# INVESTMENT FACTSHEET

# HORTICULTURE

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GROUNDD

# INVESTMENT FACTSHEET

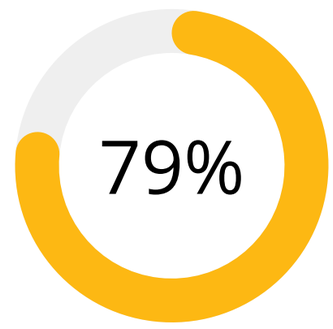
## CATALYSING SUSTAINABILITY OF HORTICULTURE IN VANDUZI AND BARUE DISTRICTS

MANICA, MOZAMBIQUE

## ENABLING CONDITIONS - CATALYSTS FOR SUCCESS

**Willingness of communities to adopt Climate Smart Agriculture (CSA) and Nature-based Solutions (NbS)**

Horticulture is widely accepted, particularly among women-led groups. Women's groups, particularly those engaged in horticulture, emphasized barriers tied to market access and financing, while farmers across various communities raised concerns regarding declining soil fertility and unpredictable rainfall patterns.




**Legal or policy framework supporting value chains**

Some supportive policies exist but lack proper implementation. Horticulture production shows strong potential for income generation across communities like Macossa and Chindengue, particularly among women-led groups.

**Legal rights to access and use land/resources**

Land tenure rights are not always clear, especially for women. Providing gender-responsive financing or supporting land title processes can significantly enhance women's participation in higher-value crops like tomatoes and onions.

**Community participation and acceptance**

High participation in horticulture, particularly among women. Women's groups demonstrate robust organizational capacity and commitment, but their potential to scale operations is hindered by limited land tenure rights and constraints on accessing credit.

**Governance structures supporting enforcement**

Local cooperatives support governance but lack influence. Horticultural cooperatives provide some governance structure, but weak enforcement of market standards limits their effectiveness in price negotiations and fair trade practices.

## FINANCIAL VIABILITY

### ASSUMPTIONS

- Yield per hectare
- Post-Harvest losses
- Storage Infrastructure Investment
- Training and Capacity Building
- Irrigation System Investment
- Land Preparation Costs

### SCENARIOS

**1** **Business-as-usual: Represents the conventional farming approach, where smallholder farmers rely on rain-fed agriculture with minimal investment in soil fertility, irrigation, pest management, and storage infrastructure.**

**2** **Transformative change: Incorporates CSA and NbS, integrating improved soil and pest management, irrigation systems, organic inputs, and cooperative market structures to enhance productivity and resilience.**

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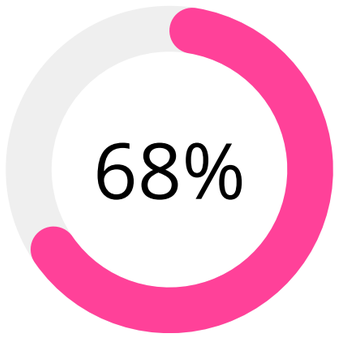
## FINANCIAL VIABILITY - THRIVING ENTERPRISES

### Use of resources and revenue

Horticulture offers strong short-term income potential, particularly near urban centers. However, limited storage and transport infrastructure hinder profitability in rural zones.




### Market demand

Urban demand for fresh vegetables is growing. Horticulture has seasonal price advantages and expanding local markets, but suffers from informality and fluctuating demand.

### Production skills and infrastructure

Horticultural skills are widespread, but infrastructure (cold storage, transport) is lacking. Improved practices and access to inputs could unlock greater value.

### Social, political, economical and environmental risks management

Horticulture is sensitive to water stress, disease, and post-harvest loss, but diversified crops and drip irrigation reduce some exposure. Social and political risks are relatively low.

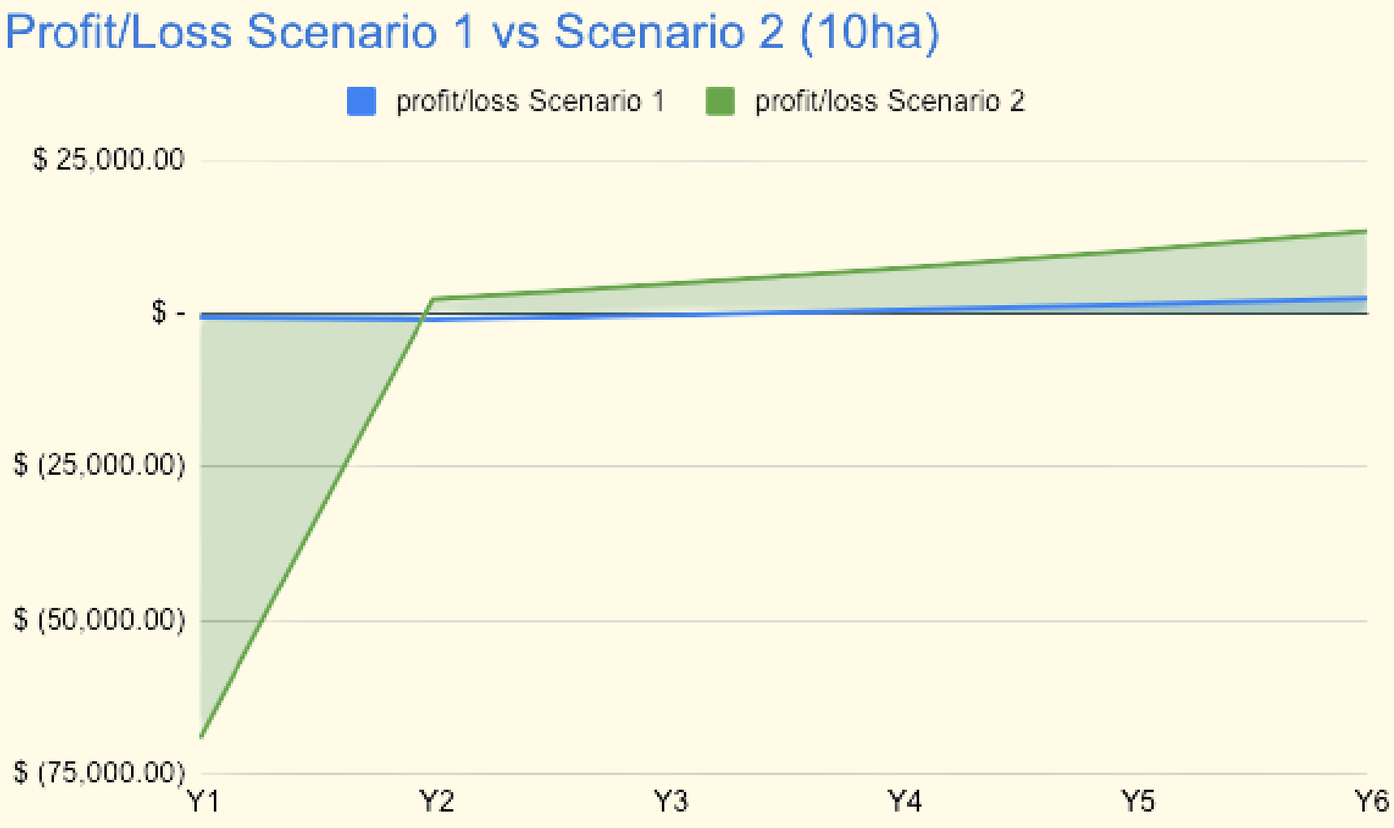
### Potential for partnerships and decision-making for fair benefit distribution

Well-established informal networks facilitate participation, but formal partnerships (NGOs, cooperatives for cold storage) are needed to ensure equitable value sharing and service delivery.

### Sustainable supply of natural goods/services assessment

Year-round production is possible with irrigation, and many areas have favorable agroecological conditions. Nonetheless, water scarcity and input access affect consistency and quality.

## ROI AND PROFIT/LOSS ANALYSIS




### Break-even

**Scenario 1** — YEAR 3

**Scenario 2** — YEAR 2

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## CATALYSING SUSTAINABILITY OF HORTICULTURE IN VANDUZI AND BARUE DISTRICTS

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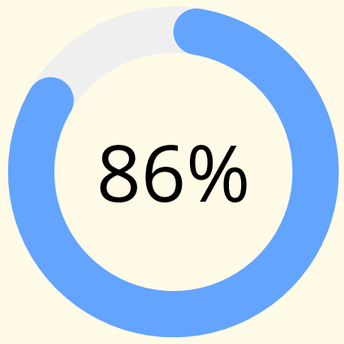
## CULTURAL AND SOCIAL ALIGNMENT - COMMUNITY IMPACT

### Women's inclusion and representation

Women play a key role in horticulture. The Simukai Azimai Club in Chindengue demonstrates women's organizational strengths in managing both production and sales of vegetables like tomatoes and onions, though they still face systemic barriers related to land ownership and access to credit.




### Prior community experience with value chain

Horticulture is well-known but requires better technical support. While farmers are familiar with tomato and onion production, they need better access to agricultural extension services and post-harvest management training to improve yield and quality.

### Fair distribution of benefits

Market control limits fair distribution of benefits. In some cases, buyers dictate prices, leaving small farmers with little negotiation power, especially in tomato and onion markets where middlemen dominate the supply chain.

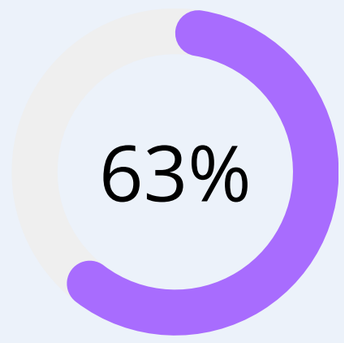
### Socio-economic impacts and cultural relevance

Horticulture is culturally significant and provides steady income. Although maize remains the dominant crop, horticulture is becoming increasingly important for diversified income generation, particularly among women farmers.

## CLIMATE AND NATURE - NATURE'S BALANCE

### Climate resilience and water stress reduction methods

Climate-resilient farming is being promoted, but adoption remains inconsistent. Rainfed systems dominate horticulture, and only a few associations, such as Piscina in Barué, utilize sprinkler or drip irrigation, reflecting a broader challenge of accessing affordable water-management technologies.




### Restoration activities in the region

Limited restoration efforts linked to horticulture. Horticultural production often occurs near water sources, but soil degradation due to overuse of fertilizers and chemicals is becoming a concern.

### Integration of native species in restoration

Agroforestry integration remains minimal. Unlike maize, which is sometimes grown in agroforestry systems, horticulture remains largely separate from native species restoration efforts.

### Efficient and resilient irrigation systems

Horticulture is heavily rain-dependent. Only a small number of producers have irrigation systems, including sprinkler, drip, and gravity irrigation, mainly in association-managed fields in Vanduzi district.

### Ecosystem service benefits vs. threats

Long-term viability is threatened by soil depletion. Climate risks and market dynamics must be addressed for sustainability.

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## CATALYSING SUSTAINABILITY OF HORTICULTURE IN VANDUZI AND BARUE DISTRICTS

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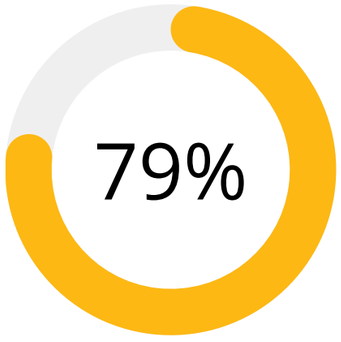
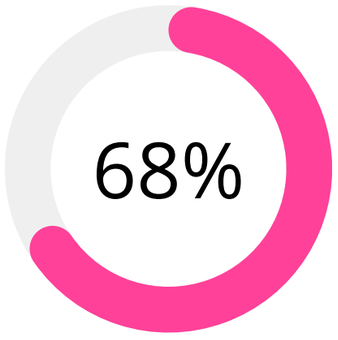
## FINAL SCORING PER COMPONENT



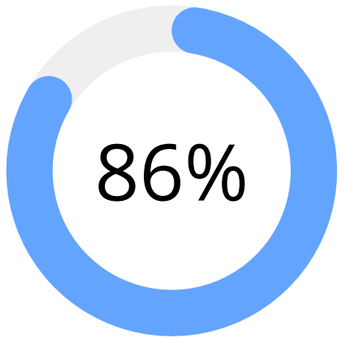

### Catalysts for Success

**Current conditions are well aligned with CERS criteria linked to Policy, Participation, Land Rights, and Institutional Capacity. There is still room for improvement.**



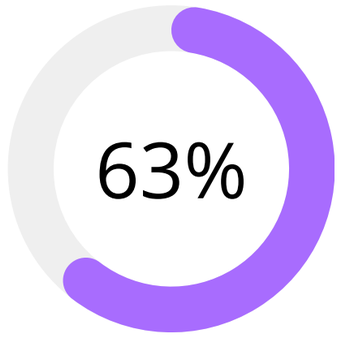

### Thriving Enterprises

**Current conditions are well aligned with CERS criteria linked to Assumptions, ROI, Scenarios, and Break-even. There is still room for improvement.**




### Community Impact

**Current conditions are perfectly aligned with CERS criteria linked to Intrinsic values, Inclusion, and Benefit sharing.**

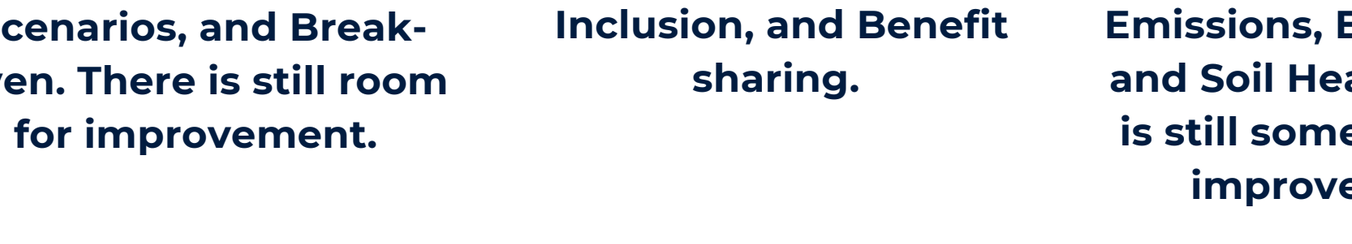



### Nature's Balance

**Current conditions are well aligned with CERS criteria linked to Biodiversity, Carbon Emissions, Ecosystem, and Soil Health. There is still some room for improvement.**

*Recommendations for improvement on the next page*

## FINAL VIABILITY SCORING CONSIDERING NbS and CSA practices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## INVESTMENT RECOMMENDATIONS

- Expand access to **solar-powered drip or sprinkler irrigation systems**, especially in Piscina and Chindengue, where interest is high but access to equipment is low (as alternative to exisiting gravity system).

- Train farmers in **pest management**, **irrigation techniques**, **soil nutrition**, and **market planning**.

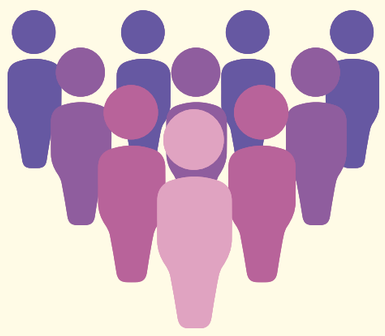
- Promote **agro-ecological practices** like composting and crop rotation in Nhamadembe, 7 de Abril, Campo 4 and Bellas

- Introduce **refrigerated transport** options for urban market access (vehicle to support regional sales).

- Build **cold storage hubs** and packhouses in strategic centers like Chindengue (power access) and Piscina.

- Target Bellas and Nhamadembe to pilot **integrated food security interventions**.

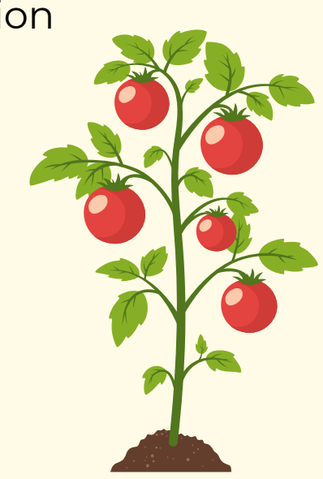
- Promote **household-level vegetable gardens** and link horticulture production to nutrition programs in schools and clinics.



- Advocate for **gender-inclusive policies** and ensure participation in producer cooperatives.

- Use 7 de Abril (access to irrigation fields) as regional **training hubs** for **horticulture-focused youth** and **women groups**.

- Facilitate **DUAT processes** and **collective land titles** (including) women's groups in Chindengue, Macossa, Vilanova, Maputo, Nhautsanze (new areas with irrigation capacity).



- Create **demonstration plots** showing benefits for crops like tomatoes and leafy greens.

- Provide **maintenance training** and create **community-led** water user groups.

- Link producers with **urban buyers** (Beira, Chimoio) through **structured contracts**.

- Promote **digital platforms** and wholesale market entry for vegetable producers.

- Facilitate **subsidies or credit** for quality seeds, compost, and natural pest repellents (Financial Literacy and Inclusion).

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