



Food and Agriculture Organization  
of the United Nations



# Scaling-up capacity, partnerships and investment to accelerate climate smart agrifood systems transformation in Southern Africa



**Hand-in-Hand**  
Initiative

**Hand in Hand Regional  
Initiative for Southern Africa**

**Investment Forum | Rome, Italy | 15-17 October 2024**



# SADC Economies



## 16 Member States

**Phase 1 :** Angola, Botswana, Eswatini, Lesotho Malawi, Mozambique, Namibia, South Africa , Zambia, Zimbabwe

**Phase 2 :** Comoros, DRC, Madagascar, Mauritius Tanzania, Seychelles,

4

## Low Income Countries

UNCTAD, 2024

DRC, Malawi, Mozambique, Madagascar,

Countries

3

## Small Island Developing States (SIDS)

Comoros, Mauritius , Seychelles

6

## Land Locked Developing Countries (LLDCs)

UNCTAD, 2024

Botswana, Eswatini, Lesotho, Malawi, Zambia, Zimbabwe

7

## Lower Middle Income

World Bank , 2024

Angola, Comoros, Eswatini, Lesotho, Tanzania, Zambia Zimbabwe

1

## High Income

World Bank , 2024

Seychelles

4

## Upper Middle Income

World Bank , 2024

Botswana, Mauritius, Namibia, South Africa



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# Regional Agriculture Investment Plan



## Production & Productivity

Production, Productivity and Competitiveness

## Market & Trade

Increased Access to Markets and Trade of Agriculture Products

## Investment & Finance

Increased Investments in and Access to Finance for Agriculture

## Food Security & Nutrition

Improved Food and Nutrition Security

# SADC CONTEXT



**Poverty**

**43%**

World Bank, 2023 Poverty headcount ratio at \$2.15 a day



**Food Insecurity**

**17.4 Mln**

SOFI, 2023



**GDP**

**Contribution  
Agriculture**

**33%**

AUDA NEPAD, 2024



**GDP**

**\$721.3 Bln**

SADC, 2018



**Population**

**363  
Mln**



**Arable Land Area**

**556 781km2**

SADC, 2024

# Investment Enablers in Southern Africa

## Infrastructure

5 Ports, Rail, & Road Network

## Climate

Favourable Climatic conditions

## Peace & Security

SADC Region enjoys Peace and Security

## Financial Sector

Considerably Functional Financial Sector

## Policy

Regional Agriculture investment Plan

## Demographics

Increasing youth population

## Challenges & Opportunities for Investments

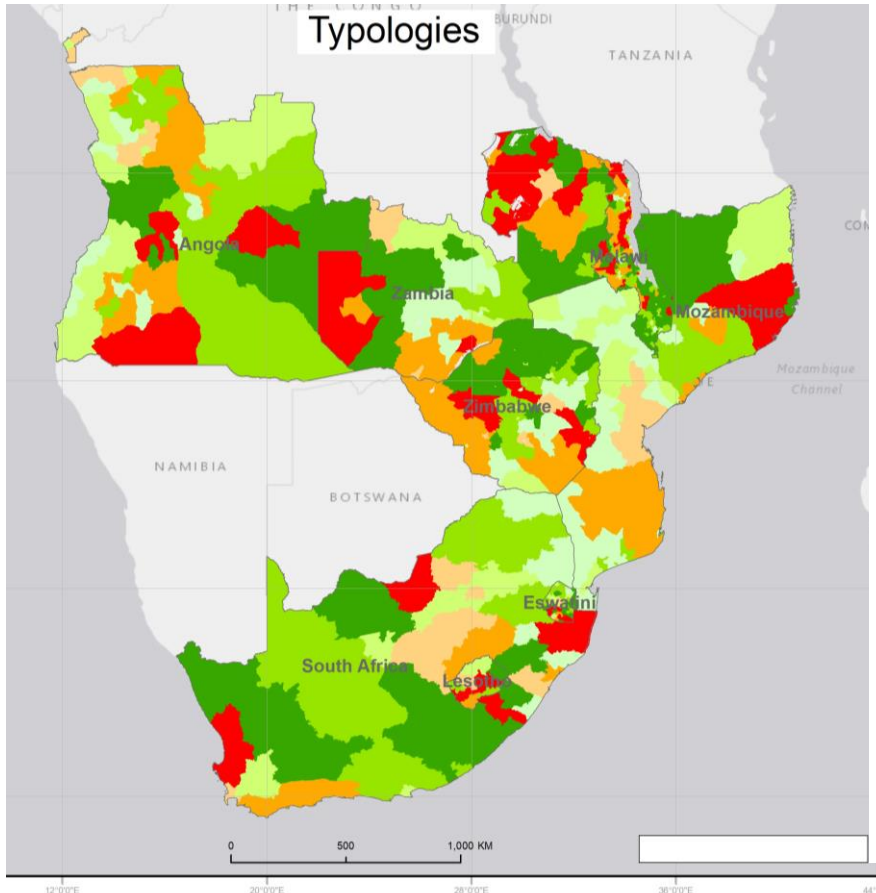
### Challenges:

- **Low investment in agriculture** production and productivity enhancement infrastructure e.g. irrigation, mechanization, industrialization, digital technology etc. ~7% of cultivated area equipped for irrigation (IWMI, 2023)
- **Low levels of Intra-African trade:** similar production, inadequate trade, sub-optimal infrastructure, High tariff and non-tariff barriers

### Opportunities:

- Irrigation development
- Industrialization focusing on agro-processing and value addition
- Smallholder farmer aggregation

# Typologies & Delivery Axis



Source: HIH GIS team, 2024

Table 1: Typology classification

Critical with moderate agricultural opportunities
Medium priority with moderate agricultural opportunities
Low priority
High priority
Medium priority with high agricultural opportunities
Low priority with high agricultural opportunities
High performance

Phase 1 : 2024

## 1. Climate Smart Agriculture

- a. Irrigation “Small Reservoirs”
- b. Solar pumps

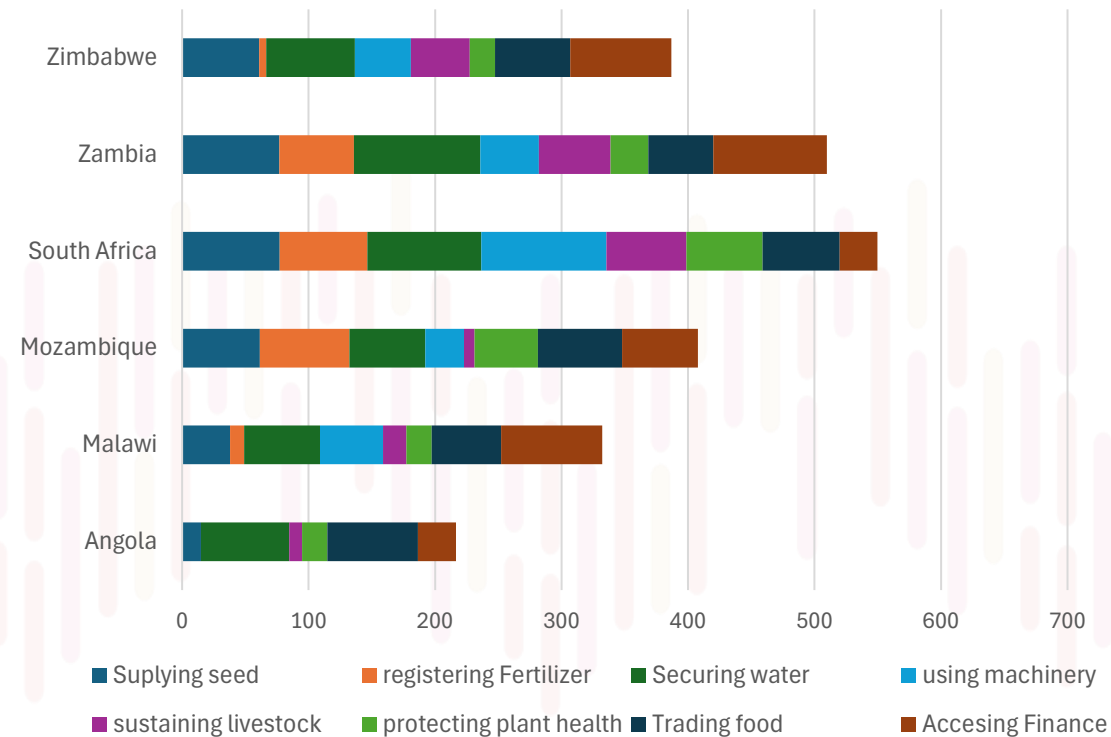
## 2. Market - Trade Integration

Phase 2 -2025

## 3. Agro-industrialization and Mechanization

# The Southern Africa Enabling Environment

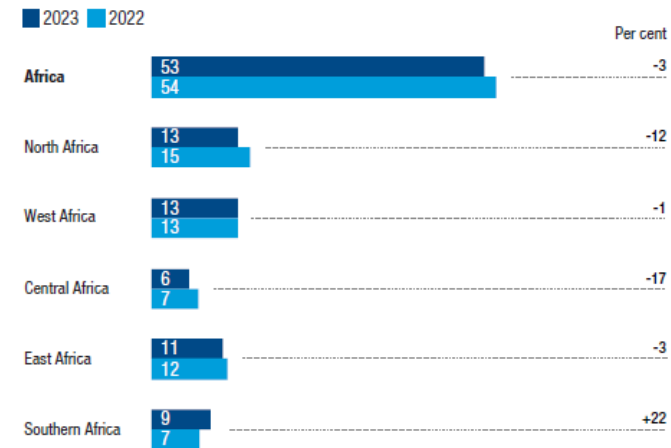
## Enabling the Business of Agriculture



Source: World Bank , 2019

## Foreign Direct Investment Flows to Africa 2022-2023 Comparison

Inflows to Africa  
(Billions of dollars and percentage change)



Source: UNCTAD, FDI/MNE database ([www.unctad.org/fdistatistics](http://www.unctad.org/fdistatistics)).

	Ease of getting credit rank	Domestic credit to private sector (% of GDP)
South Africa	80	138.8%
Angola	185	14.3%
Zimbabwe	67	13.1%
Zambia	4	14.7%
Botswana	80	31.8%
Mozambique	165	22.6%
Namibia	80	62.0%
Eswatini	94	20.7%
Lesotho	94	18.8%

Source: WB Ease of doing business. Calculations: WE4F

<https://www.fao.org/hand-in-hand/en>





# AfDB Country Food and Agriculture Delivery Compacts (Government Commitments)

## Angola

- The National Grain, Livestock & Fisheries plan.
- Granting Land rights for private use.
- Tax incentives by zones.

## Botswana

- Establishment of commercial clusters.
- The Agricultural Credit Guarantee Scheme (AGCS).
- Establishment of a Meat Industry Regulatory Authority (MIRA).

## Lesotho

- National agriculture development plan.
- Title to Land by foreign companies, & local shareholding 20%.
- Land titling and improving access to (irrigated) serviced land.

## Malawi

- Import duty and VAT waivers on agricultural equipment etc.
- Tax holiday up to 10 years for agro-processing etc.

## Mozambique

- VAT exemption for agricultural imports.
- Corporate tax rates lowered from 32% to 10% for the agriculture sector.
- Tax incentives for new investments for the next three years.

## Namibia

- Renewable energy projects in remote rural areas.
- Energy self-sufficient via renewables and export of power to the region.
- Open energy sector space to private sector since 2019.

## South Africa

- Dual agricultural economy.
- ~2.7 million farmers engaged in subsistence agriculture.
- Establishment of Agri-parks.

## Eswatini

- Strategic projects to drive agriculture development.
- Special Economic Zones (SEZ).
- Export credit guarantee scheme.

## Zambia

- Enabling environment for private sector growth.
- Development of farm blocks focusing on crop diversification.
- Creation of agricultural production and processing zones.

## Zimbabwe

- Reduced Tax for processing companies which exports - between 20 to 15%.
- Special Economic Zones (SEZ):
- Farmer Subsidy Programmes.



# HiH Southern Africa a multi-partner program complementing ongoing efforts

National governments and.....



Food and Agriculture  
Organization of the  
United Nations



.....and many others including private sector



Hand-in-Hand  
Initiative

# Investment Case 1

## Small Reservoirs for Irrigation

[Climate Smart Investment]



# Regional Irrigation HiH Investment Program

## State of Irrigation & Water Management

01

Agriculture in the region is mainly rainfed, with only ~7% of cultivated area equipped for irrigation

02

Inequal distribution of water resources across the region (less surface water in southern countries)

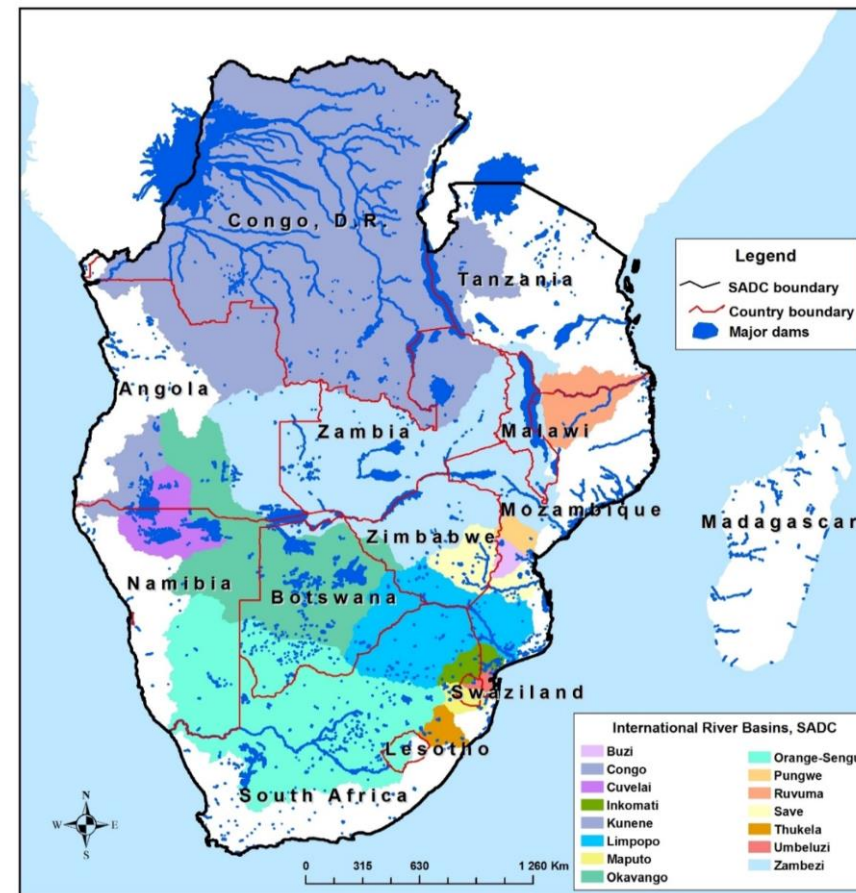
03

Low water harvesting and storage capacity – only 1% of runoff is dammed

04

Current storage capacity is dwindling through the siltation of existing reservoirs.

## Transboundary river basins and dams



Source: Mabhaudhi et. Al. 2016

# Regional Irrigation HiH Investment Program

## Key Bottlenecks

## Key Investment Needed

- |   |   |
|---|---|
| ✓ <b>Inadequate storage capacity</b> for surface water to meet water demands for irrigation to increase yield and food production | ✓ Implementation of small reservoirs irrigation on <b>55,000 ha</b> suitable for irrigation in 5 countries, for maize, wheat and horticulture.  |
| ✓ <b>Insufficient groundwater infrastructure</b> resulting in failure to supply water to communities for irrigation purposes      | ✓ Provide high quality and sustainable irrigation equipment such as solar powered pumps to smallholders dependant on groundwater resources. <b>26,000 hectares</b> are covered in 7 countries.  |
| ✓ <b>Lacking</b> water resources <b>governance</b> and <b>management</b>  | ✓ Integrated <b>Water Governance</b> at the basin level applying existing policy framework about water resources management <ul style="list-style-type: none"> <li>• Regional Strategic Action Plan IV</li> <li>• SADC protocol on shared water sources</li> <li>• SADC Regional Agricultural Policy</li> </ul> |

## Irrigation Investments Prioritized :

- Type 1:** Small scale community-managed reservoirs for irrigation
- Type 2:** Small scale private investment in Solar powered irrigation pumps for high value-added crops

## Risks

Limited availability, unaffordable costs, and poor reliability of technologies.

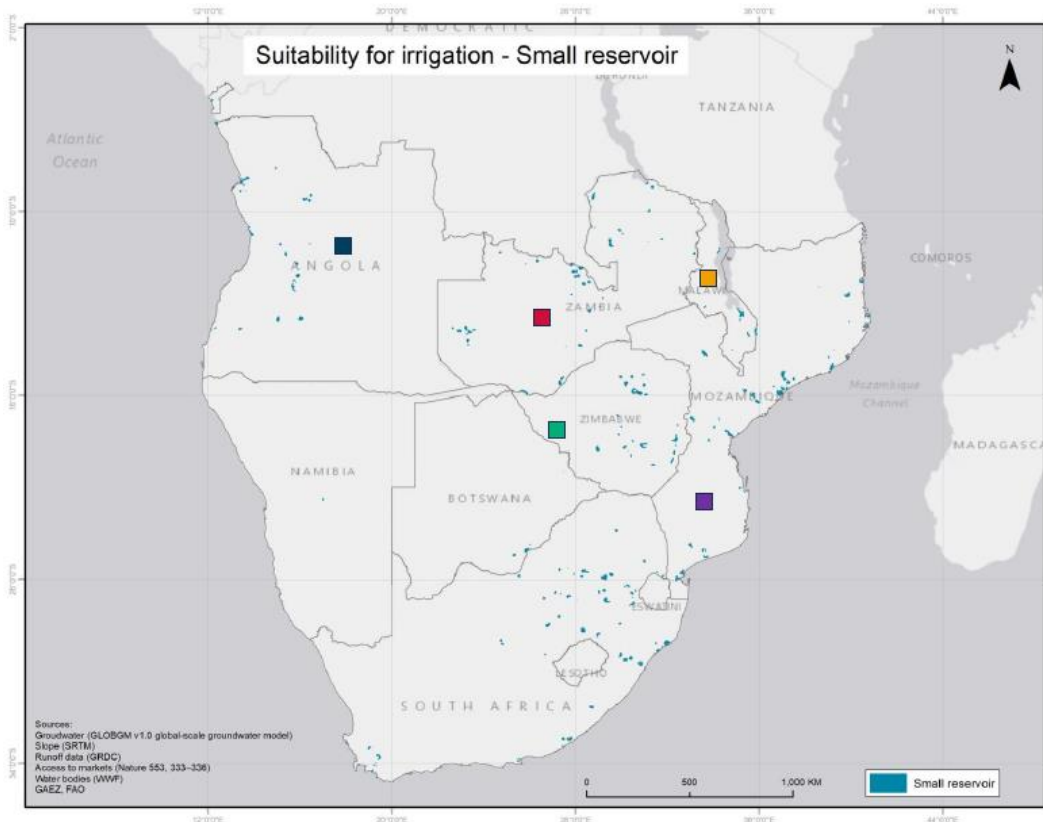
Competition for water resources use.

## Mitigation measures

Introduce smart subsidies to encourage participation of the private sector in the supply of the suitable and sustainable technologies.

Promote **participatory approaches** for **water governance** and dialogue to stimulate shared use between water users.





- Total hectares targeted: **55,020**
- Capital Investment required : **284 million USD** over five years
- NPV: **141 million USD**
- IRR (20-year): **17%**

## Narrative:

- ✓ Reservoir Size: At most, 100 hectares (ha) in surface area; Storage capacity below 30 million cubic meters (Mm<sup>3</sup>); Dam wall height < 15 m.
- ✓ Sustainable and inclusive water governance management practices.
- ✓ Public sector-oriented investment.

**Mozambique 6,483 Ha**  
**Investment \$50.2 million**  
**NPV \$26.3 million**  
**IRR 18%**  
**Beneficiaries 41,032**

**Zimbabwe 24,962 Ha**  
**Investment \$80.3 million**  
**NPV \$36.3 million**  
**IRR 16%**  
**Beneficiaries 157,984**

**Angola 10,869 Ha**  
**Investment \$84.3 million**  
**NPV \$26.2 million**  
**IRR 13%**  
**Beneficiaries 68,789**

**Malawi 5,687 Ha**  
**Investment \$44.4 million**  
**NPV \$13.6 million**  
**IRR 13%**  
**Beneficiaries 35,996**

**Zambia 7,017 Ha**  
**Investment \$24.7 million**  
**NPV \$5.8 million**  
**IRR 11%**  
**Beneficiaries 44,424**

# Investment Case 2

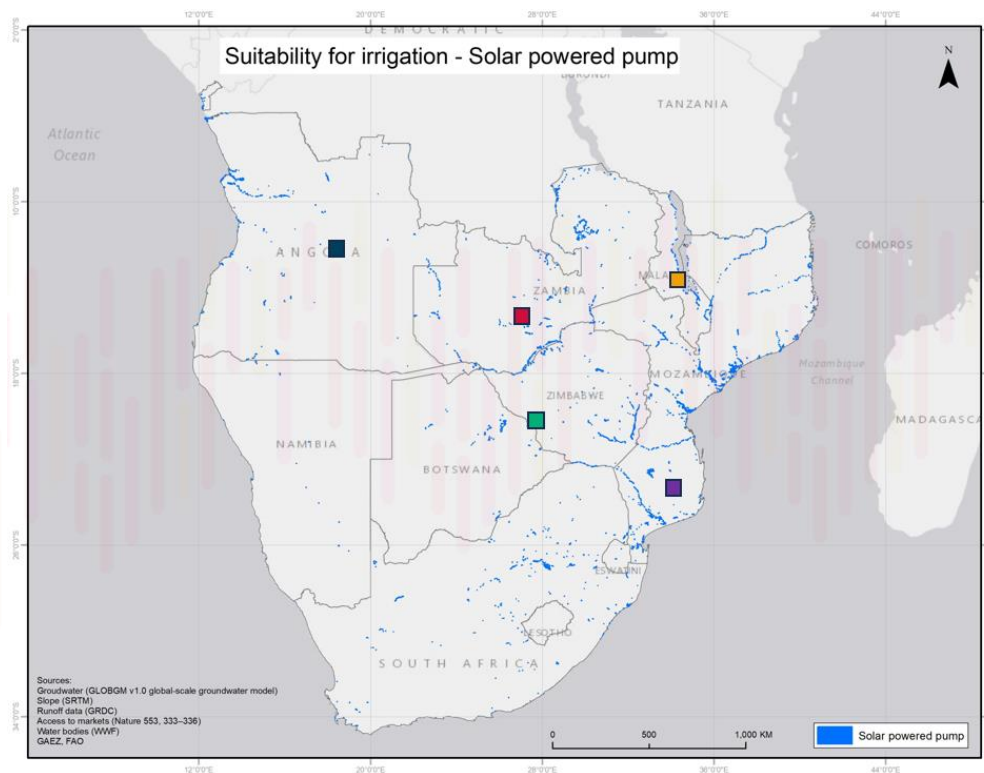
## Solar Powered Irrigation Pumps

[Climate Smart Investment]



2

## Irrigation on Solar Powered Pumps -Shallow Aquifers- Phase 1



Source: FAO, HIH GIS team, 2024

Total hectares targeted: **26,217**

Capital Investment required :  
**269 million USD** over five years

NPV: **188 million USD**

IRR (20-year): **24%**

- ✓ **Narrative:**
- ✓ Irrigation equipment (including solar pumps, fenced enclosure, drip irrigation kits) for small-scale agri-entrepreneurs, suitable for high value-added crops. 20-year life cycle of solar panels.
- ✓ Four-year life cycle of pumps with a progressive adoption rate by communities.
- ✓ Sustainability: Optimum pumping in line with the recharge capacity
- ✓ Private irrigation systems for smallholder farmers

**Eswatini 1000 Ha**  
Investment **\$10.1 million**  
NPV **\$9.4million**  
IRR **28%**  
Beneficiaries **1,111**

**Angola 2,562 Ha**  
Investment **\$25.4 million**  
NPV **\$15.7 million**  
IRR **23%**  
Beneficiaries **14,231**

**Malawi 4,354 Ha**  
Investment **\$26.6 million**  
NPV **\$13.6 million**  
IRR **23%**  
Beneficiaries **24,188**

**Mozambique 5,005 Ha**  
Investment **\$59.6 million**  
NPV **\$48.1 million**  
IRR **25%**  
Beneficiaries **27,803**

**Zambia 10,180 Ha**  
Investment **\$99.9 million**  
NPV **\$63.4 million**  
IRR **24%**  
Beneficiaries **56,558**

**Zimbabwe 3,017 Ha**  
Investment **\$28.7 million**  
NPV **\$20.7 million**  
IRR **26%**  
Beneficiaries **16,170**

**Lesotho 100 Ha**  
Investment **\$1.7 million**  
NPV **\$1.3 million**  
IRR **22%**  
Beneficiaries **111**

# Investment Case 3

Market Integration  
&  
Trade



## Hand-in-Hand Initiative



**Potential:**

- ✓ Increase intra-regional trade of agricultural products due to differences in comparative advantages.
- ✓ Increase integration in global value chains
- ✓ Optimize benefits from AfCFTA

**Challenges:**

- Limited diversification from primary commodities
- participation in regional and global value chains is inhibited by high trade costs (tariff, nontariff barriers, policy factors, custom inefficiency infrastructure, etc).
- Slow implementation of SADC objectives, lack of political coordination

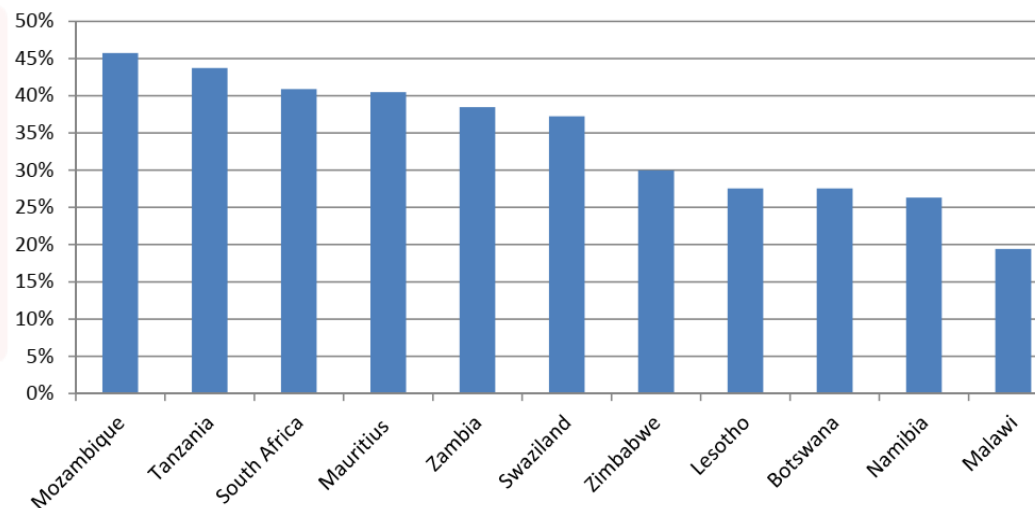
## 1 High import and export tariffs on agricultural products

Region/ country	Average import duty	Average export duty
Africa	19.58	9.86
SADC	13.56	12.48
Angola	6.9	7.9
Botswana	12.9	9.3
Lesotho	12.6	9.3
Malawi	15.2	14
Mozambique	12.9	10.6
Namibia	13.2	9.3
South Africa	13.9	12.8
Swaziland	13.4	9.3
Zambia	13.1	15.9
Zimbabwe	11.3	19.4

Source: IFPRI, 2017

## 2 High Non-tariff measures

### NTM Coverage of Agricultural products

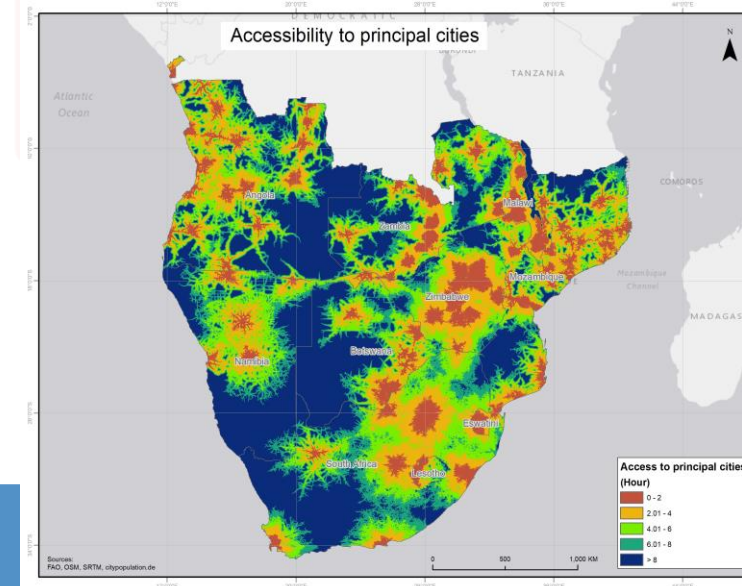


Source: Kalaba, M., &amp; Kirsten, J. (2012).

## 3 Border costs and infrastructure

Time to export: Border compliance (hours)*	Time to import: Border compliance (hours)
74	59

Source: World Bank 2020

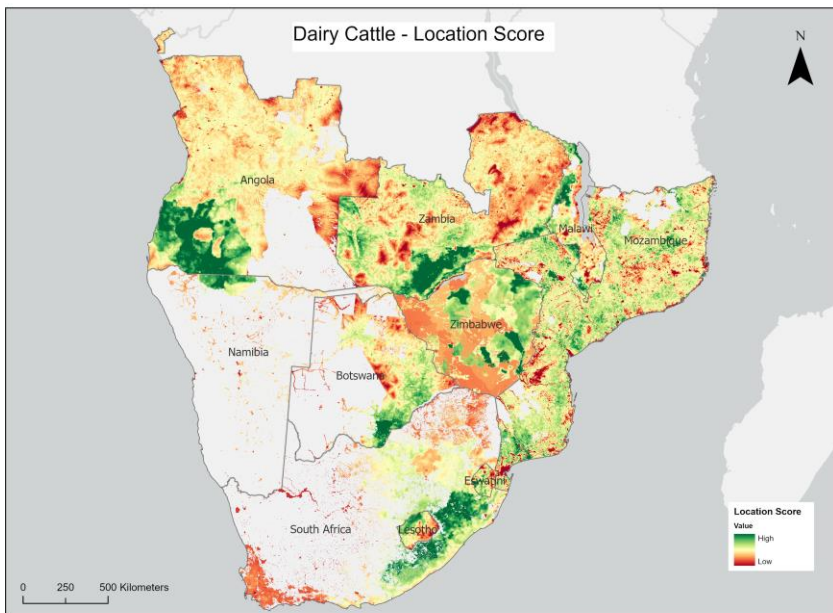


Key Bottlenecks	Key Investment Needed
High import and export tariff to agricultural products across regional countries	<ul style="list-style-type: none"> <li>✓ Establish a single common external tariff to become a customs union. Capitalize on ongoing political efforts to progress under the AfCFTA.</li> <li>✓ <b>Reduction of on import and export tariffs of 50%</b> in the agricultural sector represents a <b>decrease in tariff collection</b> for all Southern Africa countries of ~2.2 billion USD. <b>Phase 1 ~734 million USD</b></li> </ul>
Failure to implement the political agenda to remove and lower NTBs, leading to a rate equivalent of 20% in the region	<ul style="list-style-type: none"> <li>✓ Prioritize regional policies over national. Elimination of unnecessary nontariff barriers, under the SADC and SACU framework</li> <li>✓ Adoption of common rules of origin, harmonization of customs rules and procedures attainment of internationally acceptable standards, quality, accreditation, and metrology, harmonization of sanitary and phyto-sanitary measures</li> <li>✓ <b>Costs</b> incurred from <b>reducing NTM's</b> in 80%: ~225 million USD. <b>Phase 1 ~75 million USD</b></li> </ul>
High customs inefficiency leading to additional trade costs and time spent at the border	<ul style="list-style-type: none"> <li>✓ Comply with SADC core mandate to create OneStop Border Posts (OSBP) and convert the region's busiest border (Beitbridge) into a one-stop facility</li> <li>✓ Adoption of the Automated System for Customs Data (ASYCUDA) to reform customs clearing procedure and implement the standard nomenclature for traded goods.</li> <li>✓ Ensuring Trade Facilitation Agreement can reduce time in ~5 hours (WB 2020)</li> <li>✓ <b>Reduction of ~4% in costs</b> representing decrease in collection in Southern African counties of ~ 96 million USD. <b>Phase 1 ~32 million USD</b></li> </ul>

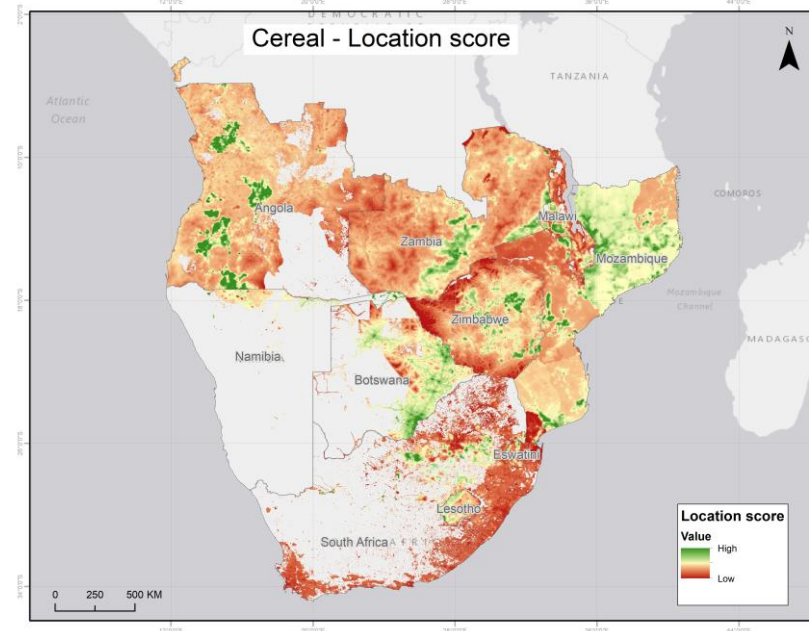
## Additional trade enhancing private sector investments to create market /non-market infrastructure:

- Cold storage facilities, agro-processing units, slaughterhouses, collection centers for crops and dairy products, aquaculture
- Supporting services (e.g. energy, water infrastructure, veterinary centers, telecommunications)

### Candidate locations for markets and supporting facilities



Source: FAO, HIH GIS team



Source: FAO, HIH GIS team

## Integration in a 3-phase implementation over 20 years

Country	"Investments" by country for Phase 1 in million \$US	Estimated returns IRR (%)
Angola	47	TBD
Botswana	26	17
Eswatini	28	8
Lesotho	13	17
Malawi	25	30
Mozambique	64	20
Namibia	40	15
South Africa	468	24
Zambia	49	25
Zimbabwe	65	22
<b>Total</b>	<b>827</b>	

## Additional impacts / benefits:

- ✓ **%50%** reduction in tariffs and **80%** reduction in non-tariffs measures can increase the region's GDP by **0.3%** (IFPRI 2022)
- ✓ Reduction of ~5 hours at border represents gains for **~205 million USD** for private sector
- ✓ **Extreme poverty reduction** in Southern Africa attributable to AfCFTA: **~4 million people** (WB, 2020)
- ✓ **Moderate poverty reduction** in Southern Africa attributable to AfCFTA: **~9 million people** (WB, 2020)
- ✓ **Employment** projection in agriculture of **29.8%** (WB, 2020)

Net Benefit Phase 1: \$ 215 million USD per year



# Summary Southern Africa Investment plan

## Total Investment

Irrigation: 553 Million USD  
Market integration: 827 Million USD

## Average IRR

Irrigation: 20%  
Market integration: 24%

Irrigation Total **Beneficiaries:** 704,402  
Market integration Total **Beneficiaries** 36.6 million

**475,854 MT**  
Co2e  
Sequestration

1

### Intervention

Type 1: community investment  
Small reservoirs

### Total Investment (\$US)

284 million

### IRR (%)

17

### NPV (\$US)

141 million

### Sustainability Benefits

Direct beneficiaries: 174,113

Indirect beneficiaries: 348,225

Income increase per capita (\$US):  
120

Co2e sequestration: 322,284 MT

2

### Intervention

Type 2: Private sector investment  
Solar pumps

### Total Investment (\$US)

269 million

### IRR (%)

24

### NPV (\$US)

168 million

### Sustainability Benefits

Direct beneficiaries: 36,413

Indirect beneficiaries: 145,651

Income increase per capita (\$US):  
411

Co2e sequestration: 153,570 MT

3

### Intervention

Market integration / trade – Phase 1

### Total Investment (\$US)

827 million

### IRR (%)

24

### NPV (\$US)

215 million

### Sustainability Benefits

Direct Beneficiaries: 5.3 M

Indirect Beneficiaries: 31.3 M

Income increase per capita:  
US\$33