



Food and Agriculture
Organization of the
United Nations



Investment Opportunities in Rwanda



Hand-in-Hand
Initiative

Investment Forum | Rome, Italy | 17-20 Oct '23



Overview of Rwanda Economy

Overview of Rwanda Economy



A

Agriculture contributes to **27% of GDP** (NISR, 2023)

B

Agriculture is one of the main sectors of **Rwanda's economic transformation**

C

The GoR partnered with the WB to launch a **USD 300 million** agriculture financing facility to promote agribusiness
<https://www.minagri.gov.rw>

D

Rwanda plans to invest **USD 92 million** in sustainable agriculture by 2030 (more focus on *environment-related projects*)
<https://www.rema.gov.rw>

E

COP27 (Nov 2022): Rwanda launched a **USD 104 million** green investment facility in climate-resilient projects



Enabling investment climate

Enabling investment climate

Business friendly regulation

- ✓ 2nd & 38th in Africa & globally for Ease of Doing Business (WB, 2022)
- ✓ Investment law No.006/2021 of 05 February 2021

- ✓ VAT-free imports of machinery and inputs within EAC
- ✓ Tax exemptions for agricultural products

Multiple incentives for exporters and priority sectors

Efficient, supported processes

- ✓ Free business registration
- ✓ Highly digitalized and efficient administration
- ✓ One-stop center for investment acceleration and aftercare team

- ✓ Domestic market of over 13 million people
- ✓ signatory to the 2018 Kigali African Continental Free Trade Area Agreement (ACFTA)

Access to market

HIH Alignment

- ✓ Vision 2050
- ✓ Strategic Plan for Agriculture Transformation (**PSTA4**), 4 pillars
 - Innovation and extension
 - Productivity and resilience
 - Inclusive markets and value addition
 - Enabling environment and responsive institutions
- ✓ Livestock master plan
- ✓ Strategy on Youth employment in agrifood systems



PSTA5

Government targets in poverty reduction:

- ✓ To attain upper middle- and high-income country by 2035 and 2050, respectively
- ✓ To contribute to achievement of several SDGs, mainly SDG1 (end extreme poverty; SDG2 (Zero hunger, improved nutrition)

Selected districts for Hand in Hand

Criteria of selection

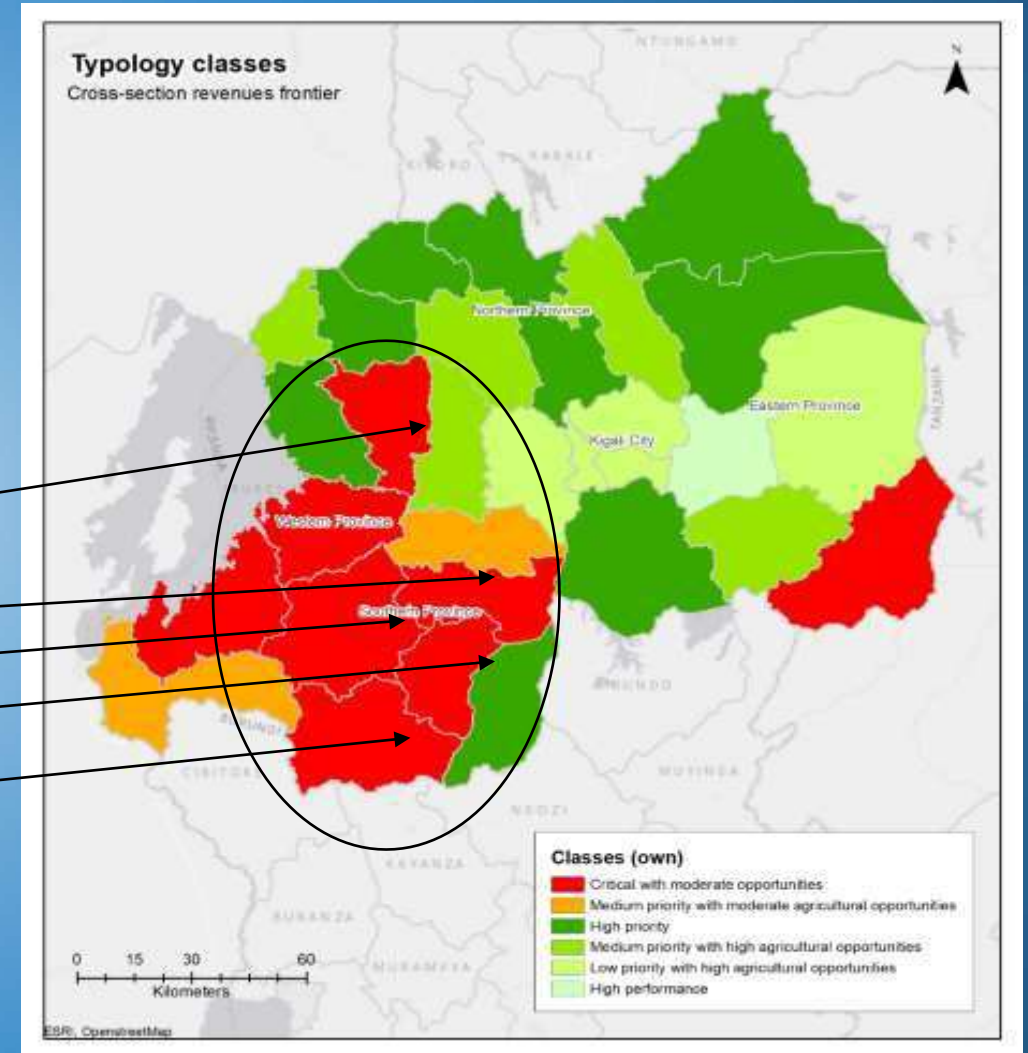
- ✓ High rate of poverty: 33.8% (NISR, 2022)
- ✓ Level of malnutrition and stunting still high
- ✓ Districts with high unrealized potential are those where impacts are more likely to be higher

Selected districts (*in Red, circled*)

- ✓ Western Province: Ngororero
- ✓ Southern Province: Ruhango
Nyamagabe
Nyanza
Nyaruguru

3 value chains

- ✓ Tea, Smallstock, Potato



Source: Stochastic frontier analysis FAO-HiH task force (2022)



Selected districts for HIH (cont'd)

Reasons of selecting HIH districts

- ✓ Ngororero, Nyamagabe, Nyanza and Nyaruguru Districts have a high potential of Tea production :
 - High level of soil acidity
 - Steep slope conducive to the Mountain tea quality
- ✓ High market potential with Burundi and DRC
- ✓ Radical terrasses in HIH districts and use of lime to restore fertility: both conducive to potato production
 - School feeding in HIH districts by WFP
 - All HIH households covered by health insurance
 - Vision Umurenge Programme (VUP) social protection programme to accelerate the rate of poverty reduction through public work

Agriculture and food security situation in selected districts

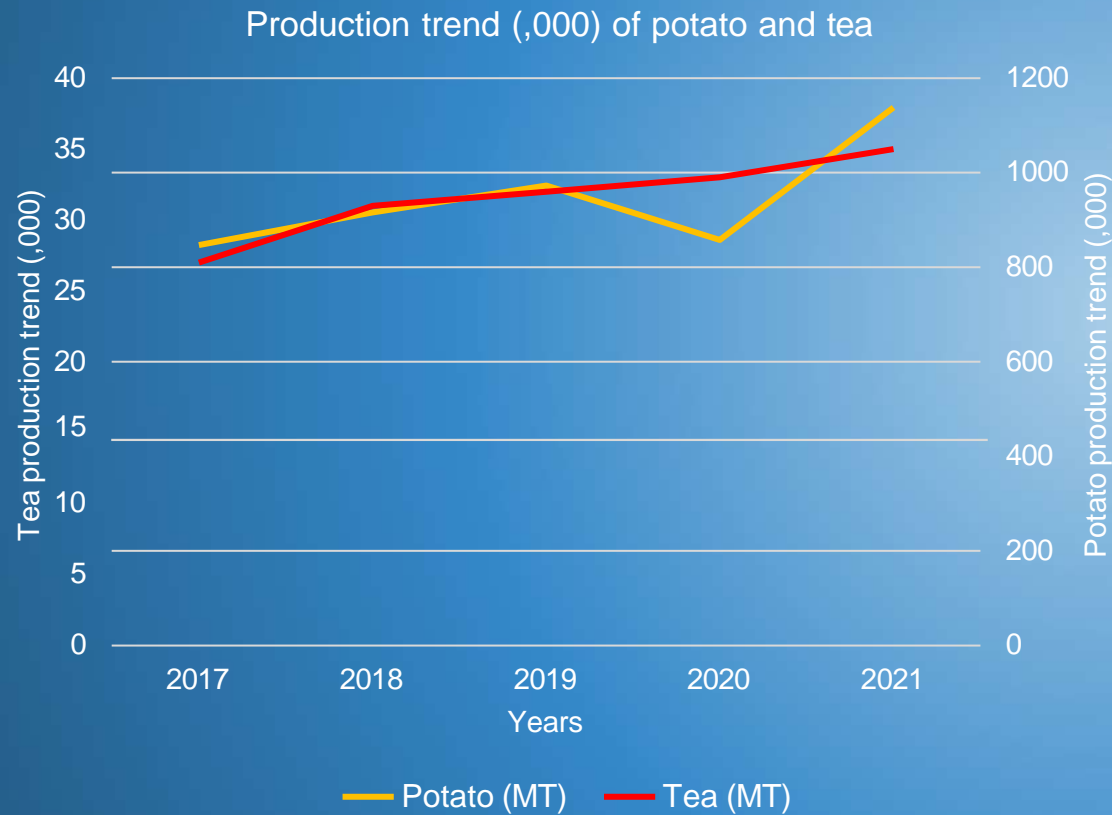
District	Total population	Total land (,000 ha)	seasonal crops (,000 ha)	perennial crops (,000 ha)	Employment-to-population ratio (%)
Ngororero	367,955	67.5	32.4	18.0	34.8
Nyamagabe	371,501	109.1	32.1	12.0	45.7
Nyanza	365,718	67.1	32.3	14.7	43.3
Nyaruguru	318,126	100.7	23.9	11.5	36.2
Ruhango	359,121	62.6	31.9	14.1	40.6

NISR, 2022

Highest prevalence of food insecure households in Ngororero (52.5%)



Production and population trend for selected value chains



Trend

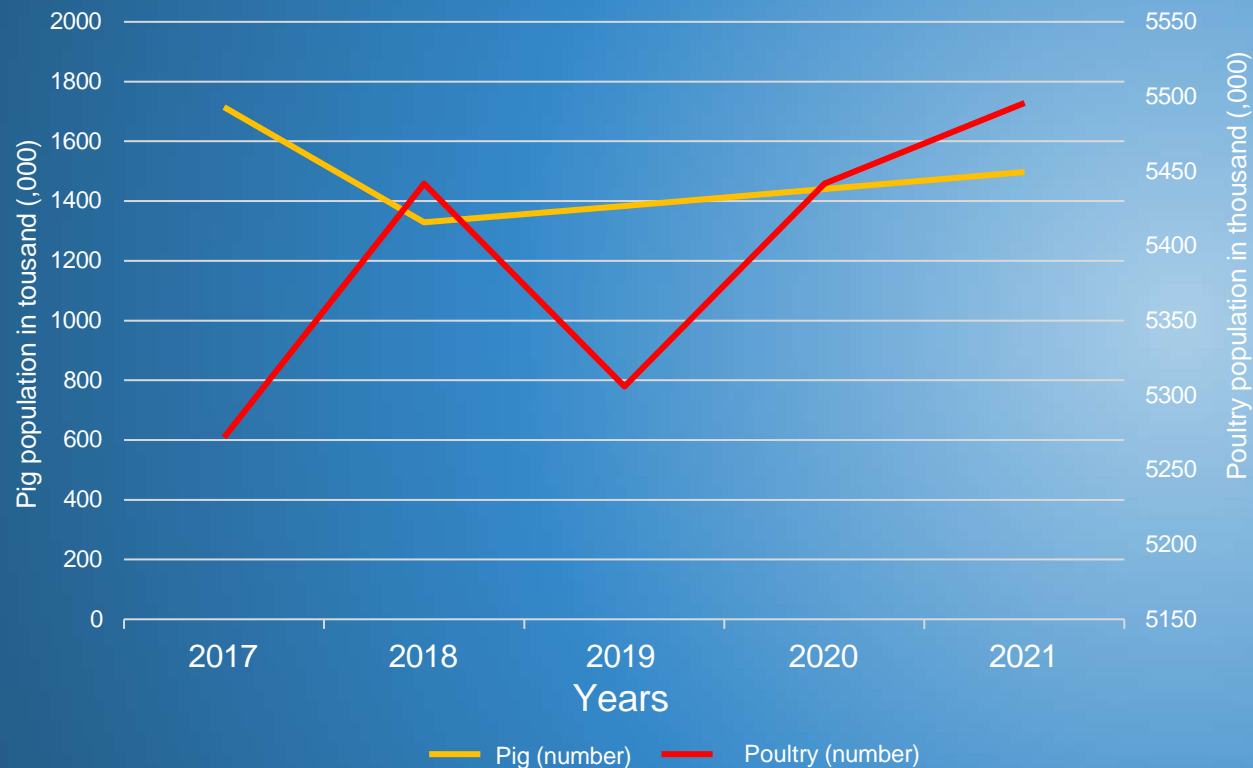
NISR, 2022

- ✓ Tea production consistently increased from 27,887 MT in 2017 to 35,626 MT in 2021.
- ✓ Potato production increased from 2017 to 2019 thanks to production expansion, and then decreased due to Covid-19 in 2020



Production and population trend for selected value chains

Population trend (,000) for pig and poultry

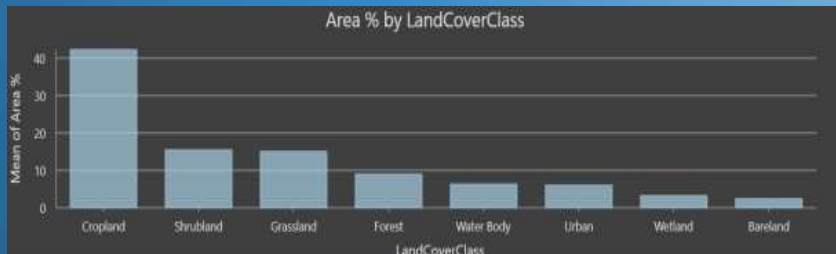
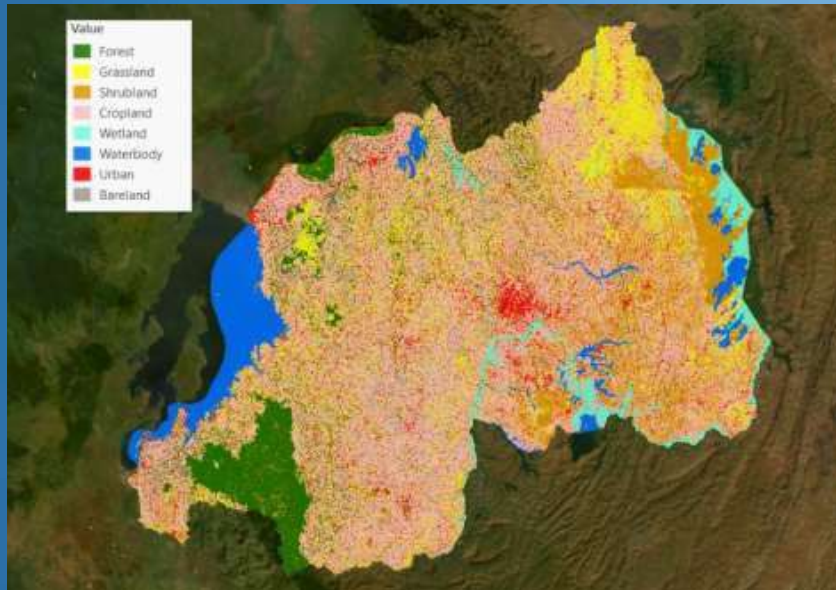


Population trend

- ✓ Poultry population trend showed fluctuations from 2017 to 2021, from 5.2 to 5.5 Million.
- ✓ Pig population decreased in 2018, but increased from then: 1.4 Million in 2018 vs 1.5 Million in 2021 (PSTA4)

Use of Earth Observations for land cover mapping to support prioritization of investments

Relevance of land cover



Provides quantitative information

Land cover and land cover change statistics

How much of each land cover/land use/where

- ✓ Land productivity (Crop acreage (ha), Crop yield (Mg/Ha), Productivity (tons)

Crop acreage and crop yield

- ✓ What is cropped where.
- ✓ When and what is the current yield at harvest

Crop suitability analysis

- ✓ Actual yield
- ✓ Attenable yield
- ✓ Yield gap

Investment summary & opportunities

Priority investment opportunities

1. Tea production
2. Small livestock production
3. Potato production

Climate smart investment

- ✓ Tea stabilises soil and reduces erosion and environmental degradation
- ✓ Feed efficiency by breeding pigs that grow faster and produce lower emissions
- ✓ Better livestock health management with less reliance to antibiotics
- ✓ Potato: no fire wood to be used in soil sterilisation but sand.

Agriculture and livestock investment summary

Total investment

target from investors

\$501.8 Million

Catalytic investments

Government/Donors/Partners

Investment Facilitation & Services from the Government

- ✓ Business/ company registration
- ✓ Tax exemption
- ✓ Land mapping/ leasing
- ✓ Environmental impact assessment
- ✓ Reforestation

INVESTMENT CASE 1

Current situation



17,000 ha are not fully exploited

27,887 MT to 35,626 MT in the past five years



Export in 2021-2022 was 35,404 MT, with a revenue of \$103.4mln



Few existing feeder roads



Firewood is the major source of energy



Investment Outlay \$299M

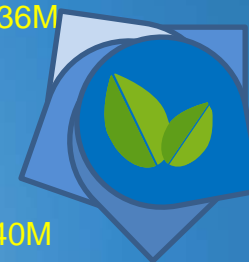
GoR mapped 17,000 ha of tea production --cost effective

Tea production through out growers: \$36M

Produce 300M seedlings

Establish 1 tea factory in Nyamagabe: \$40M

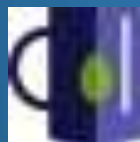
Research and innovation centre on tea trees \$100M



Expand 1,230 km of feeder roads: \$123M



Outcome



Social-Economic growth, poverty reduction and job creation



Environmental impact: grows on acidic soil and, perennial crop will reduce environmental degradation



Innovation: new tea types organic, orthodox

Beneficiaries

85,000 out growers, value chain actors-direct beneficiaries

195,831 indirect beneficiaries

Micro-Regions

Nyamagabe, Nyaruguru, Nyanza and Ngororero

Investment case1 (Cont'd): Tea production

Expand tea production & factory & feeder roads

Profitability Indicators

Total Investment	USD 299 Million
Net Present Value (NPV)	USD 129.7 Million
Internal Rate of Return (IRR)	22.3%
Payback period	5.3 years

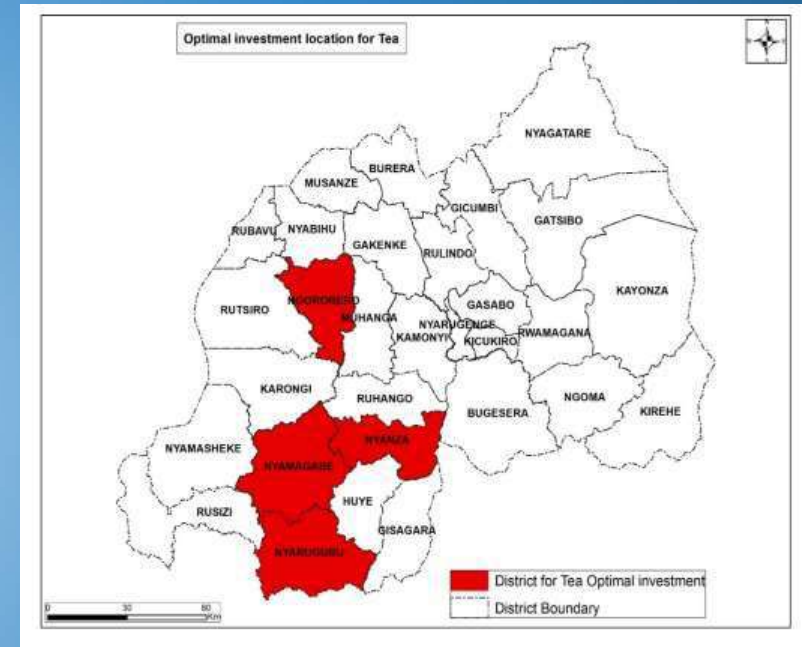
Environmental Performance Indicators & Risk mitigations

Environment degradation reduced	Perennial crop, soil conservation
Environmental degradation reduced (use certified forests, the government reforestation programme)	Source firewood from certified forests

Socio-Economic Performance Indicators

Carbon Emissions	3.7 Kg CO ₂ e/Kg
Use of unexploited agriculture areas	Around 17,000 Ha
Employment % increased	From 40% to 60%
Per capita income increase	USD1,065

Areas with investment opportunities



Government contribution

- ✓ Enabling environment (secondary roads, import tax exemption, land mapping & leasing)
- ✓ Social protection (health insurance, cash & food for work)

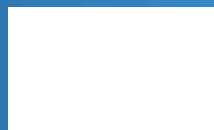
INVESTMENT CASE 2

Current situation



No Layers' hatchery in HIH districts and yet local – school feeding programme procurement of eggs-export demand

Egg consumption still low in HIH Districts
0.7 vs 4.5 kg/person/year recommended.



Feed inputs of soya and maize, competes with human consumption

Only six small stock feed factories – None located in HIH zones



Only seven pigs artificial inseminations Centers - None in HIH zones

Investment Outlay \$179 M

Establish Layer chicken hatchery and a genetic improvement farm: **\$59.9 M**

Set up of Egg powder processing plant **\$28 M**

Feed processing plant and poultry & pig feed storage. Innovative inputs for animal feed: **\$40 M**



Establish pig & poultry Model farming: **\$51.1 M**



Outcome

Economic growth, export, poverty reduction and job creation



Food Security, reduction of stunting with one egg per day per child



Beneficiaries

123,000 & 69,953 pig & poultry farmers--*direct beneficiaries*

339,304 & 311,365 poor local communities, youth and women, pre-school and school children--*indirect beneficiaries*

Micro-Regions

Ngororero
Nyamagabe
Nyanza
Nyaruguru and
Ruhango

Investment case 2 (Cont'd) - Small livestock production

Profitability indicators

Total Investment pig and poultry	\$179 Million
Net Present Value (NPV)	\$126.9 Million
Internal Rate of Return (IRR)	27%
Payback period (PBP)	4 years

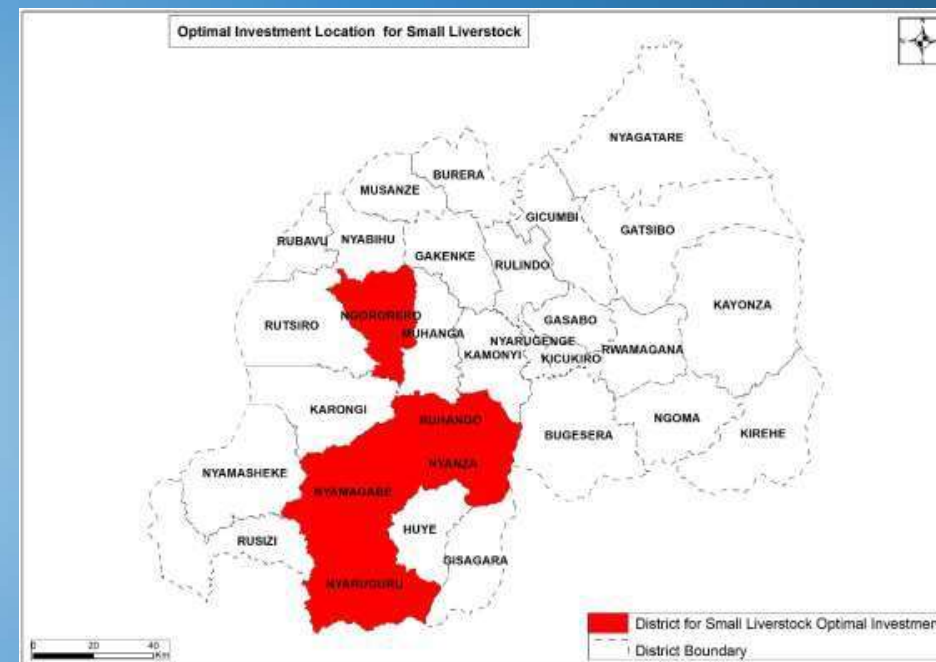
Environmental performance indicators (FAO, 2015)

Type of Livestock	kg CO2eq / kg of proteins
Emission intensity (Chicken)	18.5
Emission intensity (Pigs)	45

Socio-Economic Performance Indicators

Poverty (33.8%) & stunting (40%) reduced	Reduced to 25% and 15%, respectively
Increased income per capita	USD 927.6
Increase per capita consumption egg	0.7 Kg to 2Kg

Areas with investment opportunities



Government contribution

- ✓ Business facilitation
- ✓ Social assistance

INVESTMENT CASE 3

Current situation



Increase in domestic and export demand

Export 719.1 Tonnes in 2021 vs 10,194 Tonnes in 2022)

Availability and timely access of EG potato seed needs improvement



Seasons with irrigation



Capacity in seed production – Funding & skills. Still low

Shortage of storages, fluctuation of prices since sold at harvest

GoR tested Hydroponic technology increase quality potato seed production.



Seed produced over 2/3 seasons.

Investment Outlay \$ 23.8 M

Production of Early Generation Potato Seed (Tissue culture plantlets, mini tubers and pre-basic seed), over 3 seasons: \$10 M



Establish standardized potato storages: \$9.6 M

Establish a potato processing plant: chips and potato flour: \$4.2M



Potato Production

Outcome

Economic growth, export of potato processed products, poverty reduction and job creation



Food Security



Beneficiaries

- ✓ **Direct:** 41,772 potato producers, out growers, processors, etc)
- ✓ **Indirect:** 245,341+ potato value chain actors

Micro-Regions

- ✓ Ngororero,
- ✓ Nyamagabe and
- ✓ Nyaruguru



Investment case 3 (Cont'd) - Potato production

Profitability Indicators

Total Investment	\$ 23.8 Million
Net Present Value (NPV)	\$ 15.9 Million
Internal Rate of Return (IRR)	29%
Payback period	4.3 years

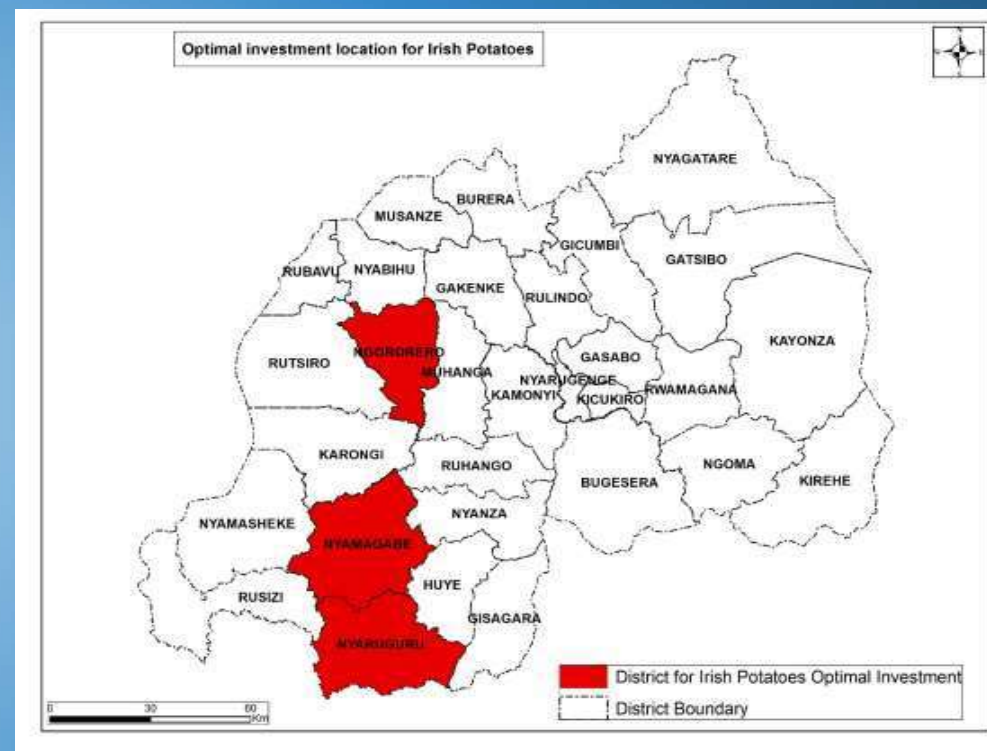
Environmental Performance Indicators

Use of sand vs soil sterilization	300,000 cubic meter of wood saved
Use of hydroponics	Reduced pests and diseases
Carbon Emissions	0.31 Kg CO ₂ e/Kg potato
Climate smart practices	Efficient use of fertilisers, pest and disease varieties resistant

Socio-Economic Performance Indicators

Potato production	increased
Increased use of improved potato seed	2.95% to 20%
Per capita income increase	USD 569.7

Areas with investment opportunities



Government contribution

- ✓ Tax exemption of processing machinery; crop insurance
- ✓ Subsidies of fertilizers “ Nkunganire”

Rwanda Investment Plan Summary

Total investment: **US\$501.8 M** | GoR Contribution: Investment facilitation | Overall average **IRR: 26%** | Income increase per capita: **USD854.1** | Total beneficiaries: **1,411,556**

Key investments

01 **Intervention**
Tea production
Cost (USD)
299 M

NPV
\$129.7 M

IRR & Payback period
22.3% & 5.3 years

Sustainability benefits

- ✓ **Direct & indirect beneficiaries**
85,000 & 195,831
- ✓ **Income increase per capita**
US\$1,065

Emission reduction
3.7 Kg CO₂ e/ Kg [dry tea using firewood from certified forests; use of renewable energy]

02 **Intervention**
Small livestock production
Cost (USD)
179 M

NPV
\$126.9 M

IRR & Payback period
27% & 4 years

Sustainability benefits

- ✓ **Direct & indirect beneficiaries:**
192,953 & 650,669
- ✓ **Income increase per capita:**
US\$927.6

Emission reduction
18.5 Kg CO₂ e/ Kg Chicken
45 Kg CO₂ e/ Kg Pig [optimize feed intake and ratio, use of smart animal feeds inputs]

03 **Intervention**
Potato production
Cost (USD)
23.8 M

NPV
\$15.9 M

IRR & Payback period
29% & 4.3 years

Sustainability benefits

- ✓ **Direct & indirect beneficiaries:**
41,772 & 245,341
- ✓ **Income increase per capita:**
US\$569.7

Emission reduction
0.31 Kg CO₂ e/ Kg of potato [use of sand vs sterilized soil to save firewood; use of hydroponics to mitigate pests and disease]



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Thank you!



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