INVESTMENTS HANDBOOK

THE NEED TO KNOWS

GREENBELT AUTHORITY PROJECTS WITHIN THE AGRICULTURE SECTOR

NO	PROJECT NAME	PROJECT DESCRIPTION	FINANCIAL INFORMATION	PROJECT READINESS
1.	Nthola Ilora Rice Irrigation Project	The project seeks to develop Rice irrigation scheme using water pumped from Lake Malawi to irrigate 1000Ha and construct a Rice processing factory for production and processing of Rice for the local and export markets.	US$30 Million	The land for the project was secured, feasibility study was conducted, Rice factory is already constructed and tested, Designs for the irrigation scheme were already done, Partial construction of the irrigation scheme has commenced.
2.	Grain and Cereals Production Project	The project seeks to undertake large scale Wheat production which will strategically be integrated with Maize and Soya beans on 2000Ha. The project will also incorporate value addition through agro-processing of Wheat and Soya bean.	US$12 Million	The project has already commenced with irrigation infrastructure in place and production is already taking place. Additional capital will help in the expansion of the project through additional irrigation infrastructure development, production as well as construction of agro-processing facilities.
3.	Seed Multiplication Project	The project seeks to undertake multiplication of various seeds including Maize, Rice, Soy beans, Groundnuts and Sesame on 700Ha. The project will involve production, distribution and marketing of high-quality and certified seeds.	US$7 Million	The project has already commenced with seed processing facility already installed at the factory and warehouse already constructed. Additional capital will help in the expansion of the project and raising working capital for buying back seed from out grower farmers.The project's Internal Rate of Return is estimated at 20.74%.
4.	Medicinal Hemp Project	A project for the cultivation of medicinal cannabis in Malawi and production of various products from medicinal hemp.	US$36 Million	The Project land has already been identified. Business plan was already done indicating Internal Rate of Return of 102% and Net Present Value of 15%.
5	Bwanje Ethanol Project	The project seeks to establish a 21,000liter ethanol distillery plant and production of cassava and sugar cane on 6000Ha for production of ethanol and associated commodities including liquid fertilizer, food grade ethanol, carbon dioxide, livestock feed and hand sanitizers.	US$63 Million	One of the potential partners is already experienced in ethanol production and land for the project is already identified, processes are underway to secure it for investment.

MUSSECO

GBA JOINT VENTURE

1. PROJECT SUMMARY SHEET

1.1 Project Name	Multi Seeds Company Limited (MUSECO) And Greenbelt Authority Joint Venture
1.2 Project Location	Lilongwe Malawi
1.3 Intended Borrower (s)	The SPV- MUSECO-GBA Limited
1.4 Implementation Institution	MUSECO-GBA Limited
1.5 Economic Sector(s)	Agricultural
1.6 Subsector (s)	Seed Production
1.7 Project Description	The project is for the enhancement of the operations in the production of seed for Maize, Soya Beans, Groundnuts, Beans, Sunflower, Sesame, Pigeon Peas, Cowpeas, Rice, Sorghum, Millet, Wheat, Vegetables. The proposed interventions are across the phases in the seed production value chain namely: access to inputs, production, harvesting and collection, processing, packing, marketing, value-addition, certified seed production, distribution and transportation.
1.8 Project Objectives	1. To increase availability and access to high-quality certified seed among smallholder and commercial farmers by 2030. 2. To create sustainable rural jobs and business opportunities by 2030.
1.9 Project Deliverables (Outputs)	1. 3,451 Mt of seed in year 1, 10,550 Mt in year 2, 20,186 Mt in year 3, 30,592 Mt in year 4 and 35,297 Mt in year 5 2. Acquisition of 1,000 hectares of land for production 3. Engagement of 200 Outgrower farmers for seed production 4.Engagement of 100 Agro Dealers for seed distribution 5.Acquisition of productive assets for seed production processing and distribution (Irrigation equipment, hostel and vehicles)
1.10 Proposed Project Implementation Period (Start Date and End Date)	This is a Five-Year Project Start Date: 1st July 2025 End Date: 30th June 2030
1.11 Estimated Project total cost and Financing Plan	a) Total Project Cost is MK4.8 billion b) The preferred financing arrangement is part equity and part bond.

1.12 Source of income for repayment (i.e. source of finances to service the bond)	MGL will utilise revenue generated from its operations to service the bond.
1.13 Key Project Risks and Mitigation Measures	**1. Side Selling:** This may lead to failure to recover full costs from Outgrower farmers: This has a high probability and medium Impact. Robust contracts, building trust and offering financial incentives for adherence to agreements are the mitigation measures. **2. Droughts and erratic rainfall** leading to low output. This has a high probability and medium impact. MGL will promote drought-tolerant varieties and small-scale irrigation systems among its Outgrowers and its on farm. **3. Pest and disease outbreaks** leading to crop damage, low quality and output. This has a high Probability and high impact. MGL will strengthen integrated pest management (IPM) and farmer training. **4. Post-harvest contamination and damage:** Use of hermetic storage and training of handlers to ensure seed quality and efficiency.
1.14 Project Readiness	The Strategic partner, MUSECO owns productive assets such as a processing facility and pieces of land which are currently used for research and seed multiplication. The business also owns administrative assets such as motor vehicles, office equipment and furniture. MUSECO has in place experts in the field of seed production and a complement of staff to provide administrative support for the smooth implementation of the project. To close management gaps, MUSECO has put in place a recruitment plan for key experts. An active Board of Directors is in place and is responsible for providing strategic direction. MUSECO has a strategic business plan which clearly demonstrates market readiness in inbound and outbound logistics. MUSECO has established partnership agreements with Agro dealers and other retail distributors for the sale of their products.

2. STRATEGIC ALIGNMENT

2.1 Country Alignment

The MUSECO-GBA Joint Venture is aligned with Malawi 2063's Pillar 1: Agricultural Productivity and Commercialization. Agricultural Productivity in Malawi is negatively impacted by the use of uncertified seeds by smallholder farmers leading to low yields per hectare for most crops. MGL will positively impact on the diversification of the agricultural sector through the production of seeds for crops like sesame, Pigeon Peas, Wheat and Millet among others. These are high value crops which have export potential and import substitution. The project also responds to MIP-1 through game changer interventions such as sustainable access to high quality affordable inputs and modern production technologies and large-scale irrigation infrastructure. The project is also aligned with the MIP-1 priority areas of irrigation development, agricultural inputs and agricultural research, innovation and dissemination.

2.2 Sectoral Alignment

The Project is also aligned with the National Seed Policy of 2028 Priority Area 4 through the production of different classes of seed such as Nucleus, Breeder, Pre-Basic, Basic and Certified seeds. The Project also aligns with Priority Area 6 Seed Marketing and Distribution through the establishment of various distribution channels to ensure more farmers are reached with the quality seeds.

2.3 Institutional Alignment

The project is aligned with the MUSECO's positioning as the "Ultimate Choice for Quality Seed". Focusing on a range of seeds, the project will benefit from MUSECO's diverse range of products and the distribution of seeds through retail and Agro-dealer outlets which it has in place. The project contributes to our vision of being a leading producer of quality seeds in Malawi and the strategic goal of achieving sustainable operations for the production of affordable seeds for the benefit of farmers across the country.

3. THE PROJECT

3.1 Project Description

The MUSECO-GBA Joint Venture Project is a strategic agricultural investment initiative aimed at strengthening Malawi's seed systems by producing and distributing certified, climate-resilient seeds for key food and cash crops. The project directly supports national goals under Malawi 2063 (MW2063) and its First 10-Year Implementation Plan (MIP-1) by promoting agricultural commercialization, import substitution, job creation, and climate resilience. The project is for the enhancement of the capacity of MUSECO which has expertise in the production of seed for Maize, Soya Beans, Groundnuts, Beans, Sunflower, Sesame, Pigeon Peas, Cowpeas, Rice, Sorghum, Millet, Wheat, Vegetables. The proposed interventions are across the phases in the seed production value chain namely: access to inputs, production, harvesting and collection, processing, packing, marketing, value-addition, certified seed production, distribution and transportation.

Project Objectives

- To increase availability and access to high-quality certified seed among smallholder and commercial farmers.
- To create sustainable rural jobs and build capacity in seed production and agribusiness.

Key Activities and Costs

Activity	Description	Timeline	Estimated Cost in Million (MWK)
1. Land Acquisition, Preparation and Irrigation Equipment Installation	Site development on 100 hectares with irrigation infrastructure	Q4 2025–Q1 2026	653
2. Procurement of Fixed Assets	Includes seed processing machines, storage silos, lab equipment, and transport vehicles	Year 1–2	417
3. Seed Multiplication and Processing	Production of maize, soybean, and groundnut seed using certified foundation seed	Q2 2026 onwards	700
4. Outgrower Scheme	Training and support to 200 contract farmers	Q1 2027 onwards	500
5. Working Capital Support	Field operations, staff salaries, logistics, and packaging	2026–2028	2350

6. Quality Assurance & Certification	Seed testing and compliance with national standards	Continuous	50
7. Financial and Technical Management	QuickBooks Online system and oversight from Forty-Large Financial & Business Consultants	2025–2027	30
8. Climate Risk Management	Installation of water storage, pest control measures, and use of drought-tolerant seed	Ongoing	140
Total Project Cost			**4,840**

Production Targets

Class of Seed (Various Crops	2025/26 In Mt	2026/27 In Mt	2027/28 In Mt	2028/29 In Mt	2029/30 In Mt
Certified	3,095	10,005	19,634	30,040	34,745
Basic	261	428	433	433	433
Breeder	2	4	4	4	4
Nucleus	5	6	6	6	6
Total Production	**3,451**	**10,550**	**20,186**	**30,592**	**35,297**

This output will support improved yields and food security for over 10,000 smallholder farmers annually.

Target Groups

- Smallholder Farmers: Primary beneficiaries through affordable access to improved seed.
- Youth & Women: 40% of project jobs and 50-50 Outgrower contracts prioritized for these groups.
- Outgrower Farmers: 200 trained and contracted for seed multiplication.
- Agro-dealers and Cooperatives: Key partners in seed distribution.

3.1 Rationale

According to (KIT,2020), compared to other countries in sub-Saharan Africa, Malawi's seed sector is characterized by a large number of international and national seed companies actively engaged in seed production and marketing. Seed multiplication takes place through an established network of Outgrower farmers, mostly medium or larger-sized. The seed system is also characterized by a strong focus on providing certified seeds of maize and, to a lesser extent, legumes. These seeds reach the market largely through the Subsidy Programme (AIP), which captures the largest proportion of the government's agricultural budget. Purchasing certified seeds on commercial terms, however, is beyond the reach of most smallholder farmers. This explains why a large amount of seed is accessed through the informal seed system. While there are many small Agro-dealers in the country, high default rates have led to widespread mistrust and impaired a functional input distribution system. Quality assurance is also a general problem in the seed sector due to the inadequate capacity of the quality control authority, the Seed Services Unit (SSU).

The SPV seeks to improve production capacity for seeds such as sesame, pigeon peas, cowpeas, millet and sorghum to achieve agricultural diversification. The pricing strategy employed by MUSECO is aimed at recovering the cost of production with a small mark-up to make the products accessible to small-holder farmers who resort to the informal sector due to affordability considerations. The project will achieve economies of scale, which will lower fixed production costs leading to setting affordable prices for smallholder farmers in convenient and small package sizes.

3.3 Specific Objective(s)

The project's objectives are:

- To increase availability and access to high-quality certified seed among smallholder and commercial farmers.
- To create sustainable rural jobs and build capacity in seed production and agribusiness.

Impact

The MUSECO-GBA Joint Venture Project is expected to generate significant agricultural, economic, and social impacts, contributing meaningfully to the transformation of Malawi's agriculture sector and broader national development objectives as outlined in Malawi 2063 (MW2063) and its first 10-year implementation plan (MIP-1).

Agricultural Sector Impact

- **Improved Seed Security and Quality:** The project will enhance the local availability of certified seeds for strategic crops, reducing dependence on imported seed and addressing shortages that affect productivity. An estimated 35,297 metric tons of certified seed will be produced by year 5.

Agricultural Sector Impact

- **Support to Commercialization:** The project aligns with MW2063 Pillar 1: Agricultural Productivity and Commercialization, and MIP-1's focus on transforming subsistence farming into commercial agribusiness. By supplying quality seeds to over 10,000 farmers annually, the project will boost yields and farm profitability.
- **Climate-Resilient Agriculture:** The project incorporates climate-smart practices, including irrigation and drought-tolerant varieties, supporting MIP-1's resilience-building goals.

Economic Development Impact

- **Export Potential and Foreign Exchange Generation:** The Malawi seed sector has significant export potential. (Mabaya 2021), states that Malawian Seed Companies exported over 3,592 Mt of Maize and Soybean seed versus seed imports amounting to 504 Mt. MUSECO has potential to contribute towards seed exports.
- **Job Creation:** The project will directly create over 100 jobs (permanent and seasonal), including youth and women in production, processing, and distribution. Indirect employment through transport, marketing, and input supply chains is expected to benefit 300 additional individuals.
- **SME Linkages:** The project will work with Outgrower farmers and Agro-dealers, stimulating rural enterprise growth and enhancing inclusive economic participation. According to the National Agro-dealer Association it had 2,632 active members of which 600(23%) were women in 2021.This demonstrates that the SME linkages through outgrowers has potential to positively impact on women's economic status.

Social Development Impact

- **Rural Livelihoods and Poverty Reduction:** By improving access to inputs and markets, the project will enhance incomes of smallholder farmers and reduce rural poverty, particularly among women and youth.
- **Skills Development:** The project will offer training in agronomic practices, post-harvest handling, and business management, benefiting at least 1,500 farmers over three years.
- **Food Security:** Increased availability of high-yielding seed will contribute to national food security, aligned with MW2063's Enabler on Human Capital Development.

Alignment with National Priorities and Challenges

- Malawi's current macroeconomic challenges, including:
  i. Persistent forex scarcity due to high import dependency.
  ii. Youth unemployment and underemployment in rural areas.
  iii. Low agricultural productivity due to limited access to quality inputs.
- MW2063's Vision of a self-reliant, industrialized upper-middle income country through agricultural value addition and commercialization.
- MIP-1's priority sectors, particularly in:
  i. Agricultural Transformation.
  ii. Job Creation.
  iii. Export Diversification.
  iv. Resilience to climate shocks.

3.4 Components

The project requires financing for the following components:

1. Working capital requirements for seed production and processing: MK4.423 billion
2. Acquisition of capital assets: MK417 million

4. COSTING AND FINANCING
(Refer to Table 1)

4.1 Project Costs

Project Component	Cost	Financing Requirement
Working Capital	4,423	4,423
Capital Expenditure	417	417
Total Project Cost	**4,840**	**4,840**

4.2 Tentative cash flow projections (Funding requirements)

The funding requirements are presented in the Table below. Year 1 requires capital investment, which is the subject of this proposal, whereas subsequent years will be financed from sales revenue, less loan repayments and other cash transactions.

Period (Month/Quarter/Year)	Funding requirements in Million Malawi Kwacha
2025/2026 FY	4,840
2026/2027 FY	14,817
2027/2028 FY	28,759
2028/2029 FY	45,044
2029/2030 FY	55,454

4.3 Revenue projections

Revenue projections show a steady increase in revenue as the seed output increases with increased production capacity and engagement of Outgrowers.

Period (Month Quarter/Year)	Period	Revenue in Million (MWK)	Source	Assumptions
Q3-Q4	2025/2026 FY	6,489	Seed Sales	Seed production at 3,451 Mt. Annual Assumptions Cost of Capital 36%. Initial Investment K4.8 billion. Outgrowers with minimum 5ha of land engaged. Irrigation
Q1-Q4	2026/2027 FY	23,908	Seed Sales	Seed production at 10,550 Mt
Q1-Q4	2027/2028 FY	49,225	Seed Sales	Seed production at 20,186 Mt
Q1-Q4	2028/2029 FY	85,090	Seed Sales	85,090
Q1-Q4	2028/2030 FY	96,212	Seed Sales	Seed production at 35,297 Mt

4.4 Financial Soundness

The Company is committed to maintaining strong financial management practices that ensure the effective use of resources, operational efficiency, and long-term sustainability of the Project. The organization has instituted a robust financial management framework to manage its assets, liabilities, and operations, thereby ensuring financial stability, profitability, and solvency over the duration of the project and beyond. These include the procurement strategy, monitoring and evaluation framework and internal audits.

In addition, MGL will benefit from the technical oversight and financial management support of Forty-Large Financial and Business Consultants, a reputable consultancy with expertise in financial governance, internal controls, and strategic business planning. Their involvement will include periodic financial reviews, mentorship of in-house finance staff, and advisory support to ensure adherence to international financial reporting standards (IFRS) and local regulatory requirements.

Through this dual approach of leveraging technology and expert advisory support, SPV will ensure that all financial resources sourced for the Project are prudently managed, risks are effectively mitigated, and sustainability of the investment is safeguarded.

Cost Benefit Analysis and Profitability

The financial projections demonstrate that the project will be progressively profitable with a net profit margin of 3% in years 1 and 11% by year 5. Assuming a cost of capital of 36%, the project presents a positive Net Present Value of MK 1,163,181,582.63 and an Internal Rate of Return of 46% suggesting the project is financially viable. The estimated payback period is four (4) years. The project implementation period is 5 years and will therefore be able to repay the investment within the project period. Using the above parameters, a conclusion can be made that the project is financially viable and worth investing in.

4.5 Project implementation arrangement

The project will put in place the following project implementation arrangements to enhance its success. The project implementation will be phased and have a supporting governance structure and procurement strategy, financial management strategy and project management risk management matrix.

SN	Phase	Timeline	Key Activities
1	Phase 1: Mobilization	Month 1–2 (Y1)	• Appoint Project Management Team • Finalize procurement plans and work plans • Open project bank accounts and reporting templates
2	Phase 2: Procurement (Y1)	Month 3–12 (Y1)	• Acquire land, procure equipment, irrigation infrastructure, office logistics. • Initiate working capital disbursements for input purchase and staffing

SN	Phase	Timeline	Key Activities
3	Phase 3: Infrastructure Setup	Month 4–16 (Y1–Y2)	• Site development, irrigation installation, construction of seed storage & drying sheds
4	Phase 4: Production Cycle 1	Month 6–18 (Y1–Y2)	• First seed production cycle: land preparation, planting, crop management, harvesting. • Quality control and certification.
5	Phase 5: Full Operations	Month 19+ (Y2–Y3)	• Full-scale operations including seed multiplication, processing, marketing, and distribution
6	Phase 6: Monitoring & Closure	Throughout + Y3 end	• Regular reporting, performance reviews, audits, and final project completion report

Project Management Capacity and Governance Structure

- **Project Implementation Unit (PIU):** The unit shall include a Project Manager, Project Coordinator, Procurement Officer, Project Accountant/Finance and Compliance Officer, and M&E Officer.
- **Board Oversight:** The SPV, will be appointed using an open process as stipulated in the Shareholders' agreement and Memorandum and articles of association. The Board shall provide strategic oversight and receive quarterly progress reports.
- **Internal Controls:** The SPV shall ensure integration of financial and procurement tracking tools and periodic internal audits.
- **Partnerships:** The SPV shall enhance collaboration with extension services, research institutions (e.g., Chitedze Research Station), and seed certification bodies

Procurement Execution Strategy

- **Procurement Planning:** Annual procurement plans shall be prepared, reviewed, and approved by the Procurement Committee and submitted to the PPDA.
- **Procurement Methods:** The methods shall be as per Malawi's Public Procurement and Disposal Act thresholds, focusing on open tender for large assets and RFQs for medium-value items.
- **Milestone-Based Procurement:** Capital procurement in batches tied to physical milestones (e.g., completion of land clearing trigger irrigation installation procurement).

Working Capital and Financial Management

- **Disbursement Schedule:** Working capital shall be released based on approved cash flow projections aligned to production seasons.
- **Banking Arrangements:** A dedicated project account shall be maintained under dual signatory arrangements with regular reconciliation and financial reporting.
- **Performance Monitoring:** The SPV shall produce Monthly financial reporting, quarterly technical reviews, and annual external audits.

Risk Management and Mitigation

SN	Risk	Mitigation Strategy
1	Procurement delays	Advance planning and use of framework contracts for long-lead items
2	Climate/weather risk	Irrigation systems, use of certified drought-resistant seed
3	Staff/contractor performance	Clear KPIs and performance-based contracts
4	Cashflow gaps	Bond-backed disbursement plan with quarterly reviews

4.6 Project Implementation Timeline Schedule

The Gantt chart is provided in Annex 1. The project will be implemented in six phases over a period of five years. The Gantt chart is provided in Annex 1.

4.7 Project Management Team

Designation	Name	Highest Qualifications	Experience
Project Manager	Dr. Godfrey Kananji	PhD	25 years in crop improvement and seed development, policy formulation and research.
Project Coordinator	Mr. Martin Isyagi	MBA	30 Years in Agriculture Finance. Experienced in Crop Science and irrigation systems management and strategic management.
Project Accountant	Mr. Ahmed Bwanali	Bachelor's degree in finance and Investment Plus ACCA Part 2	28 years' experience in financial management and administration.

5. PROJECT READINESS
(Refer to Table 2)

Table 2: Project Readiness

Project Stage	Status
Securing critical resources e.g. Land acquired	**In Place**
Feasibility studies done	**Done**
Financial and technical sponsorship secured	**Done**
Preliminary Designs available	**Available**
Detailed Design available	**Available**
Facility/Technical Design	**Available**
Supervisor procured	**In Place**
Contractor procured	**Not Yet**
Project under implementation	**In Place**
PSIP Appraisal	**In Place**

6 GOVERNANCE ISSUES

6.1 Governing Legislation

MUSECO- Greenbelt Limited will be governed by the Companies Act No 15 of 2013 as a private company limited by shares. S126 of the Companies Act No 15 of 2013 provides that companies may raise capital in the form of debentures whose definition within the Act includes a bond or an obligation.

6.2 Financial Management

The Company will develop a financial management manual to provide guidance on the handling of financial transactions in accordance with International Financial Reporting Standards (IFRS) and the Companies Act of Malawi. The manual will as well guide on accounting for fixed assets, inventory, biological assets, revenue and expenditures. The Manual will provide internal control measures such as segregation of duties and approval processes for various transactions. The manual also provides guidance on budgeting and financial reporting. Annual budgets shall be prepared to facilitate allocation of resources for productive utilisation.

6.2 Financial Management

Monthly, quarterly and annual management accounts shall be produced during the project period with quarterly financial reports submitted to the Board of Directors. Periodic internal audits shall be conducted to provide assurance that the internal control environment is strong and effective in managing risks.

6.3 Auditing

In accordance with the provisions of the Companies Act and its Memarts, annual audit of its operations will be conducted and filed accordingly. The SPV, having sourced part of capital injection from GBA, which is a Government Parastatal, will also comply with the provisions of the Public Finance Management Act 2022.

6.4 Procurement Procedure(s)

To ensure alignment with the Public Procurement and Disposal Act of 2017 and maintain internal efficiency and accountability, the SPV shall adopt procurement thresholds based on the nature and value of procurements. These thresholds will apply to goods, works, and consultancy/non-consultancy services and will guide the selection of appropriate procurement methods.

SN	Procurement Method	Applicable Threshold (MWK)	Description & Application
1	Request for Quotations (RFQ)	Up to K30 million for goods and services Up to K50 million for works	For low-value, off-the-shelf items, minor works or services, require at least 3 quotations.
2	Open Tender (National)	Above K30 million for goods and services Above K50 million for works	Default method for substantial procurement ensures open competition and transparency.
3	Open Tender (International)	Above K500 million for goods, services, or works	For high-value, complex procurements where international competition is viable or required.
4	Restricted Tendering	Case-by-case for specialized or urgent needs	Limited to a shortlist of qualified suppliers; subject to justification and internal approval.
5	Single Source Procurement	Exceptional circumstances only; typically < K15 million	Used only with prior written justification and approvals, where only one supplier is feasible.
6	Request for Proposals (RFP)	Applicable for consultancy services above K10 million	Competitive method for procuring technical and professional consultancy services.
7	Shopping Method (Low-Value)	Below K5 million	For very low-value procurements; simplified procedures and short timelines.

Governance and Oversight Measures

- A Procurement Committee shall be established to oversee all procurements.
- All procurement plans and thresholds shall be reviewed annually and submitted to the Public Procurement and Disposal of Assets Authority (PPDA) for compliance checks.

7. RISK AND RISK MANAGEMENT ISSUES

7.1 Risk and Mitigation Measures

Table 3: Risk and Risk Management Issues

Risk	Description	Impact	Bearer	Mitigation
Financial risk	Fraudulent utilisation of funds	High	MUSECO-GBA Limited	Enhancement of an effective internal control environment and implementation of a monitoring and evaluation framework to track performance.
Operational risk	Equipment breakdown leading to production disruption and processing inefficiencies.	Medium	MUSECO-GBA Limited	Preventive maintenance of key productive assets. Stocking of fast-moving equipment spares to minimize equipment downtime.
Climate Risk	Droughts and erratic rainfall lead to low output. This has a high probability and medium impact.	High	MUSECO-GBA Limited	SPV will promote drought-tolerant varieties and sustainable irrigation systems among its Outgrowers and its on farm.
Business Risk	Side-selling by Outgrower farmers	Medium	MUSECO-GBA Limited	Robust contracts, building trust and offering financial incentives for adherence to agreements
Environmental Risk	Pest and disease outbreaks lead to crop damage, low quality and output. This has a high Probability and high impact.	Medium	MUSECO-GBA Limited	SPV will strengthen integrated pest management (IPM) and farmer training.

7.2 Climate adaptation, resilience and risk mitigation

The climate-related risks associated with the MUSECO-GBA Joint Venture Project, including their probability, impact, and corresponding mitigation measures are presented in the following Table.

SN	Climate-Related Risk	Probability	Impact	Mitigation Measures
1	Erratic rainfall patterns	High	High	• Adopt irrigation systems to reduce reliance on rainfall. • Schedule planting during reliable rain windows
2	Prolonged drought periods	Medium	High	• Invest in water-efficient irrigation (e.g., drip systems) • Develop on-site water storage (dams/tanks)
3	Flooding due to heavy rains	Medium	High	• Site selection with proper drainage. • Construct raised seedbeds and drainage channels
4	Extreme temperature fluctuations	Low	Medium	• Use heat/drought-tolerant seed varieties. • Schedule sensitive stages (e.g., flowering) during moderate seasons
5	Increased pest and disease outbreaks	High	Medium	• Integrated Pest Management (IPM). • Regular field monitoring and rapid response protocols
6	Windstorms and hailstorms	Low	High	• Use windbreaks (trees or hedges). • Insure high-value crop stages/assets if possible
7	Climate-induced transport disruptions	Medium	Medium	• Maintain a buffer stock of inputs and harvests. • Use flexible transport logistics plans
8	Changes in planting calendar due to shifting seasons	High	Medium	• Engage the meteorological department for seasonal forecasts. • Update production plans annually based on forecasts.

8. ENVIRONMENTAL, SOCIAL AND GOVERNANCE (ESG) ISSUES

Environmental Considerations

To ensure alignment with the Public Procurement and Disposal Act of 2017 and maintain internal efficiency and accountability, the SPV shall adopt procurement thresholds based on the nature and value of procurements. These thresholds will apply to goods, works, and consultancy/non-consultancy services and will guide the selection of appropriate procurement methods.

8. ENVIRONMENTAL, SOCIAL AND GOVERNANCE (ESG) ISSUES

Environmental Considerations

The GBA Investments Policy will provide a general hindsight in mainstreaming the ESG guidelines in the operations of the SPV.

The proposed project may lead to increased water usage which may cause stress to the local water resources during the dry season, soil degradation, potential run-off of organic fertilizers which may contaminate water resources and affect the aquatic ecosystem, and encroachment into the habitats of flora and fauna through the proposed expansion of land for cultivation. To effectively manage these environmental impacts, SPV shall: use water-efficient sprinkler systems to minimize wastage, regularly monitor water usage to ensure sustainable extraction levels, implement water harvesting and storage systems using reservoirs to supplement irrigation needs. SPV shall conduct regular soil testing and apply fertilizers based on specific soil requirements, practice crop rotation to maintain soil fertility and introduce cover crops during fallow periods to prevent erosion and enhance soil structure. SPV shall train farm worker and Outgrowers on proper fertilizer application techniques, establish buffer zones around water bodies to filter runoff and use drip irrigation in sensitive areas to minimize over-application of water and fertilizers. To minimize the impact on flora and fauna, SPV shall continue to maintain uncultivated buffer zones and preserve the existing forested areas, promote agroforestry by planting trees along farm boundaries to enhance biodiversity. Increased activity on the Farm may have negative impacts on the health and safety of the community through accidents and the spread of diseases. SPV shall provide safety training and protective equipment for farm workers, educate workers and surrounding communities on safe handling of fertilizers, inoculants and disease prevention. Expansion of farming operations may negatively affect access to communal land for other activities such as grazing or community gatherings. SPV shall engage the local community in land-use planning to ensure shared benefits and minimal conflicts and will allocate designated areas for other communal activities. To combat climate change, the project shall use Outgrower farmer business groups to implement catchment protection programs and enhance water harvesting which will ensure continued operations through sustainable irrigation.

Social

MUSECO currently employs 17 full time staff female and youth who make up over 31% of the workforce. Overall, the project will create over 100 full time jobs and 350 seasonal jobs annually. The jobs shall attract above minimum wage pay, which shall effectively boost the economic situation of the surrounding community which earns below K2,500 in a day. The Farm is also a source of merchandise for the local community who resell the produce at various markets at a profit.

Women will be involved in this project on three fronts.

Full-time employment and Seasonal Work

Women shall participate through active employment on a permanent or seasonal basis as the farm seeks to have multiple production cycles in a year. The target proportion of women in employment is 40% in line with the national target for Malawi. MUSECO is an equal opportunity employer and does not discriminate against any women when it comes to pay for similar work.

Outgrower Program

The SPV's target will be to achieve a 50-50 distribution of male and female in its Outgrower programs. The Outgrower program recruitment guidelines shall promote recruitment of female and youth community members to enhance diversity, equity and inclusion. Terms of engagement shall be the same for men and women.

Impact on Businesses

MUSECO shall continue to promote the production of seeds which are off taken by Agro-Dealers for resell at profit. The resulting positive economic benefits from this project will also help promote small businesses across the country. Over 100 Agro-Dealers shall benefit from economic activity.
This will enhance the economic well-being of women and youth through the creation of decent work and participation in positive economic activities which boosts their standing in society and economic independence and freedom.

Governance

Governance structures and arrangements will be established in accordance with provisions of the Companies Act and the SPV's MEMARTS.

BWANJE

GREENBELT ETHANOL DISTILLERY PROJECT

1. PROJECT SUMMARY SHEET

1.1 Project Name	Bwanje Greenbelt Ethanol Distillery Project
1.2 Project Location	Salima, Nkhotakota
1.3 Intended Borrower (s)	Special Purpose Vehicle (Greenbelt-Bwanje Limited)
1.4 Implementation Institution	Greenbelt- Bwanje Limited (GBL)
1.5 Economic Sector(s)	Energy
1.6 Subsector (s)	Agriculture
1.7 Project Description	The project is for the development of 121,00 litre per day multi-model ethanol distillery plant
1.8 Project Objectives	1. To increase ethanol production in the country. 2. To enhance import substitution for ethanol. 3. To create job opportunities
1.9 Project Deliverables (Outputs)	1. US$80 Million forex saved per year 2. 5000 jobs created (1000 direct jobs, 4000 indirect jobs) 3. 37.5 Million litres of ethanol produced per year 4. 6000Ha of land acquired and developed 5. Food grade alcohol and carbon dioxide produced as a by product and exported
1.10 Proposed Project Implementation Period (Start Date and End Date)	This is a Five-Year Project Start Date: 1st August 2025 End Date: 31st July 2035
1.11 Estimated Project total cost and Financing Plan	a) Total Project Cost is US$63 Million b) The preferred financing arrangement is 30% equity and 70% debt.
1.12 Source of income for repayment (i.e. source of finances to service the bond)	The Special Purpose Vehicle will utilise revenue generated from its operations to service the bond.
1.13 Key Project Risks and Mitigation Measures	1. Forex shortage that would delayed completion of infrastructure and machinery installation. Constant engagement with Treasury and Central bank on estimated forex demands for the projects. 2. Climate change effects such as droughts. Irrigation infrastructure will be used to allow continuous supply of water. 3. Price regulation is done by MERA, hence no control over the price. 4. Power shortfalls as the project might not produce

1.14 Project Readiness	GBA has acquired 32Ha in Nkhotakota for the factory development. 2500Ha already provided in Salima by the Salima District Council, factory equipment suppliers already identified in India. Pre-feasibility assessment already done.

2. STRATEGIC ALIGNMENT

2.1 Country Alignment

The project aligns with Malawi 2063's Pillar 1 (Agricultural Productivity) and Pillar 2 (Industrialization). The project is also aligned with the MIP-1 priority areas of irrigation development, agricultural inputs and agricultural research, innovation and dissemination. The project also aligns with MIP-1's priority area of development of secondary cities. The project also links with Private Sector Dynamism enabler and Economic infrastructure development enabler. The project also relates with enabler number seven on environmental sustainability.

2.2 Sectoral Alignment

The Project is also aligned with the National Agriculture Policy that encourages agricultural productivity where 4000 out grower farmers will be engaged.

2.3 Institutional Alignment

The project aligns with the Greenbelt Authority's Strategic Plan which focuses on agricultural productivity, infrastructure development and agro-processing and market development.

3. THE PROJECT

3.1 Project Description

A project for the establishment of a 21,000liter ethanol distillery plant. The project will involve production of cassava and sugar cane on over 1000Ha as well as sourcing these value chains from out grower farmers for the production of ethanol and other associated commodities such as food grade alcohol.

Objectives

- To increase ethanol production in the country.
- To enhance import substitution for ethanol.
- To create job opportunities.

Key Activities and Costs

Activity	Description	Timeline	Estimated Cost in Million (MWK)
1. Land Acquisition	Acquisition of 6000Ha	Year 1	7,200,
2. Factory equipment installation	Construction of the factory buildings and installation of factory equipment	Year 2– Year 4	73,000
3. Irrigation infrastructure	Development of irrigation infrastructure and land preparation	Year 2 - Year 5	40,000
Total Project Cost			**7,200,**

Production Targets

Value Chain	2026/27	2027/28	2028/29	2029/30 In Mt
Sugarcane (MT)			400,000	400,000
Ethanol produced from syrup (Litres)			34,000,000	34,000,000

Target Groups

- **Smallholder Farmers:** Primary beneficiaries through sell of their produce to the factory.
- **Youth & Women:** The project will involve youth and women directly in the production.
- **Outgrower Farmers:** 4000 outgrower farmers will have contracts to supply their produce to the company.

3.2 Rationale

Ethanol is highly demanded world over due to increasing demand for use of bio fuels in place of fossil oils. The current blending ratio for ethanol in petrol in Malawi is 20% providing a ready market for fuel ethanol.

In Malawi the current ethanol production by the two main players, Ethco and Presscane, who also happen to belong to the same group of companies, Press Corporation, falls far short of demand.

Each of these companies annually produce about 18 million litres of ethanol (total 36 million litres), whose quality largely depends on the quality of feedstocks, plant efficiency and labour output and quality.

These two companies are investing in milling capacity to be able to buy sugarcane from out growers and crush it for ethanol production increasing their capacity.

However, the increased capacity will not reach 50% of the country's demand for fuel ethanol which keeps on increasing with the increased importation of cars.

This provides an opportunity for a new player in the market to fill the gap.

Both Ethco and PressCane also import molasses from Mozambique and Zambia to improve on the volumes of ethanol produced.

The importation of molasses defeats one of the reasons that ethanol production was introduced in the country as an import substitution of petrol.

According to a 1989 study by U.S. Aid for International Development, more than half the foreign exchange savings attributable to ethanol are from avoidance of inland freight from ocean ports for the Petrol or high octane gasoline which ethanol displaces, reflecting the high cost of bringing fuels distances of up to 2600 kilometers by combinations of truck, rail and pipeline.

Commercial ethanol production started in 1982 with minimal increase in production despite there being a trajectory increase of motor vehicles population on the market. The situation has resulted in increasing demand for ethanol for blending with petrol to satisfy demand for increasing fuel energy.

Despite being the first to introduce ethanol production in the region, Malawi has not increased the production capacity despite increase in demand.

Specific Objective(s)

The project's objectives are:

- To increase availability and access to high-quality certified seed among smallholder and commercial farmers.
- To create sustainable rural jobs and build capacity in seed production and agribusiness.

Impact

The GBL Special Purpose Vehicle is expected to generate significant agricultural, economic, and social impacts, contributing meaningfully to the transformation of Malawi's agriculture sector and broader national development objectives as enshrined in Malawi 2063 (MW2063) and its first 10-year implementation plan (MIP-1).

Agricultural Sector Impact

- **Increased agricultural productivity:** The project will involve 4000 outgrower farmers for production of sugarcane and cassava.
- **Climate-Resilient Agriculture:** The project incorporates climate-smart practices, including irrigation and drought-tolerant varieties, supporting MIP-1's resilience-building goals.

Economic Development Impact

- **Import Substitution:** The project will produce ethanol thereby reducing the country's import bill on ethanol of over US$80 Million.
- **Job Creation:** The project will directly create over 5000 jobs (1000 direct jobs and 400 indirect jobs).
- **SME Linkages:** The project will work with Outgrower farmers and smallholder farmers who will produce sugarcane and cassava and they will sell to the SPV. This demonstrates that the SME linkages through outgrowers has potential to positively impact on women's economic status.

Social Development Impact

- **Rural Livelihoods and Poverty Reduction:** By proving ready markets for the 4000 outgrower farmers, the project will enhance incomes and reduce rural poverty.
- **Skills Development:** The project will offer training in good agricultural practices on sugarcane and cassava production.
- **Food Security:** Increased income will help farmers afford food products as well as support their production of food crops through purchasing inputs thereby making them food secure

Alignment with National Priorities and Challenges

The project is directly responsive to:

- Malawi's current macroeconomic challenges, including:
    i. Persistent forex scarcity due to high import dependency.
    ii. Youth unemployment and underemployment in rural areas.
    iii. Low agricultural productivity due to limited access to quality inputs.
- MW2063's Vision of a self-reliant, industrialized upper-middle income country through agricultural value addition and commercialization.
- MIP-1's priority sectors, particularly in:
    i. Agricultural Transformation.
    ii. Job Creation.
    iii. Import substitution.
    iv. Resilience to climate shocks.

3.4 Components

The project requires financing for the following components:

1. Acquisition of land at MK7.2 Billion
2. Construction of factory building and installation of factory equipment at MK73 Billion
3. Construction of irrigation infrastructure at MK40 Billion.

4.1 Project Costs

Table 1: Project Cost and Financing (MK)

Project Component	Cost (MK, Millions)	Financing Requirement
Land acquisition	7,200	7,200
Factory construction	73,000	73,000
Irrigation infrastructure	40,000	40,000
Total Project Cost	**120,200**	**120,000**

4.3 Revenue projections

Bwanje Ethanol plant															
Financial summary															
US$m															
	Yr1	Yr2	Yr3	Yr4	Yr5	Yr6	Yr7	Yr8	Yr9	Yr10	Yr11	Yr12	Yr13	Yr14	Yr15
REVENUE	-	-	-	46.537	47.700	48.893	50.115	51.368	52.652	53.968	55.318	56.701	58.118	59.571	61.060
PBIT	-0.955	-0.978	-4.228	14.463	17.110	17.121	16.647	16.185	15.734	15.300	13.880	13.471	15.953	20.487	16.689
INTEREST	-	-	-	3.582	3.284	2.985	2.687	2.388	2.090	1.791	1.493	1.194	0.896	0.597	0.345
PBT	-0.955	-0.978	-4.228	10.881	13.826	14.136	13.960	13.797	13.644	13.509	12.387	12.277	15.057	19.890	16.344
TAX	-	-	-	3.264	4.148	4.241	4.188	4.139	4.093	4.053	3.716	3.683	4.517	5.967	4.903
PAT	-0.955	-0.978	-4.228	7.617	9.678	9.895	9.772	9.658	9.551	9.456	8.671	8.594	10.540	13.923	11.441
DIVIDEND	-	-	-	-	-	-	-	4.829	4.776	4.728	4.336	4.297	5.270	6.961	5.720
RETAINED INCOME	-0.955	-0.978	-4.228	7.617	9.678	9.895	9.772	4.829	4.776	4.728	4.336	4.297	5.270	6.961	5.720
NON CURRENT ASSETS	30.531	49.281	56.506	55.306	56.956	58.106	58.256	57.406	55.556	52.706	47.857	37.007	38.032	42.967	43.467
CURRENT ASSET	13.085	13.371	1.931	9.189	16.284	24.244	31.614	34.214	37.436	38.952	41.475	49.662	47.509	44.895	42.980
NON CURRENT LIABILITIES	-26.831	-38.831	-38.831	- 33.240	-32.284	-31.478	- 29.202	-26.100	-22.672	- 16.586	-9.900	-2.913	3.511	7.599	11.611
CURRENT LIABILITIES	-0.540	-0.554	-0.567	-4.599	-4.621	-4.643	-4.666	-4.689	-4.713	-4.738	-4.762	-4.788	-4.815	-4.261	-1.138
NET ASSETS	16.245	23.267	19.039	26.656	36.334	46.229	56.002	60.831	65.607	70.335	74.670	78.967	84.238	91.199	96.920
EQUITY	16.245	23.267	19.039	26.656	36.334	46.229	56.002	60.831	65.607	70.335	74.670	78.967	84.238	91.199	96.920

4.4 Financial Soundness

Greenbelt Bwanje Limited (GBL) is committed to maintaining strong financial management practices that ensure the effective use of resources, operational efficiency, and long-term sustainability of the Project. The organization has instituted a robust financial management framework to manage its assets, liabilities, and operations, thereby ensuring financial stability, profitability, and solvency over the duration of the project and beyond. These include the procurement strategy, monitoring and evaluation framework and internal audits.

In addition, GBL will benefit from the technical oversight and financial management support of Forty-Large Financial and Business Consultants, a reputable consultancy with expertise in financial governance, internal controls, and strategic business planning. Their involvement will include periodic financial reviews, mentorship of in-house finance staff, and advisory support to ensure adherence to international financial reporting standards (IFRS) and local regulatory requirements.

Through this dual approach of leveraging technology and expert advisory support, GBL will ensure that all financial resources sourced for the Project are prudently managed, risks are effectively mitigated, and sustainability of the investment is safeguarded.

Cost Benefit Analysis and Profitability

The project demonstrates that it is viable with a NPV of 33.93%, IRR of 16.48% and payback period of 8 years due to the 4-year setting up period.

Project implementation arrangement

GBL shall put in place the following project implementation arrangements to enhance its success. The project implementation will be phased and have a supporting governance structure and procurement strategy, financial management strategy and project management risk management matrix.

SN	Phase	Timeline	Key Activities
1	Phase 1: Development of the project	Year 1 to Year 4	• Land acquisition, • Land preparation, • Irrigation infrastructure installation and • factory shell development and factory equipment installation
2	Phase 2: Production of sugarcane	Year 3 to Year 10	• Sugarcane production
3	Phase 3: Ethanol production	Year 4 to Year 10	• Sugarcane production

Project Management Capacity and Governance Structure

- **Project Implementation Unit (PIU):** The unit shall include a Project Manager, Project Coordinator, Procurement Officer, Project Accountant/Finance and Compliance Officer, and M&E Officer.
- **Board Oversight:** The GBL Board shall provide strategic oversight and receive quarterly progress reports.
- **Internal Controls:** GBL shall ensure integration of financial and procurement tracking tools and periodic internal audits.
- **Partnerships:** GBL shall enhance collaboration with other stakeholders. bodies

Procurement Execution Strategy

- **Procurement Planning:** Annual procurement plans shall be prepared, reviewed, and approved by the Procurement Committee and submitted to the PPDA.
- **Procurement Methods:** The methods shall be as per Malawi's Public Procurement and Disposal Act thresholds, focusing on open tender for large assets and RFQs for medium-value items.
- **Milestone-Based Procurement:** Capital procurement in batches tied to physical milestones (e.g., completion of land clearing ⊠ trigger irrigation installation procurement).

Working Capital and Financial Management

- **Disbursement Schedule:** Working capital shall be released based on approved cash flow projections aligned to production seasons.
- **Banking Arrangements:** A dedicated project account shall be maintained under dual signatory arrangements with regular reconciliation and financial reporting.
- **Performance Monitoring:** GBL shall produce Monthly financial reporting, quarterly technical reviews, and annual external audits.

Risk Management and Mitigation

SN	Risk	Mitigation Strategy
1	Forex scarcity	Constant engagement with Treasury and Central Bank
2	Climate/weather risk	Irrigation systems
3	Price regulation by MERA	Forecasting possible ethanol prices and plan accordingly
4	Power shortages	Diversity power sources including solar, ESCOM and from the project

4.5 Project Implementation Timeline Schedule

The project will be implemented in six phases over a period of five years.

4.6 Project Management Team

Designation	Name	Highest Qualifications	Experience
Project Manager		PhD	25 years in crop improvement and seed development, policy formulation and research.
Project Coordinator		MBA	30 Years in Agriculture Finance. Experienced in Crop Science and irrigation systems management and strategic management.
Project Accountant		Bachelor's degree in finance and Investment Plus ACCA Part 2	28 years' experience in financial management and administration.

5. PROJECT READINESS

(Refer to Table 2)

Table 2: Project Readiness

Project Stage	Status
Securing critical resources e.g. Land acquired	**In Place**
Feasibility studies done	**Done**
Financial and technical sponsorship secured	**Done**
Preliminary Designs available	**Available**
Detailed Design available	**Available**
Facility/Technical Design	**Available**
Supervisor procured	**In Place**
Contractor procured	**To be identified**
Project under implementation	**Not Yet**
PSIP Appraisal	**No**

6 GOVERNANCE ISSUES

6.1 Governing Legislation

GBL will be governed by the Companies Act No 15 of 2013 as a private company limited by shares. S126 of the Companies Act No 15 of 2013 provides that companies may raise capital in the form of debentures whose definition within the Act includes a bond or an obligation. Furthermore, section 74 of the Articles of Association for GBL authorizes the Board of Directors to resolve in their absolute discretion from time-to-time to raise or borrow any sum or sums of money for the purposes of the company without limitation either upon a mortgage, charge, debenture bond or litigation or in any way whatsoever on the security of any of the property of the company including uncalled capital or otherwise as they may think fit and they may cause or permit any such mortgages, charges, debentures, debenture bonds, or obligations to be redeemed or transferred as they may think fit.

6.2 Financial Management

GBL will have financial management manual which provides guidance on the handling of financial transactions in accordance with International Financial Reporting Standards (IFRS) and the Companies Act of Malawi. The manual provides guidance on accounting for fixed assets, inventory, biological assets, revenue and expenditures. The Manual provides internal control measures such as segregation of duties and approval processes for various transactions. The manual also provides guidance on budgeting and financial reporting. Annual budgets shall be prepared to facilitate allocation of resources for productive utilization.

Monthly, quarterly and annual management accounts shall be produced during the project period with quarterly financial reports submitted to the Board of Directors. Periodic internal audits shall be conducted to provide assurance that the internal control environment is strong and effective in managing risks. Annual external audits shall be conducted to provide assurance that the financial performance and position of GBL as presented in the financial statements is true and fair.

6.3 Auditing

Financial Statements will be prepared in accordance with international reporting standards.

6.4 Procurement Procedure(s)

Will be done in compliance with company approved proicreement procedures. To ensure alignment with the Public Procurement and Disposal Act of 2017 and maintain internal efficiency and accountability, GBL shall adopt procurement thresholds based on the nature and value of procurements. These thresholds will apply to goods, works, and consultancy/non-consultancy services and will guide the selection of appropriate procurement methods.

Governance and Oversight Measures

- A Procurement Committee shall be established to oversee all procurements.
- All procurement plans and thresholds shall be reviewed annually and submitted to the Public Procurement and Disposal of Assets Authority (PPDA) for compliance checks.
- GBL will use QuickBooks Online Accounting Software to record procurement transactions.
- GBL shall facilitate independent audits, and quarterly procurement reports to ensure transparency and accountability to the bond financier (Green Belt Authority).

7. RISK AND RISK MANAGEMENT ISSUES

7.1 Risk and Mitigation Measures

Table 3: Risk and Risk Management Issues

Risk	Description	Impact	Bearer	Mitigation
Financial risk	Scarcity of forex	High	GBL	Engagement with treasury and central bank
Operational risk	Equipment breakdown leading to production disruption and processing inefficiencies.	Medium	GBL	Preventive maintenance of key productive assets. Stocking of fast-moving equipment spares to minimize equipment downtime.
Climate Risk	Droughts and erratic rainfall lead to low output. This has a high probability and medium impact.	High	GBL	GBL will promote drought-tolerant varieties and sustainable irrigation systems among its Outgrowers and its on farm.
Business Risk	Side-selling by Outgrower farmers	Medium	GBL	Robust contracts, building trust and offering financial incentives for adherence to agreements
Environmental Risk	Pest and disease outbreaks lead to crop damage, low quality and output. This has a high Probability and high impact.	Medium	GBL	GBL will strengthen integrated pest management (IPM) and farmer training.

7.2 Climate adaptation, resilience and risk mitigation

The climate-related risks associated with the GBL Joint Venture Project, including their probability, impact, and corresponding mitigation measures are presented in the following Table.

SN	Climate-Related Risk	Probability	Impact	Mitigation Measures
1	Erratic rainfall patterns	High	High	• Adopt irrigation systems to reduce reliance on rainfall. • Schedule planting during reliable rain windows
2	Prolonged drought periods	Medium	High	• Invest in water-efficient irrigation (e.g., drip systems) • Develop on-site water storage (dams/tanks)
3	Flooding due to heavy rains	Medium	High	• Site selection with proper drainage. • Construct raised seedbeds and drainage channels
4	Extreme temperature fluctuations	Low	Medium	• Use heat/drought-tolerant seed varieties. • Schedule sensitive stages (e.g., flowering) during moderate seasons
5	Increased pest and disease outbreaks	High	Medium	• Integrated Pest Management (IPM). • Regular field monitoring and rapid response protocols
6	Windstorms and hailstorms	Low	High	• Use windbreaks (trees or hedges). • Insure high-value crop stages/assets if possible
7	Climate-induced transport disruptions	Medium	Medium	• Maintain a buffer stock of inputs and harvests. • Use flexible transport logistics plans
8	Changes in planting calendar due to shifting seasons	High	Medium	• Engage the meteorological department for seasonal forecasts. • Update production plans annually based on forecasts.

8. ENVIRONMENTAL, SOCIAL AND GOVERNANCE (ESG) ISSUES

Environmental Considerations

The SPV (GBL) will adopt the Greenbelt Authority investment policy which has environmental and social governance protocols. The proposed project may lead to increased water usage which may cause stress to the local water resources during the dry season, soil degradation, potential run-off of organic fertilizers which may contaminate water resources and affect the aquatic ecosystem, and encroachment into the habitats of flora and fauna through the proposed expansion of land for cultivation. To effectively manage these environmental impacts, GBL shall: use water-efficient sprinkler systems to minimize wastage, regularly monitor water usage to ensure sustainable extraction levels, implement water harvesting and storage systems using reservoirs to supplement irrigation needs. GBL shall conduct regular soil testing and apply fertilizers based on specific soil requirements, practice crop rotation to maintain soil fertility and introduce cover crops during fallow periods to prevent erosion and enhance soil structure. GBL shall train farm worker and Outgrowers on proper fertilizer application techniques, establish buffer zones around water bodies to filter runoff and use drip irrigation in sensitive areas to minimize over-application of water and fertilizers. To minimize the impact on flora and fauna, GBL shall continue to maintain uncultivated buffer zones and preserve the existing forested areas, promote agroforestry by planting trees along farm boundaries to enhance biodiversity. Increased activity on the Farm may have negative impacts on the health and safety of the community through accidents and the spread of diseases. GBL shall provide safety training and protective equipment for farm workers, educate workers and surrounding communities on safe handling of fertilizers, inoculants and disease prevention. Expansion of farming operations may negatively affect access to communal land for other activities such as grazing or community gatherings. GBL shall engage the local community in land-use planning to ensure shared benefits and minimal conflicts and will allocate designated areas for other communal activities. To combat climate change, the project shall use Outgrower farmer business groups to implement catchment protection programs and enhance water harvesting which will ensure continued operations through sustainable irrigation.

Social

GBL shall employ over 5000 peoples.

Governance

GBL shall be registered as a Limited Company and will have an active Board of Directors in place. GBL shall be tax compliant. The business shall also comply with the Labour Relations Act, Employment Act of 2000 among relevant laws of Malawi.

For More Information

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