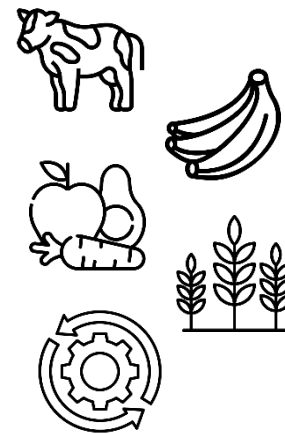


Investment Cases

National Rural Investment Program

Paraguay 2024



GOBIERNO DEL
PARAGUAY

MINISTERIO DE
AGRICULTURA
Y GANADERÍA

MINISTERIO
DE ECONOMÍA
Y FINANZAS

Follow-Up 2023 Investment Forum



Banana Value Chain:

- Expansion to Chilean and Brazilian markets
- USD 25 million project to build 40 km of paved roads (approved by Government)



Milk Value Chain:

- Interest of the bank in specific studies
- A sector-specific financial instrument is currently being designed



First 2024 National Investment Forum held for the first time, expanding interest among financial sector, international cooperation, and private sector actors



Agricultural typologies and **value chain prioritization** updated with **new Agricultural Census**

Paraguay Overview



Baa3 Credit Rating (Moody's)
Investment Grade



Middle Class
57% (2022)



Rural poverty decrease
from **70.0%** to **28.8%***



Inflation
3,7% (2023)



GDP in millions of USD
(2014 constant prices)
50.019



Agricultural Value Chains
31% of GDP (2022)



Average GDP growth rate
3.6% (2008 - 2023)



Value chain employment
27% (2022)



6.1 million
inhabitants

40M hectare surface area

Source: National Statistics and Census Institute

General poverty index of **24.7%**. World Bank (2022)

*(2023) Source: National Statistics and Census Institute

Investment Environment



3rd largest river
fleet in the world



+ Trade Agreements
MERCOSUR
23 Bilateral
8 Regional



32.060 km
Roads and
highways
network



Legal
guarantees



- Tax rate of
the region

**Best-ranked across South
America**

2024 Expectation Index

85.8

Latin American
average



154,6
Paraguay

National investment strategy in agro-productive value chains aligned with national priorities:

- National Employment Plan 2022-2026
- MAG Institutional Strategic Plan 2024 - 2029
- Program for the Promotion of Agricultural Competitiveness Development 2018
- National Program for the Promotion of the Dairy Value Chain 2014
- National Plan for the Development of the Banana Value Chain 2022
- National Program for the Sustainable Development of Aquaculture 2011

Territorial Typology Platform Hand-in-Hand Paraguay



Promising territories and high-potential value chains identified



Potential for growth in value chain efficiency



Structured and evidence-based public-private dialogue



Developing a systemic and integrated approach



National Investment Program

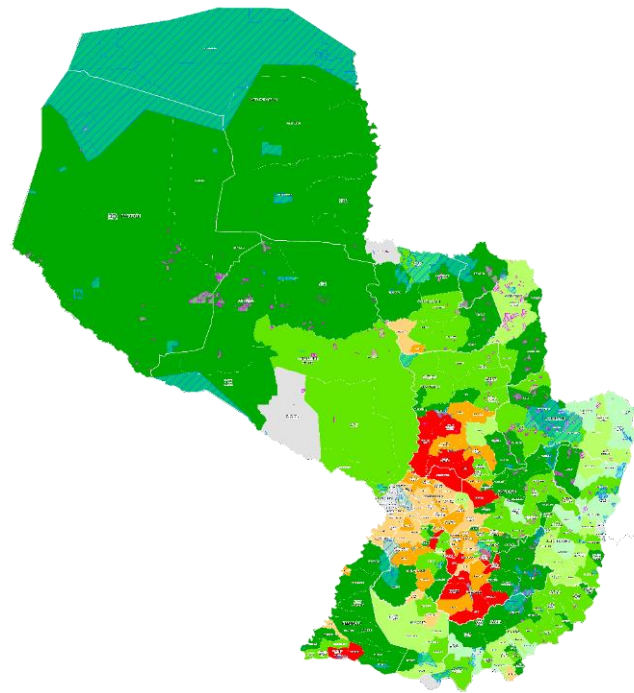
Coordinating public institutional services, private investment, and development cooperation



Potential territories

Identified value chains

Potential for growth in value chain efficiency



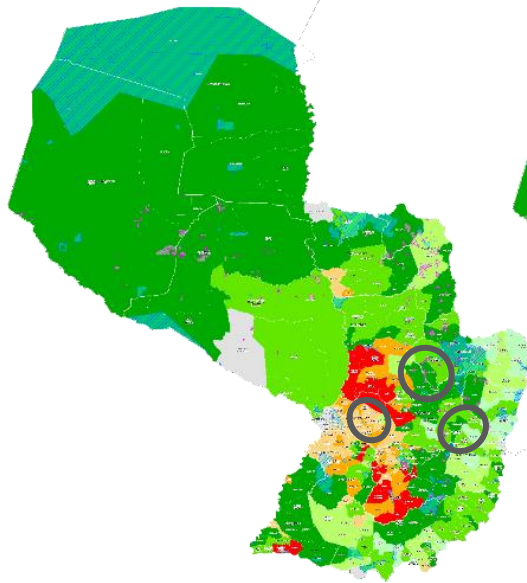
Agricultural Typologies of Paraguay Hand-in-Hand

Hand-in-Hand Territorial Typologies Paraguay 2024 Investment Initiatives

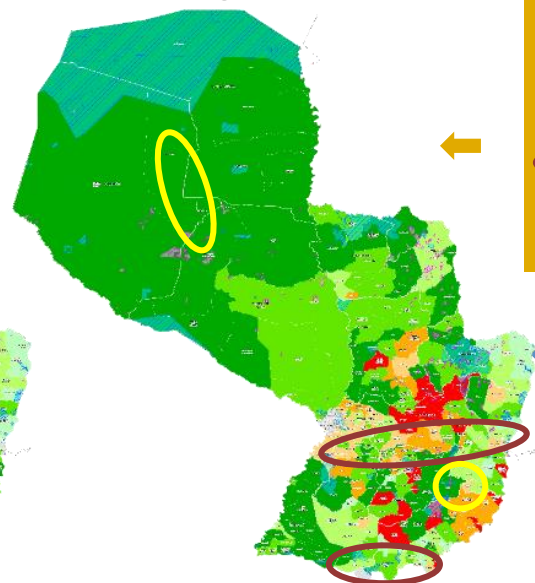
Domestic market value chains
Vegetables -
Cassava
Banana
Pineapple

Export-focused value chains
Soy - Corn
Wheat - Rice

Crop typologies



Livestock typologies



Livestock value chains in development
Aquaculture
Sheep
Goats

Agroindustrial value chains
Bovines - Dairy
Pork - Poultry

Territories with opportunities in promising value chains

Banana production Investment Case



2024



Increase the productivity of the value chain through its technification and modernization, and expand participation in national and international markets

Bottlenecks

- Medium/low productivity levels on the farm
- Low technification of the chain and high losses
- Insufficient road infrastructure increases logistical costs
- Exports highly concentrated in a single neighbor country
- Supply lower than potential demand

Opportunities

- Consolidate the **Argentine market and expand to Chile and Brazil**
- **MERCOSUR** trade agreements
- Cover **national demand** for flour

Risks

- Pest and disease
- High dependence on a single export market
- Non-compliance with quality standards
- Deficiencies in the technical management of agro-industrial processing

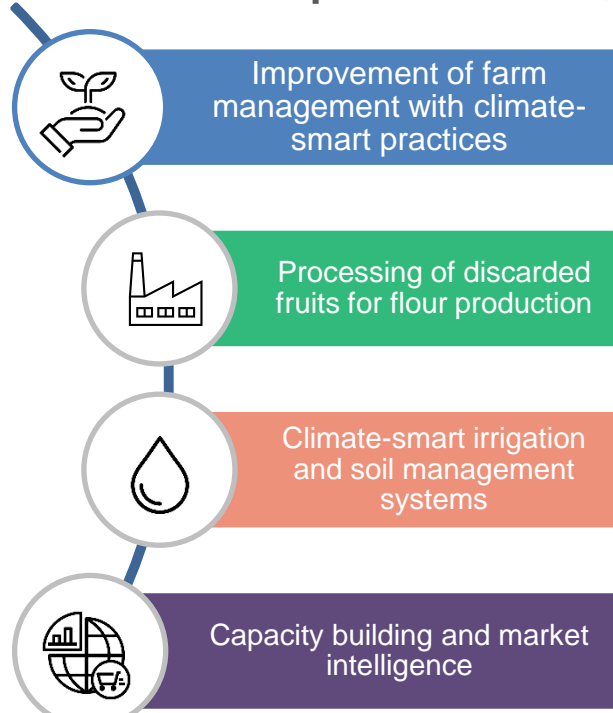
Required Investments

- Increase productivity on **5,500 hectares** of crops through the improvement of **climate-smart practices** and management tools
- Install **technified irrigation systems** for efficient water management in **1,500 hectares**
- Construction and provision of **2 flour processing plants** to expand agro-industrial capacity for national and international markets
- Structure and implement a **Market Development and Intelligence Strategy**
- Construction and improvement of **road infrastructure**

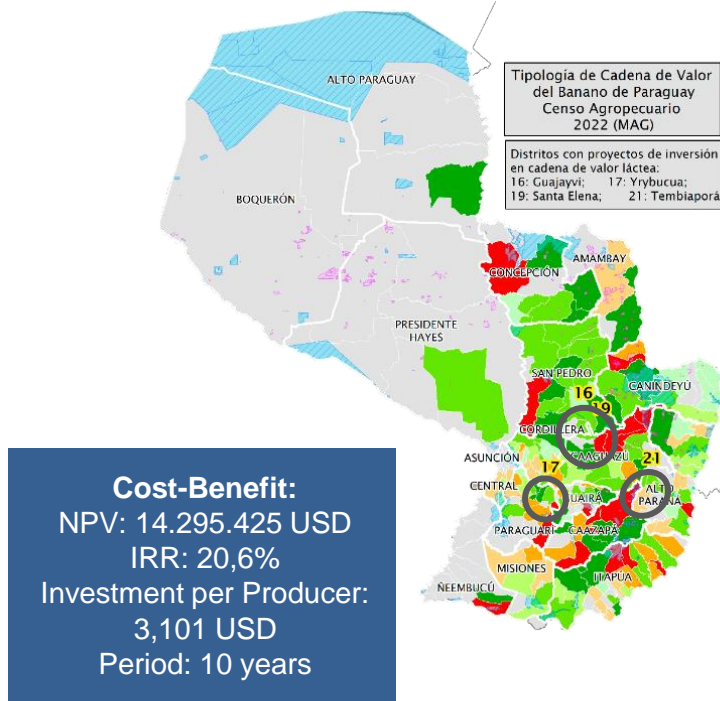
Mitigation Strategies

- Research and application of sanitary protocols (IPM)
- Market diversification and development of new products
- Implement quality control measures and certification
- Implement training, develop quality standards, and establish control and auditing mechanisms

Banana production



Total Investment:
USD 12,760.475



Cost-Benefit:
NPV: 14.295.425 USD
IRR: 20,6%
Investment per Producer:
3,101 USD
Period: 10 years

Markets: Argentina, Brasil, Chile + MERCOSUR
Flour: domestic demand

Impacts Generated

-  **5.500** hectares
-  **2850** Families (12,825 people)
-  **270** New jobs
-  **20%** Productivity increase
-  **20%** Income increase
-  **11.487** million tCO2 eq/ha 20 years

Dairy production Investment Case



2024

Increase the supply of raw milk and improve the technification of the value chain, enhancing efficiency and productivity to expand across domestic and international markets

Bottlenecks

- Deficit of raw milk for the installed agro-industrial capacity
- Need for improved animal feed
- Inefficiency in milk collection
- Limited access to financing for producers
- Inadequate animal genetics

Opportunities

- Wide growth potential due to **domestic demand** and export of powdered milk and cream
- Under-used industrial capacity

Risks

- Peaks of excess production
- Contraband of certain dairy products
- Diseases and pests
- Price fluctuations
- Climate variability


Required Investments

- Genetic and productive improvement of **23,000 head** of cattle (infrastructure, equipment, and materials)
- Strengthening the productive and associative capacity of **100 producer organizations**
- Modernization of productive equipment, infrastructure, and transportation for **4,950 production units**
- Soil recovery and improvement of pastures and forage under a **climate-smart approach over 7.910 hectares**
- Modernization and equipping of **100 collection centers with eco-efficient technology**


Mitigation Strategies

- Processing of powdered milk
- Implement border control measures
- Research and application of sanitary protocols
- Strengthen cooperatives with market stabilization mechanisms
- Promote resilient grass varieties and breeds


Dairy production




Infrastructure, equipment, and materials for genetic and sanitary improvement



Improvement and recovery of soils under a climate-smart approach



Modernization of productive infrastructure and equipment with eco-efficient technologies

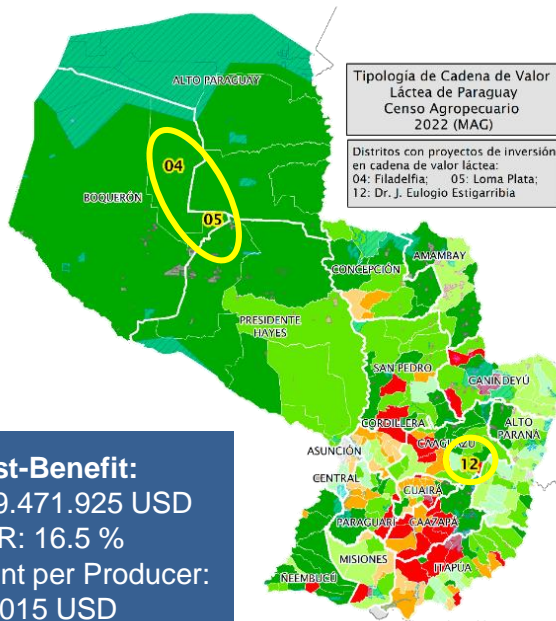


Operational management and capacity building

Total Investment:
USD 47,980.708

- **Market:** domestic demand
- **powdered milk and cream:** Bolivia, Benin, Brazil, Chile and Taiwan


Cost-Benefit:
 NPV: 29.471.925 USD
 IRR: 16.5 %
 Investment per Producer:
 9,015 USD
 Period: 10 years



Impacts Generated




3,950 Producer families (18,900 people)



15% Increase in productivity per head



600 New jobs



15% Increase in family incomes



29.992 million tCO₂ eq/ha 20 years

Aquaculture production Investment Case



2024



Increase the production and processing of fish for the domestic and regional markets

Bottlenecks

- Availability and quality of balanced feed
- Collection, harvesting, and processing infrastructure
- Insufficient production volume for domestic consumption and export
- Insufficient logistics and transportation capacity

Opportunities

- Wide growth potential for **domestic demand**
- Employment for women and Indigenous peoples

Risks

- Import of fry from abroad
- Entry of foreign balanced feed without licensing or quality control
- Diseases and pests
- Price fluctuations
- Climate variability

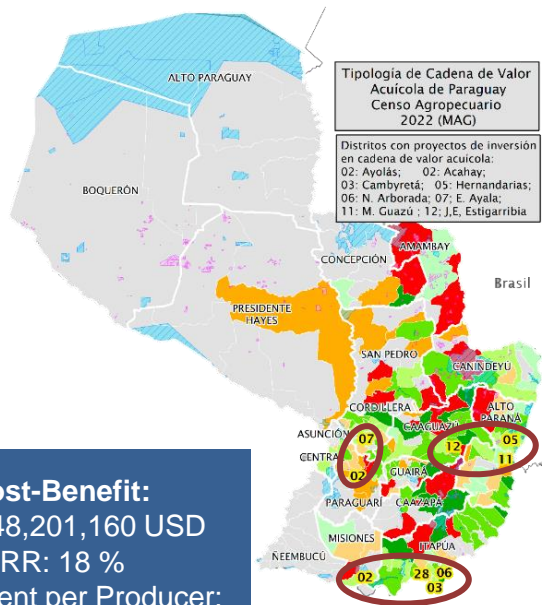
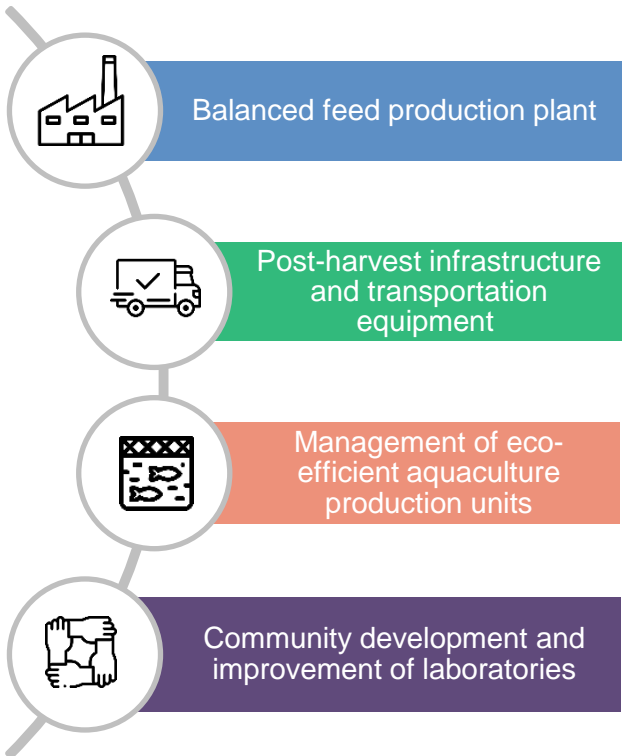
Required Investments

- Construction of **1,287 eco-efficient aquaculture ponds** for fattening native species
- Infrastructure and machinery for **1 balanced feed processing plant**
- Provision of **6 transportation systems** (conventional and refrigerated)
- Improvement of infrastructure and technology in **university laboratories**
- Improvement of infrastructure for a **regional storage center** to consolidate production

Mitigation Strategies

- Control the illegal entry of balanced feed
- Production of national balanced feed
- Improve the genetic quality of national fry supply
- Research and application of sanitary protocols
- Strengthen cooperatives with market stabilization mechanisms
- Promote efficient water management practices

Aquaculture Production



Cost-Benefit:
 NPV: 48,201,160 USD
 IRR: 18 %
 Investment per Producer:
 2,060 USD
 Period: 10 years

Generated Impacts

- 23,040** Aquacultural Families (103,680 people)
- 10%** Productivity increase
- 264** New jobs
- 6,236 Tons.** Additional production
- 10% +** Labor participation among Women and Indigenous people
- 16,349** million tCO2 eq/ha 20 years

Total Investment:
USD 50,000,000

Market: cover domestic demand

Summary of Investment Cases

USD 110.741.183 Total Investment	18,3% Average IRR	USD 91.968.510 Average NPV	29.840 Direct beneficiaries	1,134 Direct jobs created	USD 1,040 Average increase in per capita incomes	57,928 tCO2 -eq in 20 years Total carbon balance (ExACT)
			132.305 Indirect beneficiaries			

Banana

Cost: **USD 12.760.475**

Unit Cost of Investment: **USD 3.101**

IRR: (%) **20,6**

NPV: **USD 14.295.425**

Sustainability Benefits

Direct beneficiaries (families): **2,850**

Indirect beneficiaries: **12,825**

Increase in income per capita: **USD 1,033**

Carbon balance (ExACT): **11.487 tCO2-eq** in 20 years

Dairy

Cost: **USD 47.980.708**

Unit Cost of Investment: **USD 9,015**

IRR: (%) **16,5**

NPV: **USD 29.471.925**

Sustainability Benefits

Direct beneficiaries (families): **3,950**

Indirect beneficiaries: **15,800**

Increase in income per capita: **USD 1,032**

Carbon balance (ExACT): **29.992 tCO2-eq** in 20 years

Aquaculture

Cost: **USD 50.000.000**

Unit Cost of Investment: **USD 2,060**

IRR: (%) **18**

NPV: **USD 48.201.160**

Sustainability Benefits

Direct beneficiaries (families): **23,040**

Indirect beneficiaries: **103,680**

Increase in income per capita: **USD 1,056**

Carbon balance (ExACT): **16.349 tCO2-eq** in 20 years