



INOCAS
INNOVATIVE OIL AND
CARBON SOLUTIONS



Macauba – Plant Oil with Impact Project Presentation

2019

Key messages

- INOCAS **started in 2018 the implementation of the Macaúba Pilot Project** in Brazil financed by the Inter-American Development Bank - IDB and other investors.
- **Project funding of USD 3m** (equity) and USD 1m (grant) is provided by the **Inter American Development Bank (IDB)** and the Climate Investment Fund of the **World Bank**.
- Macauba is an **indigenous palm tree in Brazil** which produces vegetable oil products comparable to the African oil palm (largest global vegetable oil market today).
- The project is establishing **2,000 ha pilot of silvopastoral Macauba plantation** in Minas Gerais, Brazil, in collaboration with local partners.
- The project offers **significant benefits in terms of ecological and social benefits as well as in financial terms** – and is highly scalable.
- INOCAS has developed the project based on four years of R&D – and brings a **highly experienced international team** into the realization of the project.

The problem: Deforestation is one of the world's most pressing issues – and palm oil is one of the drivers

The problem...



- **14 million ha land are deforested each year** (= size of the UK)
- Especially **palm oil monocultures** have caused environmental disasters
- In **Brazil**, deforestation and land use change account for **77% of GHG emissions**
- Brazil's target: become a **palm oil exporting country** – huge plantations planned

Our solution: Silvopastoral systems with Macauba are a sustainable alternative to conventional palm oil

...and our solution for Brazil:



- MACAUBA**
- Indigenous palm, more **drought resistant** than the African oil palm
 - Produces **similar products** like the African oil palm, but does not require rainforest conditions
 - **Attractive oil yields confirmed** by studies of different universities
 - Can be **integrated into vast existing pastures** (= agroforestry) to produce plant oil **without decreasing the pasture's yield**
 - Can **produce plant oil without deforestation or land use change**

Macauba fruits contain five products all of which can be sold on national and international markets

Kernel oil

- Comparable to palm kernel oil



Kernel press cakes

- Animal fodder, higher value than pulpa press cake

Pulpa oil

- Comparable to palm oil

Pulpa Press cakes

- animal fodder, comparable to soymeal

Kernel shell

- Raw material for high value granulate

INOCAS aims to establish a full Macauba value chain with two major components

Process Macauba fruits from native trees



- Collect up to 1,500 t of Macauba fruit p.a. from existing trees
- Engage coffee harvesters off-season and improve their income with Macauba collection
- Process and sell Macauba products and by-products
- Build on-the-ground credibility with farmers for component 2

Establish a 2,000 ha Macauba silvopastoral system



- Establish 2,000ha plantation, with 300 trees/ha
- Continue milk production on the land, no plantation on non-pasture areas
- Land owned by smallholders (no land grabbing)

Benefits

Smallholders



- Production diversification;
- Improves microclimate of pasture;
- Prevention of erosion;
- Improves soil fertility;
- Income supplement;
- Feed supplementation;

Harvesters

- Employment for temporary workers (in the off-season of coffee);



Environment



- Carbon sequestration;
- Habitat for native species;
- Indirect reduction of deforestation;

Milestones

2019 – Winner of the 20x20 Initiative Project Award



2018 – Inclusion of the Macaúba project in the Brazilian Investment Plan for the FIP coordinated by the Brazilian Ministry of Environment



2015 - Finalist of the Brazil-Germany innovation award



Banco Mundial

2014 – 1st place in the World Bank's assessment for forest sustainability projects



2011 – Research funding by the European Union for the sustainable aviation fuel platform at Leuphana University



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