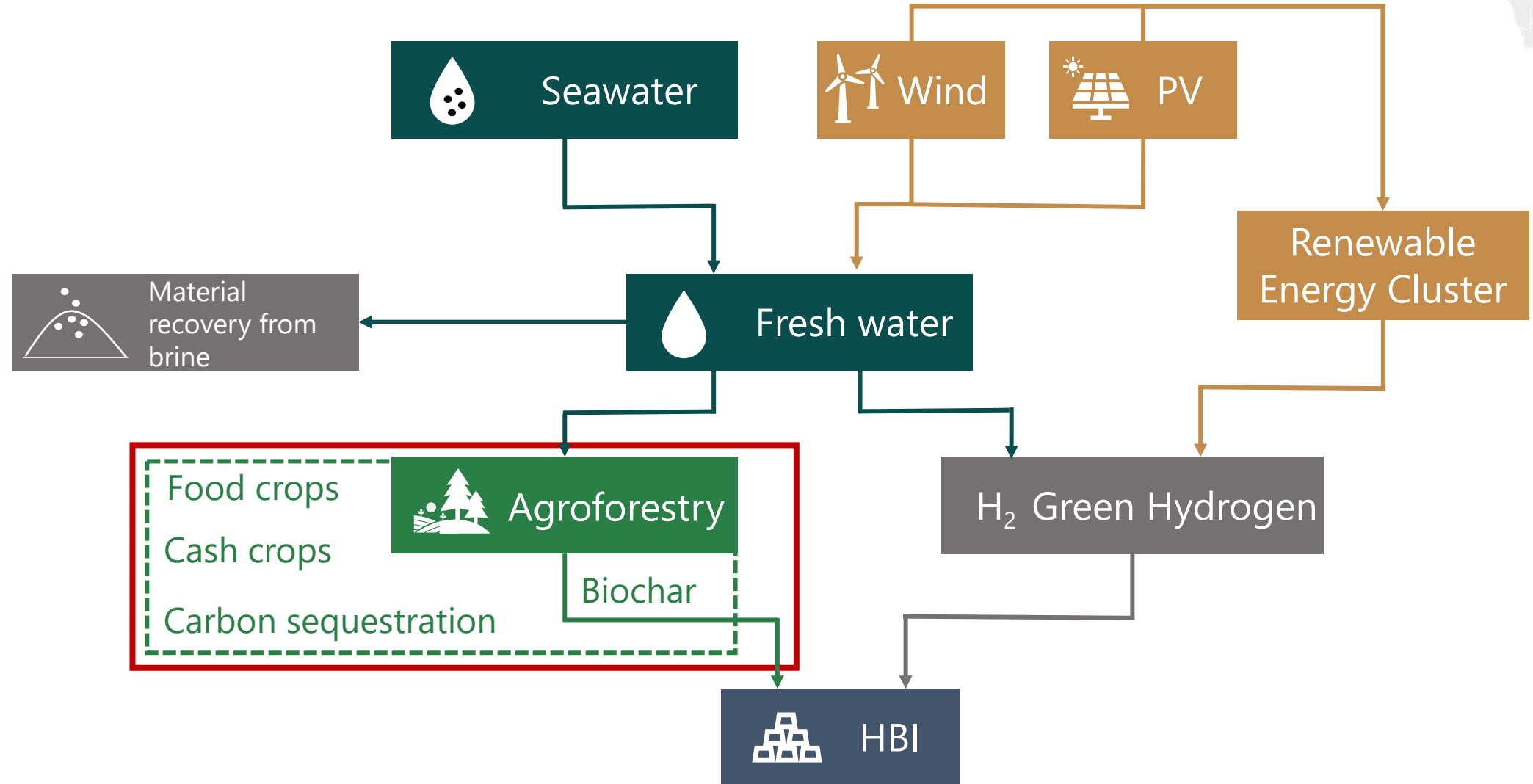


Economic Aspects of the SAREP Agroforestry System

Market Opportunities and Funding Requirements



The Rationale



Plot Versions



Crops Versions	Wood Mix	Jatropha	Staple Food	Product Focus
Version 1	3,000 ha	6,000 ha	1,000 ha	Jatropha Oil, Carbon Removal Certificates
Version 2	9,000 ha	0 ha	1,000 ha	Wood Pellets, Carbon Removal Certificates

Definition:

1 Plot = 10,000 ha of plant area

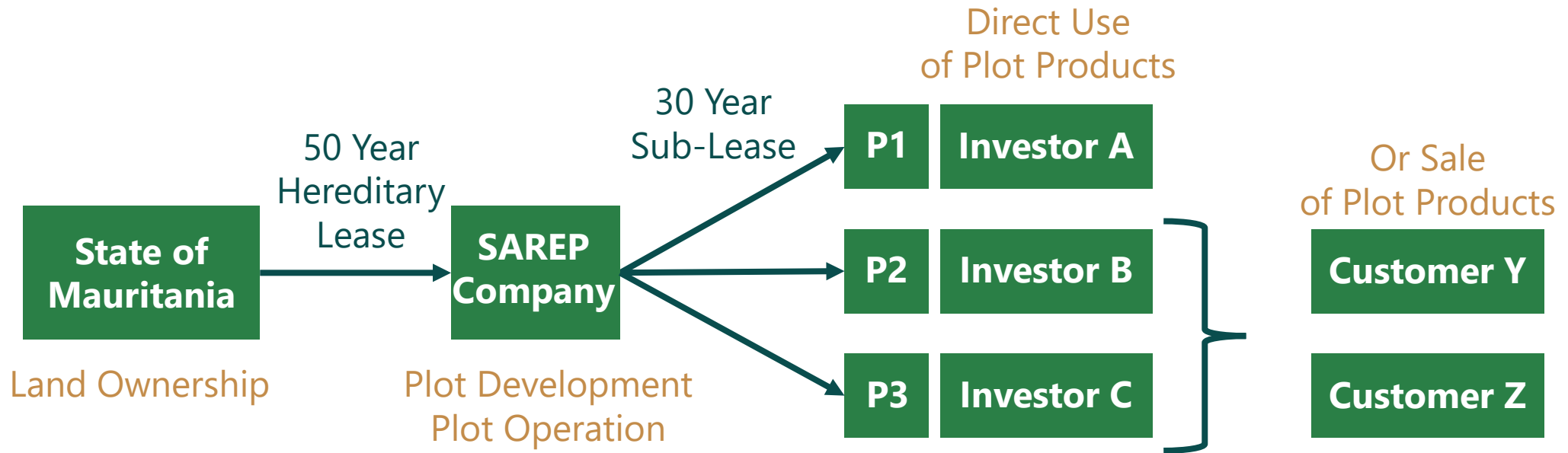
Visualization



Legend:

1. Settlement & Production Area
2. Nursery
3. Staple Food Field
4. Jatropha Field
5. Water Retention Basin
6. Outer Shelterbelt
7. Road/Firebreak

Ownership Structure



➡ Prevention of land-grabbing

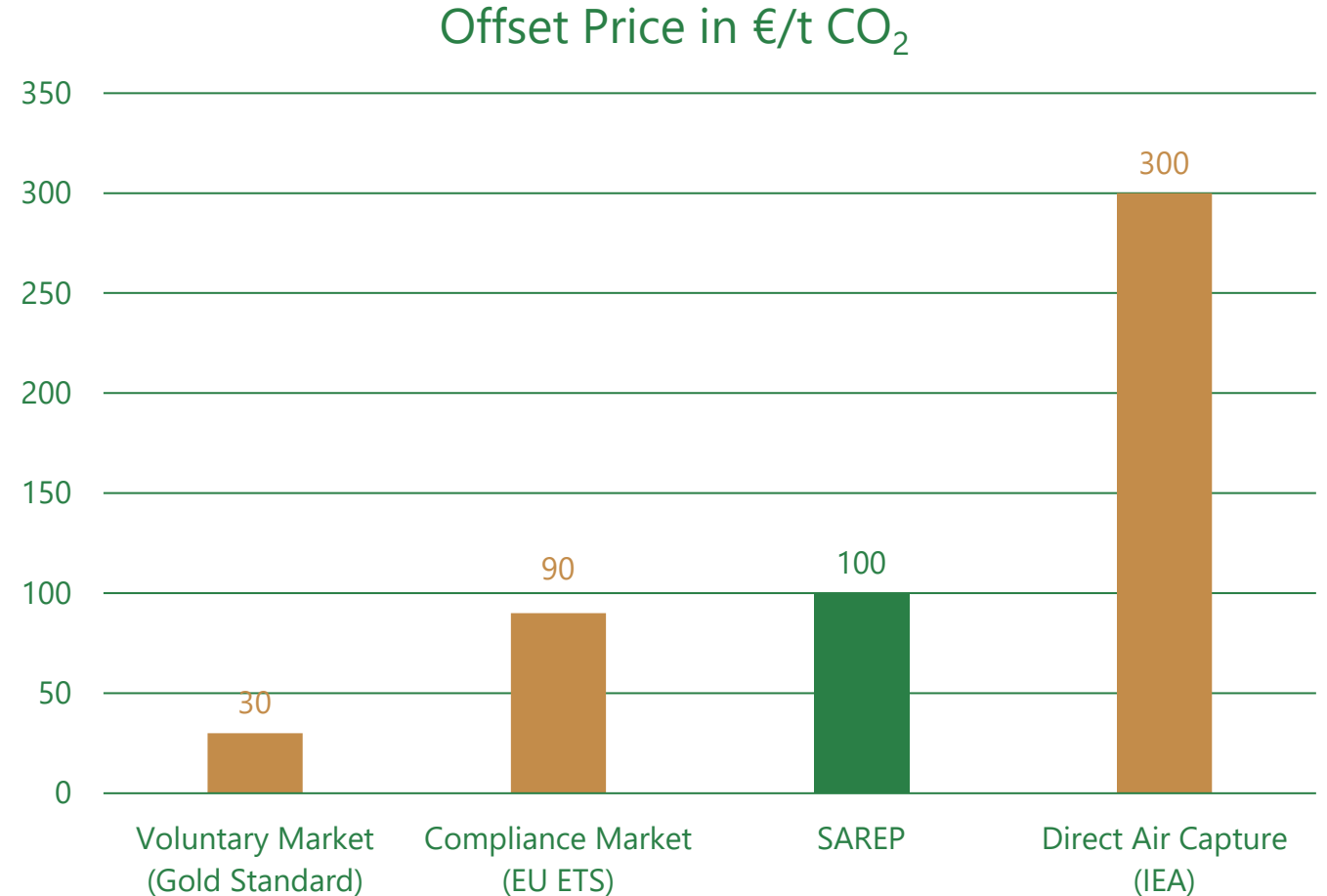
➡ Investments include assets for operation and product yields for 30 years

Carbon Certificate Market



Drivers:

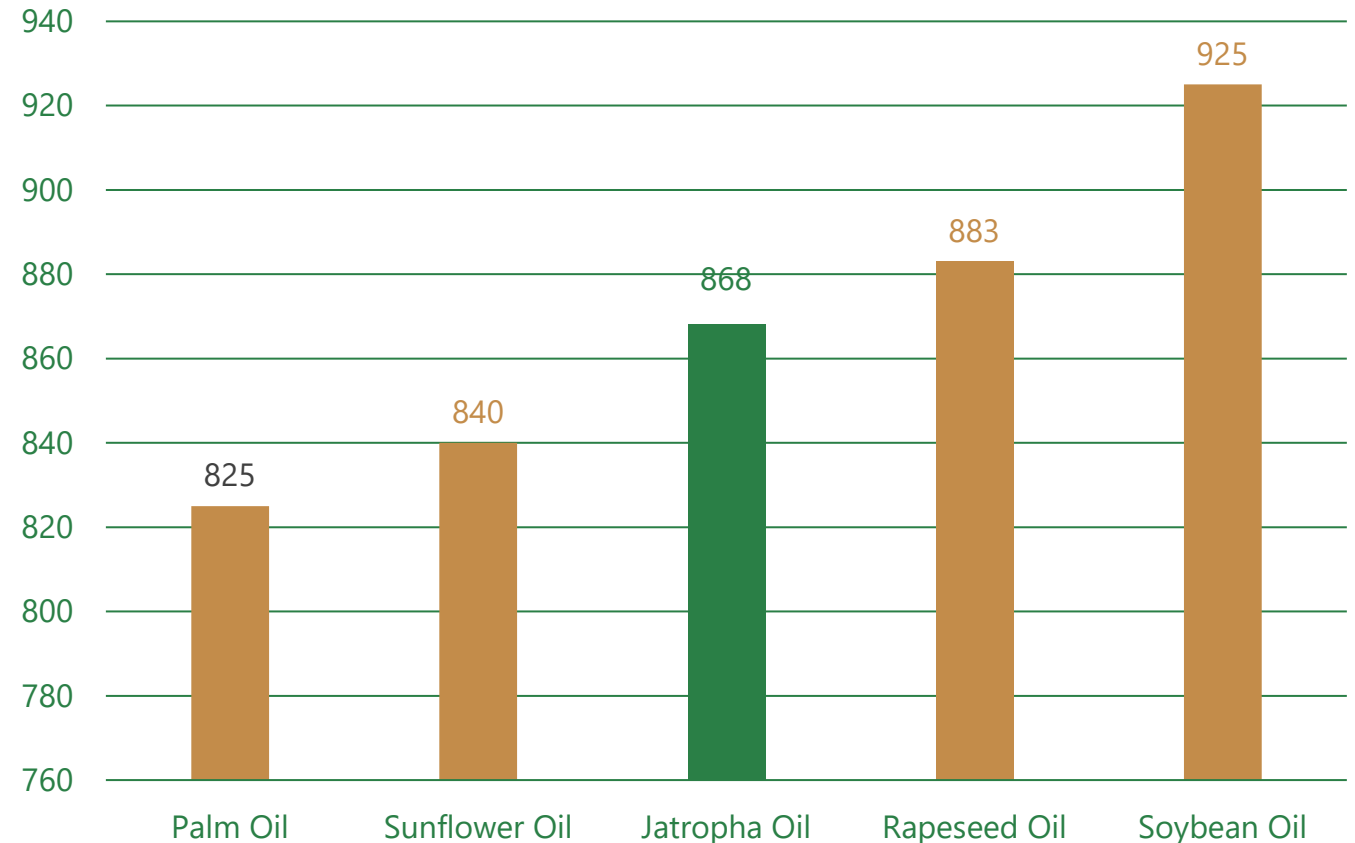
- Companies and countries committing to net-zero emissions
- Lack of high-quality certificate supply
- Limited value creation from technical solutions



Drivers:

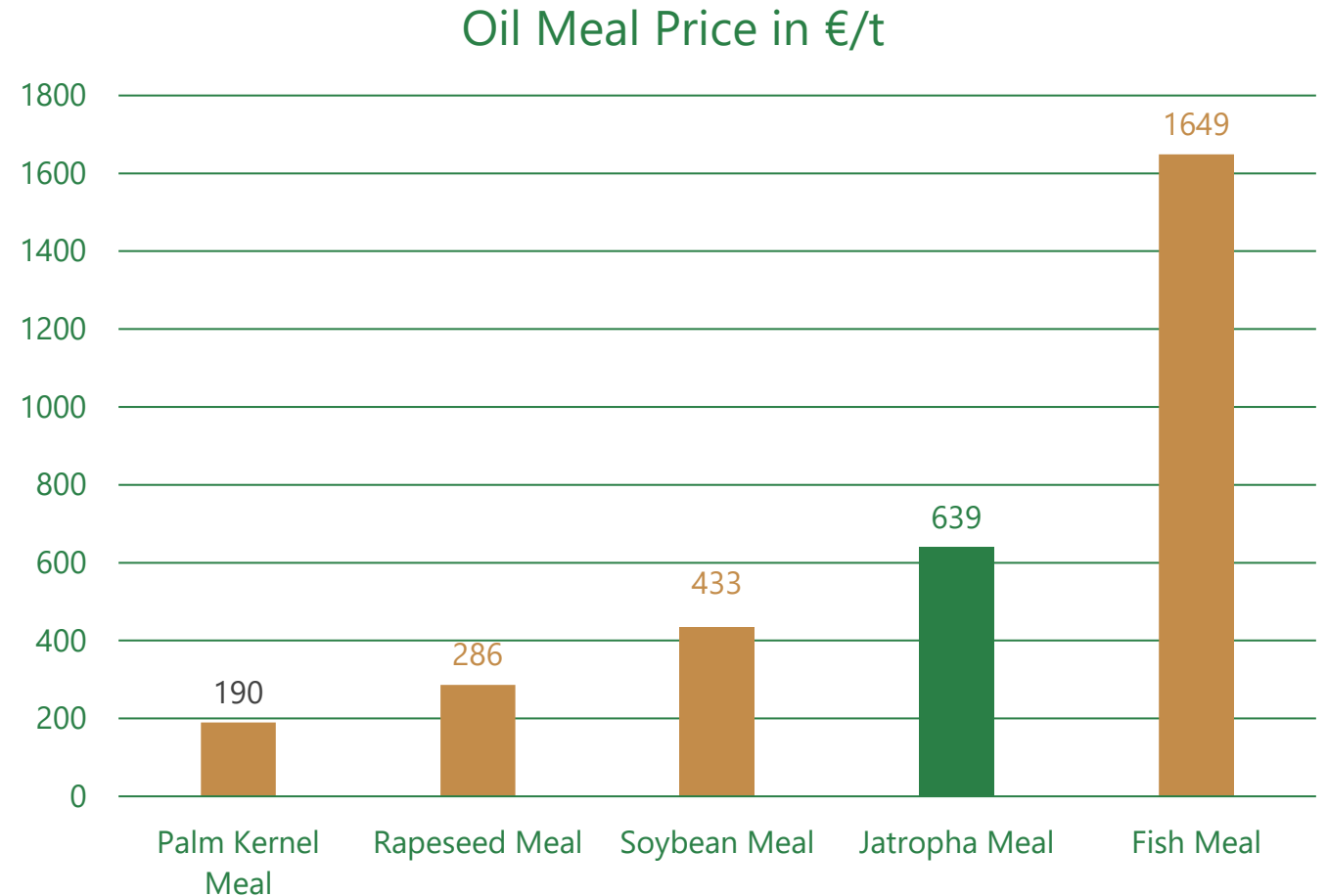
- Increasing crude oil and fossil fuel prices
- Increasing urge to decarbonize the transport sector
- Increasing biorefinery capacities

Vegetable Oil Price in €/t



Drivers:

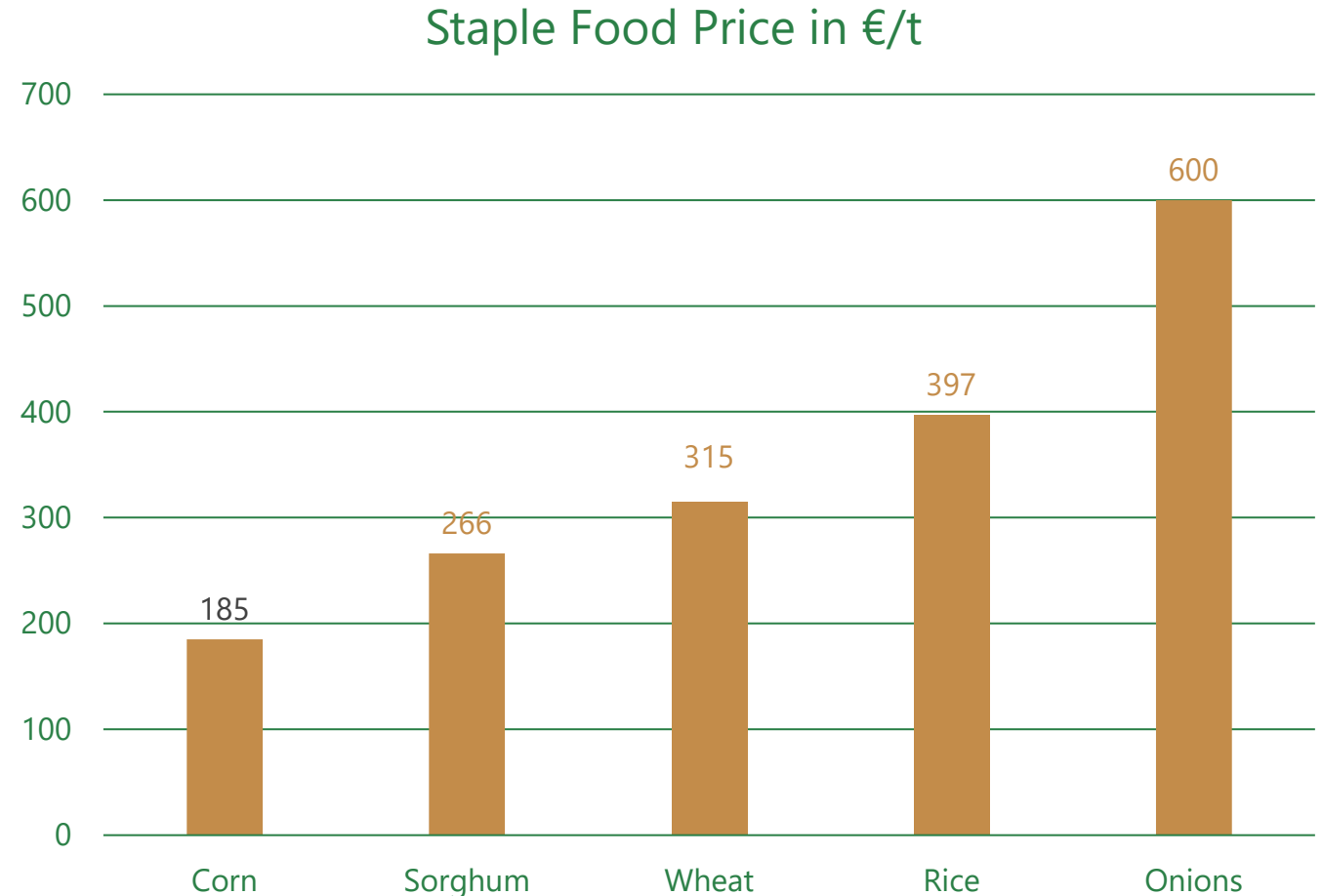
- Utilization of by-products
- High-quality protein animal feed
- Indirect contributor to food security



➔ **Mauritania's average annual cereal imports: 590,000 t (FAO)**

Drivers:

- Less available area for agriculture (urbanization, desertification)
- Supply chain instabilities (political embargos)
- Weather conditions



Simplified Overview

CAPEX: 100,000,000€

OPEX: 68,600,000€

- *Workers: 7,200,000€*
- *Technical OPEX: 55,400,000€*
- *Interest: 6,000,000€*

Revenues: 72.000.000€

- *Carbon certificates trees: 35,400,000€*
- *Carbon certificates Jatropha: 15,000,000€*
- *Vegetable oil, presscake, food crops: 21,600,000€*

KPIs:

NPV: 13,002,809€

IRR: 8.37%

PBP: 6,3 years

Modelling Assumptions

- WACC: 6 %
- Lifespan: 30 years

Nota bene: In the first three years, revenues could only be made by certifying sequestration during growth phase or by trading carbon sequestration futures.

650 ha Agroforestry | 60 Mill. € Investment



Key Facts

- 20,000 m³/d Desalination capacity
- 450 ha Prosopis
- 150 ha Jatropha curcas / Moringa oleifera
- 50 ha Staple food
- Application of approved technologies that are available on the market!

Scale Matters!



Initial Area Test Plot 650 ha

Capacity Land [ha]	650
Capacity Water [m ³ /d]	20,000
Reverse Osmosis [€]	35,000,000
Energy [€]	10,000,000
Back-up (off-grid) [€]	5,000,000
Agriculture & Infrastructure [€]	4,225,000
Development Capital [€]	5,775,000
Total Capital Demand [€]	60,000,000
LCoW [€/m ³]	0.7-0.8
IRR [%]	2.8
PBP [a]	18.1
NPV [€]	12,000,000

Expanded Area 65,000 ha

Capacity Land [ha]	65,000
Capacity Water [m ³ /d]	2,000,000
Reverse Osmosis [€]	1,750,000,000
Energy [€]	500,000,000
Back-up (off-grid) [€]	250,000,000
Agriculture & Infrastructure [€]	422,500,000
Development Capital [€]	
Total Capital Demand [€]	2,922,500,000
LCoW [€/m ³]	0.3-0.4
IRR [%]	11.9
PBP [a]	3.3
NPV [€]	2,270,000,000

UN SDGs

Solving global challenges

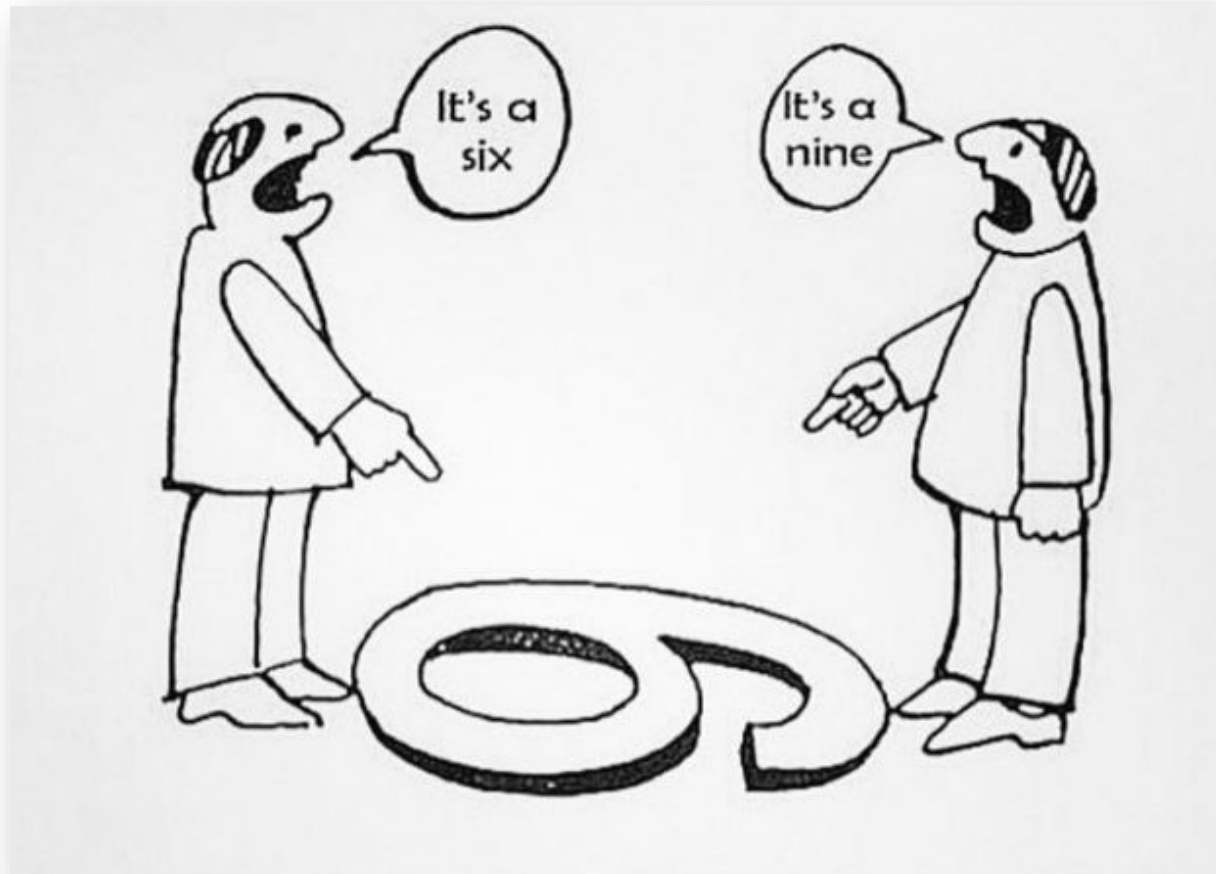
The holistic approach of SAREP, creating a circularized system and closing all loops, addresses all Sustainable Development Goals.



Impacts of a 10,000 ha plot:

- Food security
- Water security
- Energy security
- Up to 1,000,000 t CO₂ sequestered per year
- Returns generated on carbon offset investments
- 2,000 + X jobs
- Infrastructure development
- Employing state-of-the-art technology
- Increasing exports from Mauritania
- Attracting international investments
- Providing shelter

A Matter of Perspective



- Changing framework conditions can change the perception of what is possible and affordable.
- All perceivable trends point in a beneficial direction for SAREP.
- Vague pledges are condensed in one tangible project.

Thank you for your
attention!



SAREP WEBSITE