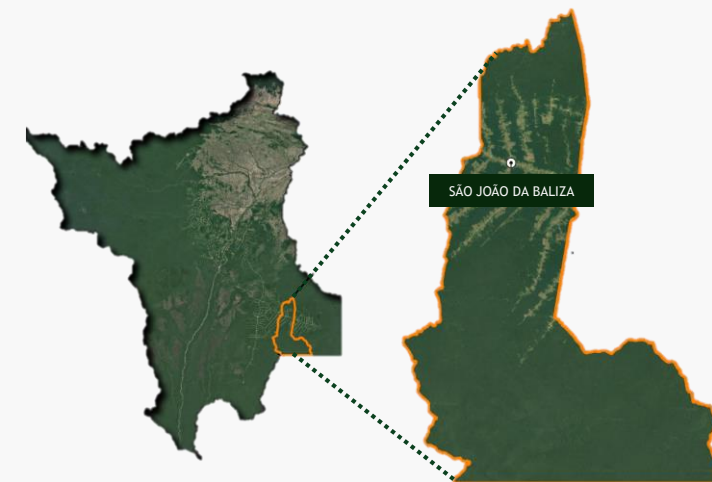
100 K

hectares of
environmental conservation

500 K

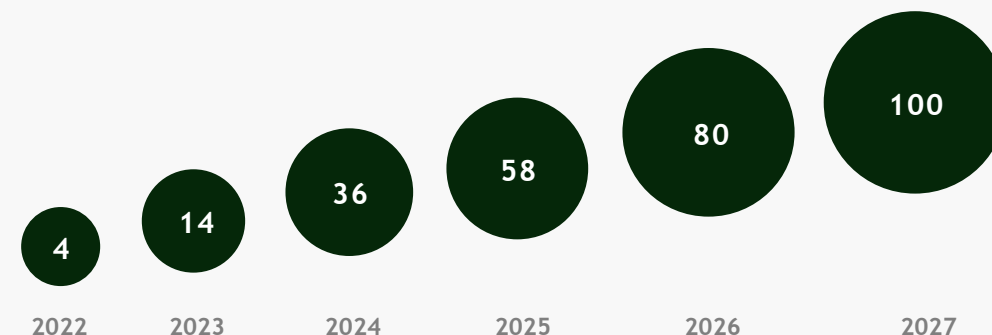
vegetable oil
processed annually

+600 K

CO₂ captured
annually


Evolution of oil palm planting in Roraima

In a thousand hectares



Social and environmental
advances inspire our project



The project presents significant socio-economic advances in the North region of the country...

- ✓ Shared strategies through **partnerships with local governments**, in order to **promote social and economic development**.
- ✓ Development of **local communities** through the construction of a network that **generates new sources of income** to the region.
- ✓ **Technical resources** to more than **300 families** through the **Family Farming Program**, guaranteeing **purchase of their production** at market prices.
- ✓ **Job creation**, adding about **12,000 direct employees**. Development of professionals through training and continuous **technical development**.



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