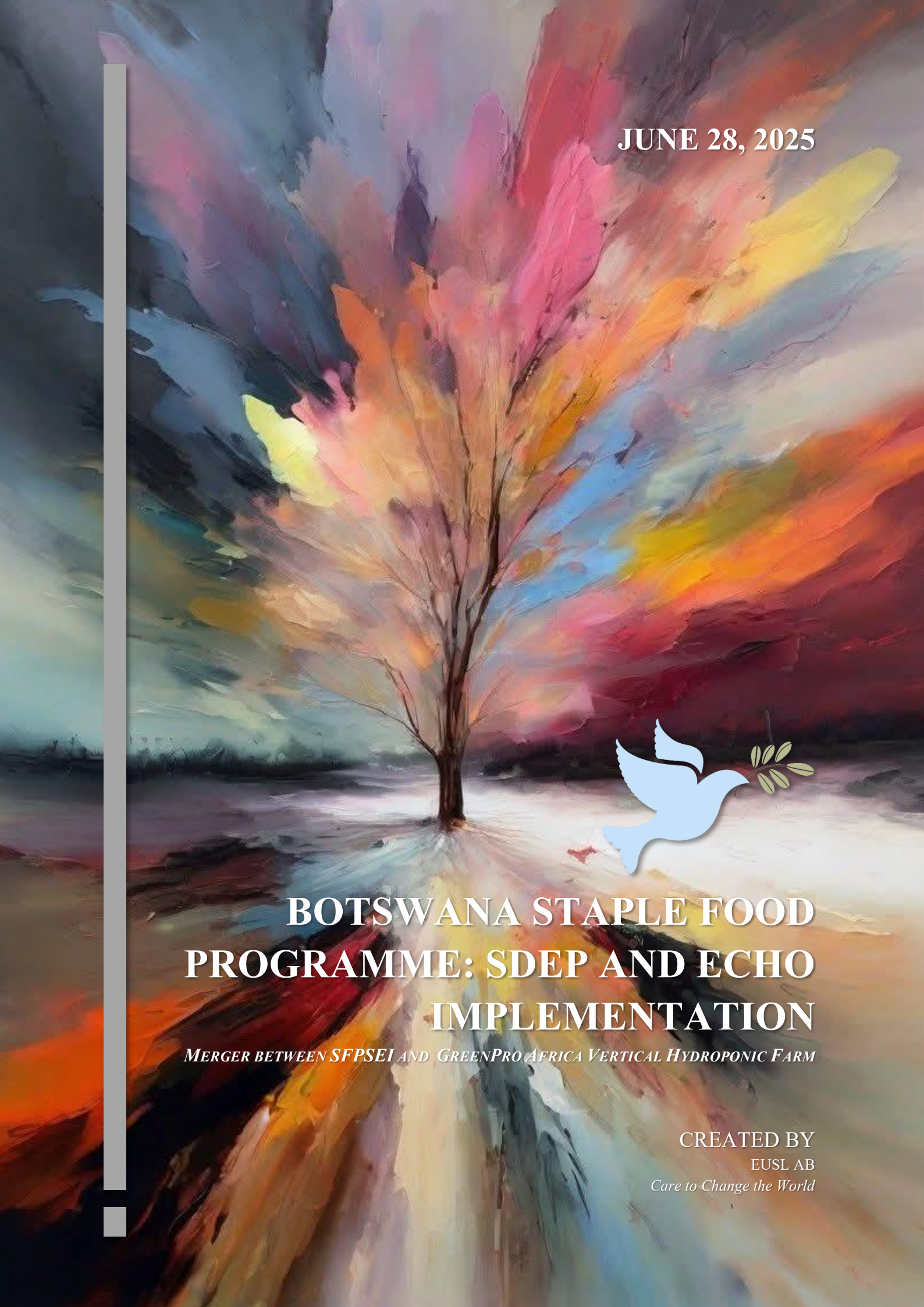

JUNE 28, 2025

BOTSWANA STAPLE FOOD PROGRAMME: SDEP AND ECHO IMPLEMENTATION

MERGER BETWEEN SFPSEI AND GREENPRO AFRICA VERTICAL HYDROPONIC FARM

CREATED BY

EUSL AB

Care to Change the World

Project Title:	**Botswana: Staple Food Programme: SDEP and ECHO Implementation (SFPSEI)**
Recipient Region:	Botswana
Government(s)/other counterpart(s):	Botswana, Private Sector, Non-Governmental Organisation
Expected EOD (Starting Date):	Oct 1st, 2025
Expected NTE (End Date):	July, 2030
Environmental and Social Risk Classification	low risk moderate risk high risk
Gender Marker:	G0 G1 G2a[1] ´ G2b
Total Budget:	USD 41,963,000.00 + 236,000,000.00

Botswana Staple Food Programme: SDEP and ECHO Implementation
Sent in by

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Name
Position
Agency: Ministry of Finance
Contact information

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ACRONYMS AND **ABBREVIATIONS**

AfDB	African Development Bank
Botswana-BBIP	Botswana Biotechnology and Biosafety Implementation
Botswana-BHAP	Botswana Bioprotectants Harmonization Programme
Botswana-FAUP	Botswana Fertilizer Access and Utilization Programme
Botswana-HA	Botswana Horticulture Accelerator
Botswana-SHCP	Botswana Seed Harmonisation and Certification Programme
SFPSEI	Botswana Staple Food Programme: SDEP and ECHO Implementation
AU	African Union
BMGF	Bill and Melinda Gates Foundation
CAADP	Comprehensive Africa Agricultural Development Programme
CET	Common External Tariff
COMESA	Common Market for Eastern and Southern Africa
EAC	East African Community
ECHO	Environmental, Circular, Holistic, Optimized (infrastructure platform)
EU	European Union
EUSL	European Social Label
FCDO	Foreign Commonwealth Development Office
FOs	Farmer Organisations
GDP	Gross Domestic Product
GMO	Genetically Modified Organisms
GSIA	Global Social Impact Alliance
ISAAA	International Service for the Acquisition of Agri-biotech Applications
M&E	Monitoring and Evaluation
MDG	Millennium Development Goals
MG FIAM	Matching Grant Facility Implementation and Modality
MOA	Ministry of Agriculture
NGO	Non-Governmental Organisation
RVCs	Regional Value Chains.
SDEP	Social Development and Empowering Programme
SFPSEI	Staple Food Programme, including SDEP and ECHO
SMEs	Small and Medium Enterprises
SPS	Sanitary and Phytosanitary

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EXECUTIVE SUMMARY

Botswana Stape Food Programme: SDEP and ECHO Implementation (SFPSEI)

The Botswana Stape Food Programme: SDEP and ECHO Implementation (SFPSEI) is a bold, integrated initiative aligned with Botswana's Vision 2036, the National Development Plan 12, and the SPEDU regional economic diversification strategy. Anchored by the transformative GreenPro Africa Essential Oil and Vertical Hydroponic Farm near Molalatau, this programme aims to catalyze agricultural modernization, food security, and inclusive rural development across Botswana's arid and semi-arid zones.

This initiative is designed to accelerate productivity, enhance intra-African trade under the African Continental Free Trade Area (AfCFTA), and position Botswana as a regional leader in regenerative, climate-smart agriculture. Drawing from COMESA's agricultural transformation models and leveraging the proven GreenPro anchor farm model, BSFATP-EI integrates high-impact interventions in seed systems, fertilizers, biotechnology, and horticulture, while embedding renewable energy, digital infrastructure, and vocational training.

Programme Structure

BSFATP-EI comprises seven interlinked programmes, adapted from the SDEP framework and tailored to Botswana's agricultural landscape:

1. **Botswana Bioprotectants Harmonisation Programme (Botswana-BHAP)** – Establishing a national framework for bioprotectants to reduce chemical pesticide use and promote environmentally friendly pest and disease management, aligned with the regenerative practices of the GreenPro anchor farm.
2. **Botswana Biotechnology and Biosafety Implementation Programme (Botswana-BBIP)** – Developing a robust biosafety regulatory system to support the safe adoption of biotechnology, including high-yield, drought-resistant cultivars suitable for hydroponic and shade-net farming.
3. **Botswana Fertilizer Access and Utilization Programme (Botswana-FAUP)** – Enhancing access to customized fertilizers through regional blending hubs, leveraging GreenPro's experimental unit and soil data to inform nutrient strategies for communal and commercial farmers.
4. **Botswana Seed Harmonisation and Certification Programme (Botswana-SHCP)** – Establishing a national seed certification and traceability system to ensure access to high-quality, climate-resilient seeds, with integration into regional seed markets under SADC and AfCFTA.
5. **Botswana Horticulture Accelerator (Botswana-HA)** – Scaling up horticultural production through precision farming, post-harvest infrastructure, and market access, building on GreenPro's vertical hydroponic model and cold-chain logistics.
6. **Technology Implementation and Infrastructure Support (SDEP Tech)** – Deploying modular ECHO infrastructure to deliver renewable energy, water purification, and digital connectivity to rural farming clusters, complementing GreenPro's solar-PV and biomass energy systems.
7. **Vocational Training and Capacity Building (SDEP VTCB)** – Establishing a national training framework in climate-smart agriculture, agribusiness, and supply chain management, aligned with GreenPro's in-house training and community development trust (CDT) model.

Strategic Components

The success of BSFATP-EI is anchored on three strategic pillars:

1. **Natural Resource Management** – Promoting regenerative agriculture, water efficiency, and ecosystem restoration, leveraging Botswana's solar potential and the Tuli Karoo aquifer.
2. **Market and Financial Integration** – Facilitating access to finance, inputs, and markets for communal and commercial farmers, with GreenPro acting as a guaranteed off-taker and logistics provider.
3. **Agricultural Policy Harmonization** – Aligning Botswana's agricultural policies with SADC and AfCFTA frameworks to enable seamless trade, investment, and innovation.

Policy Development and Alignment

BSFATP-EI emphasizes regulatory coherence to unlock investment and trade. Key focus areas include:

- Harmonizing seed, fertilizer, and biosafety regulations with regional and international standards.
- Strengthening institutional capacity for policy implementation and monitoring.
- Ensuring compliance with sanitary and phytosanitary (SPS) standards to facilitate exports.

Key Focus Areas

- Enabling policy and regulatory reform for agribusiness growth.
- Capacity building for farmers, cooperatives, and SMEs.
- Adoption of precision agriculture and mechanization.
- Climate-smart and regenerative practices.
- Gender empowerment and youth inclusion.

Implementation Approaches

- **Country-led execution** aligned with Botswana's national strategies and SPEDU's regional mandate.
- **Public-Private Partnerships (PPPs)** leveraging GreenPro's anchor farm and private sector networks.
- **Regional integration** through SADC and AfCFTA-aligned trade facilitation.
- **Research and innovation** via GreenPro's experimental unit and data-driven platforms like FlexSus.

Strategic Alignment

The Botswana Stape Food Programme (BSFATP-EI) is strategically aligned with Botswana's long-term development vision and regional integration goals. It supports the objectives of Vision 2036, the National Development Plan 12, and the SPEDU Regional Economic Diversification Strategy. At its core, the programme is designed to transform Botswana's agricultural sector from a subsistence-based system into a high-value, climate-resilient, and export-oriented industry.

This transformation is anchored by the GreenPro Africa Essential Oil and Vertical Hydroponic Farm near Molalatau, which serves as both a technological and financial anchor. The farm not only demonstrates the viability of advanced agricultural systems in arid environments but also provides the infrastructure, training, and market access needed to uplift surrounding communal farmers.

Through this integrated approach, BSFATP-EI aims to:

- **Increase agricultural productivity** by improving access to high-quality inputs such as certified seeds, customized fertilizers, and precision irrigation systems. The GreenPro experimental unit will serve as a testing ground for optimizing yields under Botswana's unique climatic conditions.
- **Support smallholder and communal farmers** by integrating them into structured value chains. This includes access to warehouse receipt systems, off-take agreements with the anchor farm, and participation in regional commodity exchanges.
- **Develop sustainable and climate-smart food systems** by deploying renewable energy, water recycling, and modular infrastructure (ECHO) to farming clusters. These systems mirror the GreenPro model, which uses solar PV, biomass energy, and aquifer-fed irrigation to operate off-grid in a water-scarce environment.

By leveraging lessons from COMESA's ACTESA programme and adapting them to the SADC context, Botswana is positioning itself as a regional hub for agricultural innovation, trade, and resilience.

Stakeholders

The success of BSFATP-EI depends on the active participation of a diverse group of stakeholders, each contributing unique capabilities and resources:

- **Government Entities** such as the Ministry of Agriculture, Ministry of Trade and Industry, Ministry of Finance, and SPEDU will provide policy support, regulatory alignment, and coordination across sectors.
- **Development Partners** including the African Development Bank (AfDB), World Bank, UNDP, AGRA, and other donors will offer financial and technical assistance to scale the programme nationally.
- **Private Sector and Industry Bodies** such as GreenPro Africa, farmer cooperatives, agribusinesses, vocational training institutions, and financial institutions will drive implementation, innovation, and investment.
- **Research and Academia**, particularly the Botswana University of Agriculture and Natural Resources (BUAN), will support data-driven decision-making, climate adaptation research, and capacity building.
- **Civil Society and NGOs** will play a vital role in community engagement, gender and youth inclusion, and ensuring that the programme remains socially equitable and environmentally sustainable.

Key Focus Areas

BSFATP-EI is structured around several strategic focus areas that reflect both national priorities and regional best practices:

- **Policy Development and Harmonization:** The programme will support the development of coherent agricultural policies aligned with SADC and AfCFTA frameworks, enabling seamless trade and investment.
- **Agricultural Investment Promotion:** By creating an enabling environment for agribusiness, BSFATP-EI will attract private capital into input supply chains, processing facilities, and export logistics.
- **Trade Facilitation:** The programme will strengthen Botswana's participation in regional agricultural markets by improving infrastructure, logistics, and compliance with SPS and quality standards.
- **Sector-Specific Interventions:** These include regenerative agriculture, seed system reform, fertilizer access, and the expansion of horticulture and essential oil value chains.
- **Technology and Mechanization:** The programme will promote the adoption of vertical hydroponics, precision irrigation, and digital farm management systems, modeled on the GreenPro approach.
- **Gender and Youth Empowerment:** Special emphasis will be placed on integrating women and youth into the agricultural value chain through training, entrepreneurship, and leadership development.

Targets and Goals

BSFATP-EI sets ambitious but achievable targets to drive measurable impact:

- Achieve a 10% annual growth rate in intra-African agricultural trade over the next decade.
- Double the utilization of improved seeds and fertilizers to enhance yields.
- Expand irrigated agriculture from less than 10% to over 30% of arable land by 2035.
- Integrate at least 5,000 communal farmers into structured value chains through the GreenPro anchor model.

Key commodities include:

- **Staple Crops:** Maize, sorghum, millet, cowpeas, and sweet potatoes.
- **High-Value Crops:** Tomatoes, onions, citrus, strawberries, and medicinal plants for essential oil extraction.
- **Livestock and Aquaculture:** Poultry, beef, dairy, and integrated aquaponics systems.

Contextual Overview: Agriculture in Botswana

Botswana's agricultural sector is characterized by low productivity, limited irrigation, and high vulnerability to climate change. Despite these challenges, the country has significant untapped potential. The presence of the Tuli Karoo Transboundary Aquifer, abundant solar energy, and underutilized arable land create a unique opportunity for transformation.

The GreenPro Africa farm exemplifies how advanced technologies and regenerative practices can thrive in Botswana's arid conditions. By combining vertical hydroponics, renewable energy, and community integration, the farm serves as a blueprint for scaling sustainable agriculture across the country.

Key Challenges Addressed

BSFATP-EI is designed to tackle the most pressing barriers to agricultural development:

- **Low Productivity:** Addressed through access to quality inputs, modern farming systems, and continuous training.
- **Market Fragmentation:** Solved by integrating farmers into structured value chains with guaranteed off-take and logistics.
- **Policy Gaps:** Closed through alignment with regional trade and investment frameworks.
- **Climate Vulnerability:** Mitigated through renewable energy, water-efficient systems, and climate-resilient crop varieties.

Strategic Role of BSFATP-EI

The programme will serve as a coordinated national initiative to:

1. **Develop Agricultural Policy:** Aligning Botswana's strategies with AfCFTA, CAADP, and Agenda 2063.
2. **Facilitate Investment and Trade:** Creating a structured, investor-friendly ecosystem for agribusiness.
3. **Drive Research and Innovation:** Utilizing GreenPro's experimental unit and platforms like FlexSus to inform policy and practice.

Strategic Partnership with the European Social Label (EUSL)

The Botswana Stape Food Programme (BSFATP-EI) is significantly strengthened through its strategic partnership with the European Social Label (EUSL), a global leader in advancing socio-economic sustainability through innovative public-private collaboration. EUSL brings to the table a proven, impact-driven methodology that ensures agricultural transformation is not only economically viable but also socially inclusive and environmentally sustainable.

This partnership enables the seamless integration of the Social Development and Empowerment Programme (SDEP) into BSFATP-EI. SDEP is a comprehensive framework designed to align public-sector development goals with private-sector capabilities, creating a scalable model for long-term agricultural reform. In Botswana, this alignment is exemplified by the GreenPro Africa anchor farm, which serves as a living laboratory for SDEP's principles—demonstrating how technology, community development, and commercial viability can coexist.

SDEP has already garnered international recognition, including interest from the United Nations Development Programme (UNDP), academic institutions, and private-sector leaders. Its inclusion in BSFATP-EI builds upon the successful COMESA ACTESA model, now adapted to Botswana's unique agricultural and environmental landscape.

Key Components of the SDEP Framework

1. Modular Infrastructure Platform (ECHO)

At the heart of BSFATP-EI's infrastructure strategy lies ECHO—a modular, scalable platform designed to deliver essential services such as renewable energy, water purification, waste recycling, and digital connectivity. In Botswana, ECHO modules will be deployed in rural farming clusters, particularly in areas

surrounding the GreenPro anchor farm, to eliminate infrastructure bottlenecks that hinder productivity and market access.

These modules will complement GreenPro's existing systems, including its solar PV farm, biomass energy from plant residue, and aquifer-fed irrigation. ECHO also serves as a platform for research and policy development, enabling stakeholders to monitor, adapt, and optimize agricultural systems for resilience and efficiency.

2. Research, Data, and Climate Resilience

BSFATP-EI places a strong emphasis on data-driven decision-making and climate-smart agriculture. This is supported by FlexSus, a decision-support system developed by leading universities to assess climate impact, resource allocation, and sustainability strategies.

By integrating satellite imagery, soil analysis, and yield data from the GreenPro experimental unit, the programme will enable:

- **Precision adaptation strategies** to improve yields and mitigate climate risks.
- **Early-warning systems** for preemptive climate action and disaster preparedness.
- **Sustainable land-use planning** to ensure long-term environmental stewardship.

Additionally, a community-driven broadband initiative will enhance digital inclusion, giving farmers access to real-time market data, financial services, and agricultural advisory platforms—fostering rural entrepreneurship and trade efficiency.

3. Vocational Training and Capacity Building

True transformation requires a skilled and empowered workforce. BSFATP-EI will establish a national training framework that builds on GreenPro's in-house training and mentorship model. This includes:

- Training smallholder farmers and agribusinesses in modern techniques, mechanization, and regenerative practices.
- Equipping regulators and policymakers with the tools to design and implement progressive agricultural policies.
- Developing leadership and governance capacity within public institutions.

A unique feature of this initiative is the integration of postgraduate students into community-based training programmes, ensuring that academic knowledge is translated into practical, field-level impact. This approach not only supports rural development but also cultivates the next generation of agricultural leaders in Botswana.

Global Social Impact Alliance (GSIA) and Public-Private Partnerships (PPPs)

The Global Social Impact Alliance (GSIA), a sister organization to EUSL, plays a pivotal role in facilitating investment and innovation through PPPs. In Botswana, GSIA will work alongside GreenPro Africa and other stakeholders to:

- **Expand access to agricultural inputs** by financing seed certification labs, fertilizer blending hubs, and bioprotectant distribution centers.

- **Attract private-sector investment** into processing facilities, cold storage, and logistics networks, ensuring that farmers are connected to both regional and international markets.
- **Support policy alignment** by helping establish a national seed harmonization framework, modeled on COMESA's COMSHIP, to streamline Botswana's agricultural value chain.

GSIA's structured financing mechanisms ensure that agricultural development is not reliant on fragmented donor funding but is instead grounded in long-term, scalable economic models.

Strategic Goals and Alignment

Through the combined efforts of EUSL, GSIA, and national partners, BSFATP-EI is committed to:

- **Promoting a circular economy** by integrating waste-to-energy systems, regenerative agriculture, and sustainable resource management.
- **Building resilient, self-sustaining agricultural communities** that thrive beyond donor interventions, supported by the GreenPro model of community development trusts (CDTs).
- **Enhancing Botswana's role in intra-African trade**, aligning with AfCFTA, SADC, and continental development priorities.

Rationale for BSFATP-EI

The rationale behind BSFATP-EI is rooted in the urgent need to transform Botswana's agricultural sector into a productive, resilient, and globally competitive industry. Drawing inspiration from COMESA's ACTESA model, the programme is built on three foundational principles:

1. **Restoring and Preserving Natural Capital**
   By implementing regenerative practices, climate adaptation strategies, and sustainable land management, BSFATP-EI ensures that Botswana's agricultural systems remain viable in the face of environmental change.
2. **Creating an Inclusive and Enabling Environment**
   The programme empowers smallholder farmers and agribusinesses through access to finance, policy reform, and structured market integration—allowing them to compete effectively in regional and global markets.
3. **Expanding Access to Market and Financial Opportunities**
   By removing trade barriers, fostering private-sector investment, and modernizing infrastructure, BSFATP-EI positions Botswana as a leader in Africa's agri-food economy.

With agriculture playing a central role in Botswana's economic diversification agenda, BSFATP-EI offers a timely and transformative opportunity to:

- Scale up productivity through technology, mechanization, and innovative finance.
- Strengthen trade competitiveness by investing in logistics, value chains, and processing capacity.
- Ensure food security and climate resilience, creating a future-proof agricultural system that delivers both prosperity and sustainability.

By fostering regional collaboration, research-led policy, and cross-sector partnerships, BSFATP-EI positions Botswana as a dynamic, inclusive, and globally relevant force in African agriculture.

Merging Programmes under SDEP for Greater Impact

To maximize impact, efficiency, and long-term sustainability, the Botswana Stape Food Programme (BSFATP-EI) will consolidate five high-impact agricultural programmes under a unified Sustainable Development and Research Implementation Framework. This strategic integration draws from the COMESA ACTESA Merger Assessment Framework and is tailored to Botswana's unique agro-ecological and socio-economic context.

Each programme retains its distinct technical focus, yet collectively they align with BSFATP-EI's overarching goals: enhancing productivity, facilitating trade, and promoting research-driven, climate-resilient agricultural solutions. These programmes are not theoretical constructs—they are grounded in the operational realities and proven methodologies of the GreenPro Africa anchor farm, which serves as both a demonstration site and a financial engine for broader rural development.

Recognizing the urgent need for structured interventions in bioprotectants, biotechnology, fertilizer access, seed harmonization, and horticultural development, EUSL and GSIA will lead the implementation of these programmes in Botswana, in close collaboration with GreenPro Africa and national stakeholders.

1. Botswana Bioprotectants Harmonization Programme (Botswana-BHAP)

The transition to climate-smart agriculture in Botswana requires a shift away from chemical-intensive farming toward more sustainable, biologically based inputs. The Botswana-BHAP initiative will:

- Develop a national regulatory framework for bioprotectants, including biopesticides and biofertilizers, ensuring safe, effective, and standardized use.
- Facilitate regional trade in bioproducts by harmonizing standards with SADC and AfCFTA protocols.
- Promote agroecological farming practices that improve soil health, reduce chemical dependency, and support biodiversity.

GreenPro Africa will serve as a pilot site for bioprotectant trials, leveraging its experimental unit to validate efficacy under controlled hydroponic and shade-net conditions. These pilots will inform national scale-up strategies and support the development of local bioproduct manufacturing capacity.

2. Botswana Biotechnology and Biosafety Implementation Programme (Botswana-BBIP)

Biotechnology holds transformative potential for Botswana's agriculture, particularly in enhancing crop resilience and productivity in arid environments. However, a robust biosafety framework is essential to ensure responsible innovation. Botswana-BBIP will:

- Develop and institutionalize biosafety regulations aligned with international best practices.
- Facilitate research and deployment of drought-tolerant, high-yield crop varieties suitable for hydroponic and regenerative systems.
- Build national capacity to regulate, monitor, and certify biotechnology applications in agriculture.

GreenPro's in-vitro tissue culture lab will play a central role in this programme, serving as a national hub for plant cloning, varietal improvement, and biosafety testing. The programme will also support the establishment of a national biosafety authority and training for regulators and researchers.

3. Botswana Fertilizer Access and Utilization Programme (Botswana-FAUP)

Access to affordable, high-quality fertilizers remains a constraint for many farmers in Botswana. Botswana-FAUP will address this by:

- Expanding access to customized fertilizer blends tailored to Botswana's diverse soil profiles, informed by GreenPro's soil and yield data.
- Establishing a regulatory framework for fertilizer quality, pricing, and transparency.
- Strengthening distribution networks through localized blending plants and logistics hubs.

GreenPro's anchor farm will serve as a central warehouse and distribution point for fertilizers, offering bulk purchasing power and last-mile delivery to communal farmers. The programme will also explore green ammonia and organic fertilizer production using plant waste from the essential oil extraction process.

4. Botswana Seed Harmonisation and Certification Programme (Botswana-SHCP)

Seed quality is foundational to agricultural productivity. Botswana-SHCP will:

- Develop a national seed certification and traceability system to ensure access to high-quality, climate-resilient seeds.
- Harmonize seed trade regulations with SADC and AfCFTA to facilitate cross-border movement of improved varieties.
- Establish seed research and multiplication centers, including hydroponic-compatible cultivars.

GreenPro's in-vitro lab and experimental unit will support varietal testing and certification, while its distribution network will ensure that certified seeds reach even the most remote farming communities.

5. Botswana Horticulture Accelerator (Botswana-HA)

Horticulture offers a high-value pathway for rural income generation and export diversification. Botswana-HA will:

- Develop infrastructure for post-harvest handling, cold storage, and logistics to reduce losses and improve market access.
- Facilitate trade in high-value crops such as tomatoes, onions, citrus, and strawberries, including hydroponic varieties.
- Promote climate-resilient horticulture through protected cropping, precision irrigation, and integrated pest management.

GreenPro's vertical hydroponic greenhouses and cold-chain logistics system will serve as the backbone of this programme, demonstrating year-round production and export readiness.

Centralized Governance for Unified Progress

The consolidation of these five programmes under BSFATP-EI provides a coherent, structured approach to agricultural modernization in Botswana. This integration will:

- Centralize governance, infrastructure, and operational support, improving coordination and accountability.
- Align policy harmonization, market facilitation, and infrastructure development with regional and global trade frameworks.
- Maximize synergies between programmes while fostering opportunities for regional and international collaboration.

EUSL, through its SDEP framework, will ensure that Botswana's agricultural development remains evidence-based, investment-friendly, and impact-driven.

SDEP and ECHO as Engines of Transformation

BSFATP-EI is more than a policy framework—it is a platform for tangible, scalable solutions. Its success will be driven by two core enablers:

- **SDEP** as a resource platform, providing the financial, technological, and policy tools needed for seamless implementation.
- **ECHO** as the infrastructure engine, delivering renewable energy, water security, and modular systems to support:
    - Irrigated farming for climate-resilient food production.
    - Processing and storage facilities to enhance value chains.
    - Rural economic empowerment in smallholder-dominated areas.

By combining ECHO's modular infrastructure with FlexSus' data-driven decision-making tools and GreenPro's operational model, BSFATP-EI ensures that Botswana's agricultural transformation is built on resilience, efficiency, and sustainability.

Programme 1: Botswana Fertilizer Access and Utilization Programme (Botswana-FAUP)

Overview

Fertilizer access remains one of the most critical constraints to agricultural productivity in Botswana, particularly for smallholder and communal farmers operating in arid and semi-arid zones. The Botswana Fertilizer Access and Utilization Programme (Botswana-FAUP) is designed to address this challenge through a comprehensive, multi-tiered approach that combines regulatory reform, infrastructure development, digital innovation, and private-sector engagement.

Anchored by the GreenPro Africa vertical hydroponic farm near Molalatau, Botswana-FAUP will leverage the farm's experimental unit, logistics network, and warehousing capacity to pilot and scale fertilizer solutions tailored to Botswana's diverse agro-ecological zones. The programme will also align with SADC and AfCFTA trade frameworks to ensure regional integration and market efficiency.

Outcome 1: Strengthening the Development and Harmonization of Regulatory Frameworks for Mineral and Organic Fertilizers in Botswana

To ensure a transparent, efficient, and sustainable fertilizer market, Botswana-FAUP will:

- Develop a national regulatory framework for both organic and inorganic fertilizers, incorporating international best practices while adapting to Botswana's local conditions.
- Harmonize Botswana's fertilizer regulations with SADC and African Union (AU) standards to facilitate cross-border trade and regional market integration.
- Establish a national accreditation system for fertilizer producers, agro-dealers, and distributors to ensure quality control and consumer protection.

Key Activities:

- **Regulatory Alignment Workshop:** Convene a national inception workshop with stakeholders to assess the current regulatory landscape and draft harmonization strategies.
- **Legislative Framework Development:** Draft Botswana's Fertilizer Harmonization Implementation Plan (FAHIP), including standardized labeling, accreditation, and licensing protocols.
- **Organic Fertilizer Guidelines:** Develop national standards for organic and biofertilizers, including certification and sustainable application practices.
- **Soil Health and Crop Management:** Implement integrated soil and water management strategies using GreenPro's demonstration plots and hydroponic data.
- **Green Ammonia Feasibility Study:** Explore the use of solar-powered electrolysis for nitrogen extraction, leveraging Botswana's solar potential and GreenPro's renewable energy systems.

Output 1.2: Establishment of Zero Tariffs and Regional Trade Harmonization for Fertilizers

To reduce input costs and improve supply chain efficiency, Botswana-FAUP will:

- Advocate for zero import tariffs on essential fertilizer inputs.
- Develop a Common External Tariff (CET) strategy aligned with SADC trade policies.
- Promote transparency in fertilizer pricing and distribution to enhance market competition.

Key Activities:

- **Customs Engagement:** Host policy dialogues with customs authorities to draft zero-tariff and CET agreements.
- **Trade Facilitation Framework:** Develop Botswana's fertilizer trade protocols in alignment with regional standards.

Output 1.3: Development of Botswana's National Soil Fertility Maps

Precision agriculture begins with understanding the soil. Botswana-FAUP will:

- Conduct national soil analysis to create detailed fertility maps.

- Develop region-specific fertilizer recommendations based on soil deficiencies.
- Establish a digital soil health monitoring system integrated with satellite imaging and GreenPro's experimental data.

Key Activities:

- **Soil Sampling and Mapping:** Conduct extensive testing across key agricultural zones.
- **Customized Fertilizer Formulations:** Collaborate with fertilizer producers to develop blends tailored to Botswana's soils.
- **Digital Soil Platform:** Launch a national platform for real-time soil health data, accessible to farmers and agro-dealers.

Output 1.4: Development of National Fertilizer Subsidy Guidelines

To ensure equitable access to fertilizers, Botswana-FAUP will:

- Review existing subsidy models and develop a "smart" subsidy framework that is transparent, accountable, and time-bound.
- Incorporate e-voucher systems and private-sector participation to reduce fiscal burden and improve targeting.

Key Activities:

- **Comparative Analysis:** Study fertilizer subsidy models across Africa to identify best practices.
- **Smart Subsidy Design:** Develop Botswana's national guidelines, including phase-out mechanisms and digital delivery systems.

Outcome 2: Strengthening Agricultural Input Distribution Networks in Botswana

A reliable input supply chain is essential for agricultural transformation. Botswana-FAUP will:

- Establish a National Fertilizer Trade Association to coordinate policy, investment, and market development.
- Implement credit guarantee schemes to support agro-dealers and input suppliers.
- Build capacity among agro-dealers and farmers to ensure responsible and efficient fertilizer use.

Output 2.1: Establishment of a National Fertilizer Trade Association

- Support the creation of a national industry body to lead fertilizer policy dialogue and market coordination.
- Develop regional trade agreements to facilitate cross-border fertilizer movement.

Output 2.2: Implementing Credit Guarantee Schemes for Agro-Dealers

- Introduce credit guarantee mechanisms to enable agro-dealers to purchase and distribute fertilizers at scale.

- Establish Agribusiness Partnership Contracts (APCs) to finance warehousing, logistics, and last-mile delivery.

Key Activities:

- **Trade Credit Facilities:** Facilitate supplier credit models for trusted agro-dealers.
- **Infrastructure Support:** Provide financial assistance for storage and transport infrastructure, potentially co-located with GreenPro's logistics hubs.

Output 2.3: Capacity Building and Training for Agro-Dealers and Farmers

- Train agro-dealers in business development, compliance, and supply chain management.
- Educate farmers on fertilizer application, soil health, and sustainable input use.

Key Activities:

- **Demonstration Farms:** Use GreenPro's facilities to host hands-on training sessions.
- **Business Development Support:** Equip agro-dealers with the skills to scale operations and serve rural markets effectively.

By embedding Botswana-FAUP within the GreenPro ecosystem, the programme ensures immediate implementation capacity, financial sustainability, and a clear pathway from pilot to national scale.

Strategic Vision for Botswana-FAUP

The successful implementation of the Botswana Fertilizer Access and Utilization Programme (Botswana-FAUP) will:

- Ensure universal access to high-quality, affordable fertilizers, thereby improving soil fertility and boosting agricultural productivity across Botswana's diverse agro-ecological zones.
- Develop a competitive and efficient fertilizer market that reduces dependency on imports and enhances domestic blending and distribution capacity.
- Position Botswana as a regional leader in sustainable soil management and fertilizer innovation, aligned with SADC and AfCFTA trade frameworks.

By combining policy reform, market facilitation, digital innovation, and capacity building—anchored by the operational infrastructure of the GreenPro Africa farm—Botswana-FAUP will strengthen the country's agricultural sector, ensuring long-term food security, economic resilience, and environmental sustainability.

Integration with the GreenPro Africa Anchor Farm

The GreenPro Africa farm will serve as the operational nucleus for Botswana-FAUP. Its role includes:

- Hosting soil trials and fertilizer demonstrations in its experimental unit.
- Acting as a central warehouse and distribution hub for fertilizers and inputs.
- Providing training facilities and technical expertise for agro-dealers and farmers.
- Piloting green ammonia production and organic fertilizer recycling using plant residue from essential oil extraction.

Programme 2: Botswana Bioprotectants Harmonization Programme (Botswana-BHAP)

Overview

As Botswana transitions toward regenerative and climate-smart agriculture, the use of bioprotectants—such as biopesticides, biofertilizers, and microbial soil enhancers—has become increasingly vital. These natural inputs reduce environmental impact, improve soil health, and support sustainable crop production. However, the absence of a harmonized regulatory framework has limited their adoption and commercialization.

The Botswana Bioprotectants Harmonization Programme (Botswana-BHAP) is designed to address this gap by establishing national standards, streamlining approval processes, and facilitating market access for bio-based agricultural inputs. The programme will be implemented in close collaboration with GreenPro Africa, which will serve as a pilot site for bioprotectant trials and demonstrations.

Outcome 1: National Assessment of Bioprotectant Registration and Commercialization in Botswana

Before developing a regulatory framework, Botswana-BHAP will conduct a comprehensive assessment of the current landscape.

Output 1.1 – National Inception Workshop and Stakeholder Engagement

- Convene a national workshop with government agencies, private sector actors, research institutions, and NGOs to co-develop a roadmap for bioprotectant regulation and commercialization.
- Engage international experts and industry leaders to align Botswana's approach with global best practices.

Output 1.2 – Regulatory and Market Assessment

- Review existing policies and market conditions related to bioprotectants.
- Identify regulatory gaps and develop policy recommendations for a harmonized framework.

Key Activities:

- Conduct policy and market research with regulatory consultants and agribusiness specialists.
- Organize stakeholder consultations, including farmer cooperatives and GreenPro's agronomists, to ensure commercial viability and farmer relevance.

Outcome 2: Development of a National Regulatory Framework for Bioprotectant Registration

Botswana-BHAP will establish a harmonized, science-based regulatory system for bioprotectants.

Output 2.1 – Establishment of a National Bioprotectant Registration System

- Develop a national approval system with clear safety, efficacy, and sustainability criteria.
- Define product classification, labeling, and distribution protocols.

Output 2.2 – Legal and Institutional Harmonization

- Establish mutual recognition mechanisms with SADC member states.

- Align Botswana's regulations with AU guidelines and Codex Alimentarius standards.

Key Activities:

- Form legal drafting committees to develop the Bioprotectant Harmonization Act.
- Host validation workshops with stakeholders, including GreenPro's technical team.
- Present the framework for legislative approval.

Outcome 3: Implementation of the Bioprotectant Harmonization and Market Facilitation Plan

With the regulatory framework in place, Botswana-BHAP will focus on implementation and market development.

Output 3.1 – Strategic Implementation Plan

- Develop a five-year roadmap for enforcement, awareness, and commercialization.
- Launch a national campaign to promote bioprotectants as sustainable inputs.

Output 3.2 – National Rollout and Capacity Building

- Train regulators, inspectors, and extension officers in bioprotectant oversight.
- Support domestic production and innovation through R&D incentives.

Key Activities:

- Conduct public awareness campaigns using GreenPro's demonstration plots and community outreach channels.
- Train regulatory agencies and labs in testing and compliance.
- Provide grants or tax incentives for local bioproduct manufacturers.

Outcome 4: Establishment of a Pesticide Residue and Biocontrol Training Programme

To ensure safe and effective use, Botswana-BHAP will establish a national training programme.

Output 4.1 – Development of IPM Training Modules

- Create a standardized curriculum on bioprotectant selection, application, and integrated pest management (IPM).
- Train farmers and agro-dealers in safe handling and storage.

Output 4.2 – Establishment of a Training Delivery Mechanism

- Develop an e-learning platform for remote training.
- Implement on-site demonstrations at GreenPro and other regional hubs.

Key Activities:

- Launch Training of Trainers (ToT) programmes for extension officers.
- Conduct field demonstrations and farmer training days in partnership with cooperatives.

- Establish a monitoring and evaluation (M&E) framework to track adoption and impact.

Strategic Vision for Botswana-BHAP

The successful implementation of Botswana-BHAP will:

- Establish a fully operational, internationally aligned regulatory framework for bioprotectants.
- Promote widespread adoption of sustainable crop protection methods, reducing reliance on synthetic pesticides.
- Position Botswana as a regional leader in agroecological farming and bioproduct innovation.
- Enable Botswana's participation in intra-African trade in sustainable agricultural inputs.
- Foster domestic R&D and manufacturing capacity, supported by GreenPro's experimental unit and technical expertise.

Through a cohesive regulatory strategy, market-driven solutions, and capacity-building programmes, Botswana-BHAP will transform the country's agricultural input landscape. It will ensure long-term sustainability, economic viability, and food security by enabling the safe, widespread adoption of bioprotectants. This will reduce environmental impact, enhance soil health, and support Botswana's transition to regenerative agriculture—anchored by the GreenPro Africa farm as a national demonstration and innovation hub.

Programme 3: Botswana Biotechnology and Biosafety Implementation Programme (Botswana-BBIP)

Overview

Biotechnology offers Botswana a powerful tool to address the challenges of food insecurity, climate change, and low agricultural productivity. From drought-tolerant crops to pest-resistant varieties, biotechnology can significantly enhance resilience and yields—especially in arid and semi-arid regions. However, its adoption must be guided by a robust biosafety framework to ensure environmental protection, public health, and market integrity.

The Botswana Biotechnology and Biosafety Implementation Programme (Botswana-BBIP) is designed to institutionalize a national biosafety risk assessment mechanism, strengthen regulatory capacity, and foster public understanding of biotechnology. The programme will be implemented in close collaboration with GreenPro Africa, whose in-vitro tissue culture laboratory and experimental unit will serve as key platforms for biotech research, varietal testing, and regulatory piloting.

Outcome 1: Establishing and Institutionalizing a National Biosafety Risk Assessment Mechanism

To ensure that biotechnology is introduced safely and effectively, Botswana-BBIP will support the creation of a structured, science-based risk assessment system.

Output 1.1 – Identification and Selection of Botswana's Biosafety Experts Panel

- Establish a national Panel of Experts (PoE) on Biotechnology and Biosafety, drawing from government, academia, and the private sector.
- Define clear mandates and responsibilities to ensure efficient, evidence-based decision-making.

Output 1.2 – Convening a Technical Review and Nomination Process

- Organize a national review meeting to formally nominate and approve panel members with the necessary expertise.

Output 1.3 – Strengthening Botswana's Biosafety Authority and Regulatory Procedures

- Review and align existing biosafety policies with SADC and AU frameworks.
- Standardize application forms and approval processes to streamline regulatory pathways.

Output 1.4 – Institutionalizing the Risk Assessment Mechanism

- Establish a formal, transparent risk assessment process supported by the Biosafety Authority and PoE.
- Develop legislation defining risk thresholds, environmental impact criteria, and approval conditions.

Output 1.5 – Induction and Training for Biosafety Experts

- Conduct capacity-building workshops for PoE members.
- Implement pilot case studies using biotech crops such as pest-resistant maize and climate-resilient vegetables, tested at GreenPro's experimental unit.

Outcome 2: Strengthening Botswana's Biosafety Regulatory Capacity

To regulate biotechnology effectively, Botswana must build institutional capacity and scientific infrastructure.

Output 2.1 – Establishment of a National Biosafety Database

- Create a centralized data system to track biotech applications, approvals, and scientific evidence.

Output 2.2 – Case Study Testing for Risk Assessment

- Conduct field trials on biotech crops, analyzing environmental and economic impacts.
- Apply risk protocols to real-world cases to validate regulatory systems.

Output 2.3 – Promoting Evidence-Based Policy

- Publish findings from trials and case studies to inform policy and public discourse.

Output 2.4 – Capacity Building for Institutions

- Train regulators, researchers, and certification bodies.
- Facilitate exchange programmes with other African biosafety institutions.

Output 2.5 – Economic Assessment of Regulatory Impact

- Evaluate the economic implications of biosafety regulation to ensure it supports innovation and competitiveness.

Outcome 3: Enhancing Public Awareness and Communication on Biotechnology and Biosafety

Public understanding and trust are essential for the successful adoption of biotechnology.

Output 3.1 – Development of a National Communication Strategy

- Launch a centralized platform for public education on biotechnology.
- Create tailored materials for farmers, researchers, and consumers.

Output 3.2 – Strengthening Public Awareness

- Conduct national workshops and campaigns to explain biosafety regulations and biotech benefits.
- Share case studies from Africa and beyond to demonstrate real-world impacts.

Output 3.3 – Engaging Stakeholder Networks

- Train media, youth groups, and industry leaders to communicate accurately about biotechnology.
- Partner with universities and technical colleges to integrate biosafety into curricula.

Output 3.4 – Showcasing Farmer Experiences

- Document and share testimonials from farmers using biotech crops, including those participating in GreenPro's pilot programmes.

Output 3.5 – High-Level Engagement and Policy Advocacy

- Host annual national forums on biotechnology and biosafety.
- Provide regular updates to the Ministry of Agriculture, the Biosafety Authority, and other stakeholders.

Strategic Vision for Botswana-BBIP

The successful implementation of Botswana-BBIP will:

- Establish a fully operational biosafety regulatory system, enabling the safe and responsible adoption of biotechnology.
- Support Botswana's agricultural transformation by introducing improved crop varieties that enhance resilience and productivity.
- Strengthen Botswana's competitiveness in regional and international markets by aligning biotech regulations with global standards.
- Foster public-private partnerships and investment in biotechnology research and innovation, with GreenPro Africa serving as a national center of excellence for biotech testing and deployment.

The successful implementation of Botswana-BBIP will:

- Establish a fully operational biosafety regulatory system, enabling the safe, controlled adoption of biotechnology.

- Support Botswana's agricultural transformation by introducing improved crop varieties that enhance resilience and productivity.
- Strengthen Botswana's regional and international competitiveness by ensuring that biotech regulations facilitate, rather than hinder, trade.
- Encourage public-private partnerships and investment in biotechnology research, innovation, and sustainable agricultural practices.
- Ensure transparency and public confidence by grounding biotechnology adoption in scientific evidence and aligning it with national development priorities.

By establishing a robust regulatory framework, fostering public awareness, and aligning with regional trade policies, Botswana-BBIP will position Botswana as a leader in biotechnology governance within SADC—while ensuring that agricultural innovation remains sustainable, inclusive, and responsible.

Programme 4: Botswana Seed Harmonisation and Certification Programme (Botswana-SHCP)

Overview

A well-regulated, efficient seed system is the cornerstone of Botswana's agricultural transformation. Access to high-quality, certified seeds is essential for increasing yields, enhancing climate resilience, and ensuring food security. However, Botswana's seed sector currently faces fragmented regulations, limited varietal testing infrastructure, and barriers to regional trade.

The Botswana Seed Harmonisation and Certification Programme (Botswana-SHCP) is designed to address these challenges by establishing a structured national seed certification and traceability system. The programme will align with SADC and AfCFTA trade frameworks and leverage the GreenPro Africa anchor farm's in-vitro lab and experimental unit to support varietal development, testing, and certification.

Outcome 1: Strengthening Botswana's National Seed Certification and Traceability System

To ensure that farmers have access to genuine, high-quality seeds, Botswana-SHCP will establish a transparent, digital tracking system for seed verification and regulatory enforcement.

Output 1.1 – Development of a National Digital Seed Tracking System

- Create a nationwide digital platform for seed verification, enabling farmers, agro-dealers, and regulators to authenticate seed quality and origin.
- Develop a feedback mechanism to track seed performance, allowing farmers to report actual vs. declared yields.

Output 1.2 – Implementation of a National Seed Information System (NSIS)

- Establish a centralized database for seed registration, certification status, and market distribution.
- Integrate digital seed labeling and tracking to monitor seed movement across domestic and regional markets.

Key Activities:

- Develop a mobile-based e-verification system for seed authentication.
- Build a national seed database with performance data and supplier profiles.
- Ensure interoperability with regional trade platforms under SADC and AfCFTA.

Outcome 2: Facilitating Seed Variety Testing and Certification

To ensure that Botswana's farmers have access to the best-performing seed varieties, Botswana-SHCP will strengthen national seed testing infrastructure and align certification processes with regional standards.

Output 2.1 – Support for Seed Variety Testing and Registration

- Facilitate seed trials and certification for small and medium seed companies.
- Establish a national seed variety catalog to ensure only high-performing, climate-resilient varieties are certified.

Output 2.2 – Expansion of Seed Testing and Performance Trials

- Support on-farm and controlled-environment trials to validate varietal performance.
- Harmonize testing protocols with SADC standards to enable cross-border seed trade.

Key Activities:

- Establish testing sites at GreenPro's experimental unit and other regional hubs.
- Engage private seed companies in the certification process.
- Align Botswana's seed certification system with SADC and AU policies.

Outcome 3: Strengthening Seed Trade and Market Integration

A competitive seed market requires harmonized trade regulations, technical support for seed companies, and incentives for private-sector participation.

Output 3.1 – Establishment of a National Seed Trade Facilitation Framework

- Develop a clear regulatory pathway for seed import, export, and domestic distribution.
- Create a national accreditation system for seed distributors and agro-dealers.

Output 3.2 – Technical Assistance for Seed Companies

- Provide support for SMEs to navigate the seed registration and certification process.
- Offer capacity-building programmes for local seed producers to meet quality standards.

Output 3.3 – Implementation of a National Seed Labeling System

- Introduce standardized seed labeling to prevent counterfeiting and ensure traceability.
- Align Botswana's seed labeling framework with SADC trade protocols.

Key Activities:

- Draft regulatory reforms to streamline seed trade.
- Conduct training for agro-dealers and seed companies.
- Strengthen enforcement mechanisms to reduce counterfeit seed circulation.

Strategic Vision for Botswana-SHCP
The successful implementation of Botswana-SHCP will:

- Ensure that all seeds used in Botswana meet international quality and certification standards, reducing the prevalence of low-yielding or counterfeit seeds.
- Support the growth of Botswana's seed sector by enabling local producers to compete in domestic and regional markets.
- Enhance food security and climate resilience by ensuring access to high-yielding, stress-tolerant crop varieties.
- Improve Botswana's participation in intra-African trade by aligning seed certification systems with SADC and AfCFTA frameworks.
- Strengthen regulatory institutions and enforcement capacity, ensuring a modern, high-functioning seed system.

By combining digital innovation, regulatory harmonization, and market development—and by leveraging the GreenPro Africa farm's technical infrastructure—Botswana-SHCP will ensure that farmers across the country have reliable access to certified, high-quality seeds.

Programme 5: Botswana Horticulture Accelerator (Botswana-HA)

Overview
Horticulture represents one of the most promising frontiers for Botswana's agricultural transformation. With its potential to generate employment, improve nutrition, diversify exports, and empower rural communities, the sector is poised to become a cornerstone of Botswana's agri-business economy. However, like many countries in the region, Botswana faces persistent challenges in this space—including fragmented value chains, limited processing capacity, high post-harvest losses, and constrained market access.

The Botswana Horticulture Accelerator (Botswana-HA) is designed to address these challenges through a comprehensive, integrated approach. Anchored by the GreenPro Africa vertical hydroponic farm near Molalatau, the programme will modernize Botswana's horticultural value chains, ensuring that smallholder farmers, agribusinesses, and exporters benefit from a competitive, climate-resilient, and inclusive sector.

Development Outcomes and Targets (by 2035)

Botswana-HA aims to achieve the following measurable outcomes by 2035, positioning horticulture as a major pillar of Botswana's agricultural economy:

1. **Market Growth and Trade Expansion**
    - Increase Botswana's horticultural exports to regional and international markets.

- Strengthen intra-African trade through alignment with SADC and AfCFTA frameworks.

2. **Enhanced Processing Capacity**
    - Double the share of processed fruits and vegetables from 8% to 16%.
    - Expand cold chain, packaging, and storage infrastructure to meet global export standards.
3. **Value Chain Efficiency and Logistics Optimization**
    - Reduce farm-to-market time by 50%, minimizing spoilage and improving freshness.
    - Stabilize market prices and improve profitability for farmers and traders.
    - Ensure 80% of horticultural products are traceable from farm to consumer.
4. **Increased Domestic Consumption for Better Nutrition**
    - Improve affordability and accessibility of fruits and vegetables by at least 25%, contributing to national dietary diversity and public health.
5. **Expansion of Horticulture Production Area**
    - Increase fruit production area by 5%, and vegetable cultivation by 5%, including under shade nets and hydroponic systems.
6. **Increased Farm Productivity and Reduced Post-Harvest Losses**
    - Boost fruit yields by 4% and vegetable yields by 3%.
    - Cut post-harvest losses from 40% to 20% through improved handling and storage.
7. **Economic Empowerment of Farmers**
    - Raise farmer profitability by 25% and reduce cashflow volatility by 50%.
    - Lower debt-to-asset ratios by 10%, improving access to credit and investment.
8. **Adoption of Climate-Smart Agricultural Practices**
    - Promote widespread use of climate-resilient crop varieties and regenerative practices.
    - Integrate renewable energy and water-efficient irrigation systems into production.
9. **Policy Harmonization for Seamless Trade**
    - Remove or harmonize the top five trade-related policy barriers to facilitate regional horticultural trade.
10. **Value Addition and Employment Creation**

- Generate significant new revenue through expanded horticultural markets.
- Create 30,000 new jobs across the horticulture value chain, with a focus on youth and women.

Strategic Objectives
Botswana-HA will be implemented through four core strategic objectives:

1. **Developing Sustainable and Competitive Horticulture Value Chains**
   The programme will strengthen Botswana's horticulture sector by integrating fragmented supply chains, expanding processing capacity, and promoting market-driven production models. GreenPro Africa's vertical hydroponic infrastructure and cold-chain logistics will serve as a national demonstration of year-round, high-efficiency horticulture.

2. **Ensuring Profitable and Safe Horticultural Production**
   Botswana-HA will ensure that horticultural products meet domestic, regional, and international standards for quality, safety, and affordability. The GreenPro farm's in-house laboratories and quality assurance systems will support this objective by setting benchmarks for traceability and compliance.

3. **Creating an Enabling Business Environment for Horticulture Growth**
   The programme will improve regulatory frameworks, investment conditions, and access to finance. GreenPro's model of integrated production, processing, and market access will be replicated through public-private partnerships and community-based outgrower schemes.

4. **Advancing Research and Cross-Border Collaboration**
   Botswana-HA will foster collaboration between public institutions, research bodies, and agribusinesses to ensure that Botswana remains competitive in the global horticulture sector. GreenPro's experimental unit will serve as a hub for varietal trials, climate adaptation research, and technology transfer.

Implementation Approach and Expected Results
The Botswana Horticulture Accelerator (Botswana-HA) will be implemented through a results-oriented, multi-stakeholder approach that emphasizes coordination, innovation, and inclusivity. The GreenPro Africa anchor farm will serve as a central hub for piloting, demonstrating, and scaling many of the programme's interventions—particularly in value chain integration, post-harvest management, and climate-smart production.

Result Area 1: Strengthening Value Chain Coordination
A well-coordinated horticulture value chain is essential to reduce inefficiencies, lower transaction costs, and improve infrastructure for storage, logistics, and processing.

Key Actions:

- Establish a National Horticulture Coordination Platform to facilitate regular dialogue between policymakers, industry players, and farmer organizations.
- Develop a digital market information platform to provide real-time data on prices, production forecasts, and trade opportunities—integrated with GreenPro's ERP and logistics systems.
- Strengthen cross-border trade coordination, ensuring that Botswana's horticultural products meet SADC and AfCFTA standards for export readiness.

Result Area 2: Increasing Productivity and Market Access
To unlock the full potential of Botswana's horticulture sector, farmers must have access to high-quality inputs, climate-smart technologies, and competitive markets.

Key Actions:

- Expand research and innovation in climate-smart horticulture, using GreenPro's experimental unit to trial resilient crop varieties and optimize growing conditions.
- Improve post-harvest handling infrastructure, including cold storage and packaging facilities, modeled on GreenPro's integrated processing and logistics systems.
- Strengthen market linkages by connecting communal farmers to premium domestic and export markets through GreenPro's off-take agreements and distribution channels.

Result Area 3: Enhancing Policy and Business Ecosystem
A supportive policy and investment environment is critical for horticulture to thrive.

Key Actions:

- Align Botswana's horticulture regulations with SADC and AfCFTA trade policies, ensuring seamless market integration.
- Provide technical assistance to agribusinesses to meet international food safety and quality standards.
- Develop investment incentives to attract private capital into horticultural production, processing, and logistics—leveraging GreenPro's success as a model for replication.

Result Area 4: Expanding Research and Development Collaboration
Botswana-HA will enhance scientific research, encourage knowledge-sharing, and improve cross-border cooperation.

Key Actions:

- Strengthen partnerships between universities, research institutes, and agribusinesses, ensuring that scientific advancements translate into practical solutions.
- Facilitate joint research projects on horticulture trade, post-harvest management, and processing technologies.
- Establish a National Horticulture Research and Innovation Fund to support scientists, entrepreneurs, and youth-led agritech ventures.

Strategic Vision for Botswana-HA
The successful implementation of Botswana-HA will:

- Position Botswana as a regional leader in horticultural production and trade, with GreenPro Africa as a flagship model of innovation and sustainability.
- Improve national food security and nutrition by increasing the availability and affordability of high-quality fruits and vegetables.
- Strengthen Botswana's agro-processing sector, creating value-added products and increasing export revenues.
- Generate large-scale employment opportunities, particularly for women and youth in rural areas.

- Enhance Botswana's participation in intra-African and global trade by ensuring that horticultural products meet international market requirements.

By integrating modern supply chains, climate-smart practices, and trade facilitation strategies—and by leveraging the infrastructure and expertise of the GreenPro Africa farm—Botswana-HA will accelerate the country's horticultural transformation, ensuring sustainable growth and global competitiveness.

Strengthening Public-Private Dialogue for Horticulture Development

Long-term growth, competitiveness, and sustainability in Botswana's horticulture sector will depend on effective collaboration between public and private stakeholders. Botswana-HA will institutionalize Public-Private Dialogue (PPD) mechanisms to ensure that value chain development, policy alignment, and investment promotion are coordinated and impactful.

Key Areas of Improvement:

i. Enhanced Coordination Between Public and Private Sector

- Establish structured collaboration channels between government institutions, agribusinesses (including GreenPro), and smallholder farmers.
- Promote joint planning and execution of horticulture development strategies, ensuring inclusive and transparent decision-making.

ii. Development of Work Plan Alignment Frameworks

- Create mechanisms to harmonize interventions across sectors, fostering knowledge exchange and shared best practices.

iii. Operationalization of a National Public-Private Dialogue Platform

- Launch an interactive platform for policy discussions, investment matchmaking, and market coordination.
- Ensure regular consultations between stakeholders to address key challenges and opportunities in the horticulture value chain.

Addressing Key Value Chain Challenges

The coordination frameworks under Botswana-HA will focus on eliminating major bottlenecks in the Fruit and Vegetable Value Chains (FVVCs):

1. **Supply Chain Fragmentation**
    - Connect smallholder farmers with processors, exporters, and market hubs to ensure a continuous, efficient flow of produce.
2. **Post-Harvest Losses**
    - Strengthen cold chain systems, modern storage infrastructure, and logistics networks to reduce waste and maximize product quality.
3. **Market Access**
    - Improve compliance with international quality standards and certifications, ensuring that Botswana's horticultural products meet global consumer demands.

4. **Policy Harmonization**

- Align Botswana's regulatory frameworks—including SPS standards—with SADC and AfCFTA trade agreements to enable seamless regional and international trade.

Policy Harmonization: Facilitating alignment of regulatory frameworks, such as SPS standards, to ease cross-border trade and reduce transaction costs.	**Activities**
Strategic Interventions	
Established regional platforms and mechanisms for coordination among value chain actors	Support establishment of multi stakeholder collaboration
	Create a centralized digital platform to address information gaps along the FVVCs, providing real-time data on market trends, production forecasts, logistics, and quality standards
	Enable stakeholders—including smallholders, processors, exporters, and policymakers—to access, share, and utilize critical value chain information for better decision-making
	Leverage this platform to integrate digital trading systems, improving market visibility and connectivity across the region
Establish Resource Mobilization Mechanisms	Provide a convening platform to pool resources from private investments, public sector initiatives, and donor funding to support infrastructure, capacity building, and technology adoption along the FVVCs
	Establish horticulture commercial clusters based on comparative advantage to crowd in infrastructure and program investments
Support Public Private Dialogue Mechanisms	Develop frameworks for aligning work plans and interventions by fostering cross-fertilization of knowledge and experiences among stakeholders
	Establish mechanisms for regular communication, ensuring that all partners work cohesively toward common objectives
	Host regular regional forums, workshops, and consultative meetings to review progress, share updates, and address emerging challenges in the horticulture value chain

Expected Outcomes of Botswana-HA

By strengthening coordination, investment, and policy alignment, Botswana-HA will deliver tangible, measurable improvements across the horticulture sector. These outcomes will be driven by the

GreenPro Africa anchor farm's infrastructure, innovation capacity, and role as a national demonstration site.

1. **Stronger Public-Private Collaboration**
    - Enhanced engagement between government agencies, agribusinesses, and farmer organizations through structured dialogue and joint planning.
2. **Streamlined Value Chain Linkages**
    - More efficient trade networks, ensuring seamless movement of produce from farms to markets, supported by GreenPro's cold-chain logistics and ERP systems.
3. **Strengthened Investment in the Sector**
    - Mobilization of financial and technical resources for infrastructure, capacity-building, and technology adoption, with GreenPro serving as a model for scalable investment.
4. **Reduction of Inefficiencies in the Value Chain**
    - Establishment of regional processing and aggregation hubs, reducing post-harvest losses and increasing value addition.
5. **Enhanced Market Visibility and Trade Competitiveness**
    - Improved forecasting, traceability, and compliance mechanisms, ensuring Botswana's horticultural products meet regional and global standards.
6. **Greater Resilience and Sustainability**
    - Adoption of climate-smart agricultural practices, reducing environmental impact while maintaining profitability.
7. **Expanded Opportunities for Smallholder Farmers and Agribusinesses**
    - Increased market access and economic resilience for farmers, cooperatives, and SMEs through structured off-take agreements and training.

Through a cohesive public-private engagement strategy, enhanced resource mobilization, and strategic value chain interventions, Botswana-HA will position the country as a regional leader in horticultural production and trade.

Result Area 2: Increased Productivity and Market Access
To strengthen Botswana's horticulture sector and increase its competitiveness, Botswana-HA will address key gaps in research, technology adoption, post-harvest management, and climate-smart practices. The GreenPro Africa farm will serve as a national innovation hub for piloting and scaling these interventions.

i. Enhancing Research, Innovation, and Technology for Inputs, Data, and Extension Systems
Botswana-HA will integrate modern agricultural technologies, knowledge-sharing platforms, and capacity-building programmes to ensure market-driven growth.

Key Activities:

1. **Promoting Climate-Smart, High-Yielding, and Pest-Resistant Varieties**

- Support research into climate-resilient and high-yielding horticultural crops, using GreenPro's experimental unit for varietal trials.
- Strengthen national research institutions to develop and distribute locally adapted seed varieties.

2. **Strengthening Partnerships Between Research Institutions, Academia, and the Private Sector**
    - Facilitate public-private collaborations to scale innovative solutions in horticulture.
    - Promote technology transfer agreements, ensuring farmers benefit from cutting-edge research.
3. **Embedding Climate Early Warning Systems**
    - Establish early warning systems to help farmers anticipate and mitigate climate risks.
    - Integrate satellite data, meteorological forecasts, and predictive analytics into national agricultural planning.
4. **Promoting Sustainable Water Management**
    - Expand access to efficient irrigation technologies such as drip systems and precision water management.
    - Train farmers in water conservation techniques, leveraging GreenPro's aquifer-fed and recycled water systems.
5. **Building Capacity Among Value Chain Actors**
    - Provide technical assistance and training to farmers, cooperatives, and agribusinesses to meet market standards.
    - Use GreenPro's training facilities and CDT model to deliver ongoing mentorship and skills development.
6. **Enhancing Access to High-Quality Inputs and Climate-Smart Technologies**
    - Expand the input supply chain to ensure access to fertilizers, seeds, and bioprotectants tailored to Botswana's conditions.
    - Promote adoption of greenhouse production, organic soil amendments, and smart irrigation systems—demonstrated at GreenPro.
7. **Strengthening Market Linkages and Expanding Trade Opportunities**
    - Develop new domestic and export market channels for Botswana's horticultural producers.
    - Support trade missions and partnerships to integrate Botswana into regional and global horticulture markets.

Improved Post-Harvest Management and Circularity

Post-harvest losses in Botswana's horticulture sector remain a significant challenge, particularly in remote and arid regions where cold storage, logistics, and aggregation infrastructure are limited.

Losses are estimated to range between 30% and 50%, reducing farmer incomes, weakening market competitiveness, and contributing to food insecurity.

Botswana-HA will implement a national post-harvest strategy to reduce these losses, extend product shelf life, and improve the overall efficiency of the horticultural value chain. The GreenPro Africa anchor farm, with its integrated cold chain, packaging, and logistics systems, will serve as a national model for post-harvest excellence.

Key Outputs:

1. **Promoting Circularity for Waste Management**
    - Develop systems to repurpose agricultural waste into valuable by-products such as organic compost, bioenergy, and animal feed.
    - Support circular economy business models, including GreenPro's use of plant residue from essential oil extraction to produce biomass energy and organic soil amendments.
2. **Ensuring Compliance with Quality Control and SPS Standards**
    - Establish technical assistance and training programmes to help producers comply with domestic and international sanitary and phytosanitary (SPS) regulations.
    - Introduce digital traceability systems, integrated with GreenPro's ERP platform, to ensure quality control across the horticultural value chain.
3. **Strengthening Aggregation and Cooperative Capacity**
    - Expand the role of farmer cooperatives and aggregation centres, enabling smallholder farmers to access shared infrastructure and improve market leverage.
    - Provide business development training to cooperatives, using GreenPro's CDT model as a blueprint for governance and logistics coordination.
4. **Developing Market Systems Linkages**
    - Establish direct partnerships between producers, processors, and buyers to ensure a transparent and efficient supply chain.
    - Introduce digital trading platforms to enable real-time market access for smallholder farmers, linked to GreenPro's distribution network.
5. **Developing and Disseminating Post-Harvest Handling Protocols**
    - Provide comprehensive guidelines on handling, storage, and transportation to reduce spoilage and enhance product value.
    - Train value chain actors in best practices for cold storage, packaging, and logistics, using GreenPro's facilities as demonstration sites.
6. **Investing in Shared Infrastructure**
    - Facilitate investment in cold storage, packaging units, and aggregation centres to reduce losses and improve product quality.

- Establish rural logistics hubs, particularly in SPEDU and other underdeveloped regions, to ensure efficient movement of produce from farm to market.

Strategic Vision for Botswana-HA under Result Area 2
The successful implementation of this result area will:

✓ Ensure that Botswana's horticulture sector operates efficiently, reducing waste and improving competitiveness.
✓ Improve access to research-driven solutions, strengthening the country's capacity to develop climate-resilient, high-yielding crops.
✓ Enhance market readiness by ensuring compliance with food safety, SPS, and quality standards.
✓ Expand trade opportunities by linking smallholder farmers to regional and global horticultural markets.
✓ Strengthen food security and sustainability by improving post-harvest infrastructure and logistics systems.

Through targeted investments in research, technology, post-harvest handling, and market expansion—anchored by the GreenPro Africa model—Botswana-HA will establish a modern, resilient, and globally competitive horticulture industry.

Enhancing Accessibility and Adoption of Climate-Smart Agricultural Technologies and Mechanization
To increase resilience to climate change, improve productivity, and ensure sustainable horticultural production, Botswana-HA will promote the adoption of modern, climate-smart technologies and mechanization. These include renewable energy-powered irrigation, circular agricultural practices, and digital knowledge-sharing platforms.

Key Focus Areas:

1. **Expanding Access to Solar-Powered Irrigation Systems**
    - Introduce affordable, decentralized irrigation systems powered by solar energy, ensuring year-round water availability.
    - Support smallholder farmers in adopting smart irrigation techniques, reducing reliance on erratic rainfall. GreenPro's aquifer-fed, solar-powered irrigation system will serve as a national demonstration model.
2. **Promoting Circular Agriculture Practices**
    - Encourage composting, organic waste recycling, and sustainable soil regeneration methods.
    - Establish pilot programmes for biofertilizer and compost production, using GreenPro's biomass and organic waste streams as inputs.
3. **Enhancing Awareness and Adoption of Climate-Smart Technologies**
    - Conduct farmer training programmes, demonstration farms, and technology transfer initiatives to promote climate-smart agriculture.
    - Develop extension service platforms that integrate digital tools and advisory services, building on GreenPro's ERP and community training systems.

Strategic Interventions and Key Activities

Expected Outcomes of Botswana-HA

Strategic interventions	Activities
Strengthen research, innovation, and technology for input, data, and extension system	Embed climate early warning systems to de-risk, preserve profit
	Support Expansion and alignment of Agricultural research initiatives to deliver climate smart varieties
	Facilitate knowledge and data exchange among academia, public and private stakeholders
	Promote sustainable water management to ensure adequate resources for horticulture production
	Capacity building on conducting horticulture production surveys
	Data collection on Horticulture -Survey
	Horticulture production Survey Data analysis
	Horticulture production Survey Validation, Publication and dissemination of survey results
Enable improved post-harvest management and circularity	Advocate circularity for waste management and waste as an asset; repurpose waste
	Support Compliance with Quality and SPS Standards
	Build better aggregation and cooperative understanding and operating skills capacity
	Support market systems linkages
	Develop and disseminate post-harvest handling protocols to minimize spoilage
	Support investment in shared infrastructure, including cold storage, aggregation centres, and packaging facilities, to improve value chain efficiency
Support accessibility and adoption of appropriate climate smart agriculture technologies	Make sustainable, affordable, solar powered irrigation systems accessible to farmers
	Promote circular practices such as composting, recycling, and reusing by-products
	Support the awareness of the available technologies across the value chains

Through the implementation of climate-smart technologies, circular resource management, and modern irrigation infrastructure, Botswana-HA will deliver transformative results across the

horticulture sector. These outcomes will be anchored by the GreenPro Africa farm, which already demonstrates many of the programme's core principles in practice.

- **Expand the use of renewable energy-powered irrigation**, ensuring stable and predictable water supply for horticultural production, especially in arid regions.
- **Reduce waste and promote sustainable agriculture** by repurposing farming by-products into compost, bioenergy, and other value-added inputs—modeled on GreenPro's biomass energy system.
- **Enhance farmers' capacity to adopt modern, climate-smart techniques**, increasing yields and resilience to climate variability.
- **Improve post-harvest management efficiency**, reducing food loss and strengthening Botswana's horticulture supply chain.
- **Align Botswana's horticulture policies with SADC and AfCFTA climate resilience strategies**, enabling greater access to regional and international markets.

By integrating these solutions, Botswana-HA will position the country as a model for sustainable agricultural transformation in Southern Africa.

Overarching Expected Outcomes

Botswana-HA is designed to achieve significant transformation in the horticulture sector, benefiting farmers, agribusinesses, and the broader economy through increased efficiency, resilience, and global competitiveness.

1. **Increased Productivity and Reduced Post-Harvest Losses**
    - Improved techniques, better storage, and enhanced logistics will ensure higher yields and reduced spoilage.
2. **Strengthened Resilience of Production Systems**
    - Climate-smart agriculture and regenerative practices will protect farmers from climate variability and ensure long-term productivity.
3. **Improved Access to Shared Infrastructure and Modern Technologies**
    - Farmers and agribusinesses will benefit from upgraded cold storage, irrigation systems, and processing centres—many of which will be modeled on GreenPro's infrastructure.
4. **Enhanced Compliance with Quality and Trade Standards**
    - Alignment with international SPS and quality standards will improve Botswana's competitiveness in regional and global markets.
5. **Greater Sectoral Resilience to Market and Climate Disruptions**
    - Sustainable and adaptive practices will reduce vulnerability to environmental and economic shocks.
6. **Higher Profitability for Farmers and Agribusinesses**

- Strengthened value chains and expanded market access will ensure equitable profit distribution.

7. **Increased Employment and Inclusion**
    - Expansion of the horticulture value chain will create thousands of jobs, especially for youth and women.
8. **Development of Aggregation and Processing Hubs**
    - Regional hubs will improve value addition, reduce waste, and enhance export competitiveness.
9. **Capacity Building for Producers and SMEs on Food Safety Standards**
    - Training and knowledge-sharing platforms will ensure producers meet global food safety and trade standards.
10. **Improved Availability of Data on Horticulture Production**

- Enhanced data collection and analysis will support evidence-based decision-making for policymakers, investors, and farmers.

Result Area 3: Strengthening Policy and Business Ecosystem
A thriving horticulture sector requires a supportive business environment where access to finance, trade facilitation, and regulatory coherence drive growth. Botswana-HA will focus on building strong institutions, attracting investment, and ensuring regional and international competitiveness.

i. Facilitating Access to Finance Across the Value Chain

Access to tailored financing remains a key barrier to horticulture expansion in Botswana. Botswana-HA will introduce innovative financial models to unlock capital for smallholders, SMEs, and agribusinesses.

Key Interventions:

1. **Strengthening Working Capital and Bridging Finance**
    - Collaborate with financial institutions and development partners to develop short-term financing solutions for farmers, aggregators, and processors.
    - Introduce seasonal financing models to help horticulture businesses manage cash flow fluctuations.
2. **Expanding SME Financing Through Seed, Venture, and Growth Capital**
    - Facilitate access to funding for horticulture-based startups and agribusinesses, including seed capital and expansion financing.
    - Pair financing with technical assistance to ensure strong business models and compliance with trade standards.
3. **Advocating for Targeted Finance Policy Reforms**
    - Work with policymakers and banks to increase lending for horticulture enterprises.

- Introduce risk-mitigation tools such as loan guarantees and blended finance mechanisms to make horticulture a priority investment sector.

ii. Enhancing Policy, Institutional, and Coordination Frameworks
Robust policies and well-coordinated institutions are essential for long-term sustainability and investment attraction.

Key Interventions:

1. **Simplifying Botswana's Tariff Regime to Encourage Investment**
    - Collaborate with the Ministry of Finance and trade regulators to streamline tariffs and make them predictable and investor-friendly.
    - Ensure that import/export duties on horticultural inputs (e.g., seeds, fertilizers, machinery) align with regional best practices.
2. **Strengthening Mutual Recognition Agreements (MRAs) for Trade**
    - Work with regional trade bodies to ensure Botswana's horticultural products receive mutual recognition within SADC and AfCFTA markets.
    - Harmonize regulations governing seed certification, SPS compliance, and quality standards to enable full integration into intra-African trade networks.

Strategic Vision for Botswana-HA under Result Area 3
Through policy reforms, financial innovation, and institutional collaboration, Botswana-HA will create a business-friendly environment that attracts investment, fosters competitiveness, and strengthens Botswana's position as a regional horticulture powerhouse.

✓ **Unlock new financing opportunities** for horticulture, ensuring farmers and agribusinesses have access to capital for growth—supported by GreenPro's proven investment model and financial structuring.
✓ **Improve Botswana's trade environment**, streamlining tariff structures, policy frameworks, and trade agreements to enhance sectoral competitiveness.
✓ **Strengthen institutional coordination**, ensuring public-private collaboration remains central to horticulture transformation.
✓ **Increase Botswana's participation in regional and global markets**, ensuring horticultural products meet international trade standards and consumer expectations.

Regional and International Collaboration for Harmonization of Trade Standards and SPS Regulations

Quality standards and Sanitary and Phytosanitary (SPS) regulations are essential for ensuring that Botswana's horticultural products meet the requirements of both regional and international markets. Botswana-HA will align national policies with global best practices, reduce regulatory bottlenecks, and foster trade harmonization.

Key Interventions:

1. **Reducing or Eliminating Formal and Informal Trade Barriers**

- Advocate for the removal of tariff and non-tariff barriers that hinder Botswana's horticulture exports.
- Engage with government agencies, trade bodies, and border authorities to streamline customs procedures and eliminate inconsistencies.

2. **Harmonizing Food Safety Regulations, Pesticide Use, and Quality Standards**
    - Collaborate with SADC, AfCFTA, and international bodies to harmonize Botswana's SPS and food safety standards with global benchmarks.
    - Align pesticide use regulations with international norms to reduce compliance costs and ensure export readiness.
3. **Developing Simplified Manuals and Compliance Guides**
    - Produce clear, accessible manuals on SPS regulations to help farmers, SMEs, and exporters understand and meet compliance requirements.
    - Use GreenPro's training and digital platforms to disseminate these guides and support adoption.

Expected Outcomes of Botswana-HA's Trade Harmonization Strategy

1. **Improved Access to Affordable and Diverse Financing Solutions**
    - Expanded funding mechanisms will ensure liquidity for farmers, agribusinesses, and exporters.
2. **A Simplified and Predictable Tariff Regime**
    - Transparent, investment-friendly trade policies will attract new investors and enhance Botswana's trade capacity.
3. **Strengthened Policy and Institutional Coordination**
    - Enhanced collaboration among trade regulators, policymakers, and private sector stakeholders will improve governance and responsiveness.
4. **Harmonized Trade Standards and SPS Regulations**
    - Alignment with SADC, AfCFTA, and WTO frameworks will enhance Botswana's competitiveness in global markets.
5. **Increased Regional and Global Competitiveness**
    - Botswana's horticulture exports will be positioned as reliable, high-quality products, opening new trade opportunities and boosting revenues.
6. **Higher Compliance with International Trade Standards**
    - Consistent enforcement of SPS and food safety protocols will increase Botswana's access to premium global markets.

Strategic Interventions and Key Activities

Strategic Interventions	**Key Activities**
Increased intra-regional trade and exports by addressing tariff and non-tariff barriers and improving logistical coordination.	
Facilitate availability of finance across the value chain	Strengthen availability of working capital and bridging finance
	Support SMEs through seed-, Venture-, and growth stage-, capital along with TA
	Advocate for targeted finance policy reforms on the composition of the loan book
Strengthen the policy, Institutional and coordination framework among horticulture value chain actors including tariff regimes	Support simplifying tariff regime to create growth and investment
	Review MRA based on regional trade protocols
Facilitate regional and international collaboration for the harmonisation of trade standards, SPS regulations and support implementation	Facilitate the reduction/elimination of formal and informal tariff and non-tariff barriers
	Support the Harmonisation of regional food safety regulations/pesticides and quality standards to facilitate trade
Strategic Focus	Key Activities
Expanding Regional and International Market Access	- Facilitate the elimination of formal and informal tariff barriers.

Technical Approach

Botswana-HA will employ a three-pronged strategy for horticultural development, centered around:

✓ **Policy Harmonization** – Aligning Botswana's agricultural regulations with regional and global best practices, including SADC and AfCFTA frameworks.

✓ **Agricultural Productivity** – Enhancing yields, efficiency, and climate-smart farming through regenerative practices and modern inputs.

✓ **Agriculture Commercialization** – Upgrading value chains to expand domestic and export markets, leveraging GreenPro's integrated production and logistics systems.

This framework ensures that Botswana's horticulture sector is supported by a robust policy and regulatory environment, where both public and private institutions are empowered to drive investment and inclusive economic growth.

Botswana-HA's Key Implementation Pillars

✓ Market-Oriented Approach

- Prioritize commercially viable transactions between farmer organizations, SMEs, and formal off-takers.
- GreenPro's guaranteed off-take model will serve as a national benchmark for market integration.

✓ Capacity Development & Technical Assistance

- Deliver training, mentorship, and knowledge-sharing to farmers, cooperatives, and agribusinesses.
- Use GreenPro's CDT and training facilities to scale outreach and impact.

✓ Agribusiness Development Through Public-Private Partnerships

- Leverage private sector expertise and financing to modernize horticulture.
- GreenPro's success as a privately financed anchor farm will be replicated through PPPs across Botswana.

✓ Value Chain Optimization

- Enhance every stage of the horticulture supply chain—from input production to processing, logistics, and exports.
- GreenPro's vertically integrated model will serve as a blueprint for national replication.

This integrated strategy ensures that Botswana's horticulture development is holistic, market-driven, and structured for long-term success.

Theory of Change

The Core Development Hypothesis

✓ Strengthening Botswana's agricultural supply chain through policy harmonization, financial inclusion, and infrastructure investment will create a self-sustaining, competitive horticulture industry.
✓ Value chain clustering and commercialization will transform smallholder farming into a high-value, structured industry.
✓ By facilitating trade agreements, improving access to finance, and aligning policies with SADC and AfCFTA, Botswana will become a major player in the regional and global horticulture market.

Botswana-HA's Expected Transformational Impact

1. **Higher Agricultural Productivity**
    - Farmers will adopt climate-smart techniques, irrigation solutions, and improved inputs, leading to higher yields and economic stability.

2. **Increased Trade and Market Access**
    - Alignment with SPS regulations and international quality standards will boost Botswana's export competitiveness.
3. **Better Financial Inclusion**
    - Expanded access to credit, insurance, and investment incentives will allow SMEs and agribusinesses to scale operations.
4. **Resilient, Sustainable Growth**
    - Climate-adaptive farming and sustainable supply chain investments will ensure long-term food security and economic resilience.
5. **Enhanced Institutional and Policy Alignment**
    - Strengthened coordination between government agencies, the private sector, and international trade bodies will position Botswana as a leader in African horticulture.

	Objective Hierarchy SFPSEI						
Impact	Inclusive and sustainable food systems development to better food security and agriculture commercialization. KPI 1-Botswana regulations/laws on agriculture are fully harmonized and aligned by the SADC Member States KPI 2 -Seamless engagement in agriculture activities by the SHFs and agribusinesses within SADC with Botswana as reference. KPI 3 -Commercialization of Agriculture by SHFs in Botswana through geo-clustering of value chains KPI 4 – Streamlining of processes						
Outcomes	1. Increased number of SADC Member States have created a good enabling environment through harmonization of their policies, regulations and laws to that of Botswana KPI 1.1- SADC Member states aligning their regulations/laws to the Botswana Seed Harmonisation and Certification Programme (Botswana-SHCP). KPI 1.2- SADC Member states aligning their regulations/Laws to the Botswana Biotechnology and Biosafety Implementation Plan (Botswana-BBIP). KPI 1.3- SADC Member States aligning their regulations/laws to the Fertlizer Access and Utilization Programme (Botswana-FAUP) 2. Increased share of agriculture activities by the smallholder farmers (SHF) as a result of conducive enabling environment 3. Increased share of commercial agriculture by smallholder farmers (SHF) and agri-businesses through more inclusive, sustainable and territorial relevant value chains KPI 3.1-Average income of small-scale food producers, by sex and indigenous status KPI 3.2-Number of smallholders reached with AFDB supported interventions aimed to increase their sustainable production, access to markets and/or security of land.						
Outputs	**1.Capacity Development and agriculture Commercialization:** **KPI 1.1:** Number of SHFs and FBOs	**2.Value Chain Development:** **KPI 2.1:** Value Chain development **KPI 2.2:** Number of agriculture value	**3 Markets facilities for trade expansion:** **KPI 3.1**: Number of trade volumes on the geo	**4.Policy Development and Implementation:** **KPI 4.1:** SADC Member states aligning their regulations/laws to	**5. Access to finance** **KPI 5.1:** Number of targeted agribusiness groups having improved access to finance and financial support services with	**6. Climate Change** **KPI 6.1:** Number of vulnerable communities enhanced their capacity to	**7. SDEP/ECHO & PPP** **KPI- 7.1**: Number of Public-Private Partnership (PPP) system adheres to global standards and aligns with regional priorities.

	engaging in agri-culture activities. **KPI 1.2:** Number of Micro, Small and Medium Enterprises (MSMEs) applying climate smart agriculture production practices with AFDB support **KPI 1.3:** Number of SHFs and FBOs using high quality seeds following the Botswana and SADC Guidelines. KPI 1.4 Number of SHFs and FBOs applying the recommended fertilizer in the Botswana and SADC region KPI 1.5 Number of SHFs and FBOs using the right Bioprotectants	geo clustered along the regional territories. **KPI 2.3:** Number of SHFs and FBOs engaging in viable agribusiness in clustered value chains. KPI 3.2-Number of SHFs and FBOs producing products along the geo clustered value chains. KPI 3.3-Number of value chains products meeting the international/global standards KPI 3.4-Number of value chain players actively engaged in the agriculture value chains.	clustered value chains **KPI 3.2:** Number of trade-climate nexus promoted **KPI 3.3:** Number of trade volumes coordinated by AFDB support	relevant Programmes.	support of AfDB funded interventions. **KPI 5.2:** Number of beneficiaries with access to financial services with AFDB support: people (all financial services) KPI 5.3 Number and total value of matching grants disbursed to targeted agri-business groups with AFDB support	adapt to climate change impacts. **KPI 6.2:** Number of climate-resilient livelihoods plans created/promoted. KPI 6.3 -Number social-economic wellbeing of targeted communities improved. KPI 6.4- Number of sustainable development practices and environment stewardship fostered.	**KPI 7.2:** Number of farming communities accessing equitable infrastructure through ECHO Platform. **KPI 7.3:** Number of Flexus monitoring tools integrated.

	recommended in the Botswana and SADC Region KP1 1.6 Number of SHFs and FBOs engaging the recommended biotechnology practices						
Main activities and tasks	1.1 Strengthening existing farmer organizations T1. Strengthening Farmer Based Organizations (FBO's) by promoting viable models that can sustainably provide needed services such as storage, access to finance and market linkages to smallholders is critical for the growth of the	2.1. Strengthening existing farmer organizations. T1. Strengthening Farmer Based Organizations (FBO's) by promoting viable models that can sustainably provide needed services such as storage, access to finance and market linkages to smallholders is critical for the growth of the staple food sub sector.	3.1. Create service forums that will bring together alliance members and stakeholders within the staple food value chains to interact with each other and share best practices and lessons learnt. T1. Establish and run service forums in areas critical to the value chain including input and commodity production, trade	4.1 Improving the competitiveness of the staple food sector. T1. Comparative competitiveness benchmarking of national business environments among ESA member states through analysis and empirical client satisfaction surveys. T2. Analysis of key sectors across intra-regional markets in ESA. T2. Comparative analysis of ESA regional markets	5.1. Facilitate access to information and linkages between targeted agri-business groups and existing financing and de-risking mechanisms. T1. Conduct a rapid market assessment of the traditional and non-traditional sources of finance available to agri-business groups. T2. Assess the plans and capacity of the agri-business groups looking to raise finance.	6.1. Community engagement and needs assessments. T1. Conduct participatory consultations to understand the specific needs and challenges faced by target communities. T2. Identify existing livelihood practices and assess their vulnerability to climate change.	7.1. Pre-study phase of the SDEP/ECHO. T1. Test soil fertility, pH levels, and suitability for climate-smart agriculture. T2. Identify potential impacts on ecosystems, water, and biodiversity. T3. Engage local communities, governments, and private sector partners. T4. Gather socioeconomic data to tailor project goals to community needs. T5. Assess gaps in transport, energy, and water infrastructure for ECHO.

	staple food sub sector. T2. strengthening formal value chain linkages between farmers, FBO's and regional marketing infrastructure such as larger warehousing facilities and commodity exchanges. T3. Capacity building activities to enhance the effectiveness of FBO's. 1.2. Innovative linkages to markets. T1. Developing methodologies to promote increased farmer integration.	T2. Strengthening formal value chain linkages between farmers, FBO's and regional marketing infrastructure such as larger warehousing facilities and commodity exchanges. T3. Capacity building activities to enhance the effectiveness of FBO's. 2.2. Innovative linkages to markets. T1. Developing methodologies to promote increased farmer integration. T2. Strengthen the relevant public sector stakeholders' capacity to review, harmonise, and	facilities, market infrastructure and transport, finance and investment, regulations, strategic food reserves, industrialisation and humanitarian assistance. T2. Collate information generated from the service forums and present them to the advisory committee highlighting impacts, the action needed, potential costs and time frame of the various actions. 3.2. Input market access development and expansion.	against alternative export sources in viable export destinations for selected staple foods. 4.2. Agricultural trade policy harmonisation T1. Securing approval from Botswana and SADC Policy Organs for policy reform and harmonisation. T2. Supporting national adoption and implementation. T3. Working with national level partners/programs to ensure activities are anchored around policy reforms. T4. Conducting value chain training and awareness campaigns on these regional decisions	T3. Conduct Investment readiness capacity building training and mentorship to ensure the FOs and SMEs are attractive for investments. T4. Facilitate linkages between bankable SMEs and FOs and prospective public, private, and donor sector financial services providers and de-risking mechanism. 5.2. Set up matching grants to facilitate investment in productive assets and incentivize acquisition of further financing. T1. Develop and field test a matching grants operating manual (inception period).	T3. Identify potential opportunities for climate-resilient livelihoods based on local resources and capacities. 6.2. Capacity Building and Skills development. T1. Provide training and workshops on climate change adaptation and sustainable livelihood practices. T2. Build technical skills related to climate-resilient agriculture, agroforestry, sustainable fisheries, renewable	T6. Evaluate vulnerability to climate impacts and develop resilience strategies. T7. Ensure alignment with regional, national, and international frameworks. T8. Identify gaps in farming techniques and opportunities for improvement. T9. Analyze supply chains and post-harvest logistics for optimization. T10. Establish initial ESG compliance criteria for all project phases. 7.2. Skills training for SDEP/ECHO. T1. Train farmers on intercropping, agroforestry, and reduced tillage. T2. Educate on installing and maintaining solar panels and biogas units.

	T2. Strengthen the relevant public sector stakeholders' capacity to review, harmonise, and improve existing digital market information systems to better meet the needs of agri-business groups 1.3. Productivity and technology adoption. T1. Training and support to enhance adoption of technologies such as drip irrigation, promotion of climate-smart varieties within relevant Climate Change programme.	improve existing digital market information systems to better meet the needs of agri-business groups 2.3. Productivity and technology adoption. T1. Training and support to enhance adoption of technologies such as drip irrigation, promotion of climate-smart varieties within relevant Climate Change programme. T2. Support for use of agriculture productivity enhancing options such as conservation farming, carbon trading,	T1. Organization and formalizing of regional staple food value chain into competitive canters. T3. Strengthen the capacity of targeted agri-business groups to engage in competitive trade 3.3. Market information and trade intelligence systems. T1. Strengthen and leverage existing national systems and create linkages to the regional ESA wide Market Information System. T2. Strengthen national data collection systems to ensure data	and opportunities, targeting key players within the staple food value chain. 2.2 Establish Zero Tariffs and Common External Tariff (CET) Harmonisation for Fertilizer Trade in the SADC Member States. T1. Technical meetings of customs officials from SADC member states held on zero tariffs and CET for fertilizers. T2. Drafting of agreement on zero tariffs and CET for SADC. 4.3. Development of new SADC Soil Fertility Maps to assist Fertilizer Blending companies in coming up with new Suitable Fertilizer Blends.	T2. Develop and deploy marketing collateral to be used to solicit matching grant application. T3. Establish and train the PTC who will be evaluating the matching grant applications. T4. Open the call for applications and/or concept papers to those participating in the programme. Note, different terms and conditions may apply to the grant levels. T5. Where applicable, link targeted agribusinesses and FOs to other financing arrangements available in SADC Region.	energy, and other relevant sectors. T3. Promote financial literacy, entrepreneurship, and market linkages to support the development of viable livelihood initiatives. 6.3. Livelihood diversification and Innovation. T1. Support the establishment of climate-resilient livelihood initiatives, such as sustainable agriculture practices, aquaculture, eco-tourism, renewable energy enterprises, and	T3. Provide skills in irrigation, recycling, and purification techniques. T4. Teach conversion of agricultural waste into biogas or fertilizers. T5. Equip farmers with skills to manage loans, savings, and investments. T6. Train beneficiaries to use FlexSus for resource monitoring. T7. Educate on storage, processing, and packaging techniques. T8. Build local leadership for promoting sustainable practices. T9. Train on safe equipment use and occupational health standards. T10. Train on safe equipment use and occupational health standards.

	T2. Support for use of agriculture productivity enhancing options such as conservation farming, carbon trading, biotechnology through GMO cotton. T3. Support for extension by enhancing the capacity of farmer organisations and adoption of extension models such as training of lead farmers to serve as focal points for information dissemination. 2.1. Assessment reports of existing Bioprotectants registration and commercialization	biotechnology through GMO cotton. T3. Support for extension by enhancing the capacity of farmer organisations and adoption of extension models such as training of lead farmers to serve as focal points for information dissemination. 2.1. Established Regional Platforms and mechanisms for coordination among value Chain actors. T1. Facilitate Establishment of Botswana HA National Chapters. T2. Conduct Botswana HA Stakeholders	integrity and reliability. T3. Strengthen cross border data collection and monitoring systems. T4. Drive use of market information by both smallholder producers and private actors. T5. Disseminate information through various communication tools for example SMS's, radio and periodic publications of the regional food balance sheet. 3.4. Development of a SADC-wide agricultural commodity exchange.	T.1 Conduct soil analysis and develop soil fertility maps based on the soil analysis for the SADC region. T2. Develop new fertilizer recommendations based on the soil analysis that will include the missing nutrients, validate the findings via fertilizer trials. T3. Work with fertilizer blending companies to develop the new fertilizer blends (promote the sourcing of the nutrients from both organic and mineral fertilizer sources). 4.4. Develop SADC Regional Fertilizer Subsidy Guidelines with Exit Strategies.		nature-based businesses. T2. Facilitate access to appropriate technologies, inputs, and resources necessary for the success of these initiatives. T3. Promote innovation and knowledge sharing among participants to enhance adaptive capacity and productivity. 6.4. Strengthening Institutional support. T1. Collaborate with local government agencies, NGOs, and other relevant	T11. Focus on inclusive participation in skill-building programs. 7.3. ECHO Implementation Activities. T1. Identify and prepare suitable ECHO deployment locations. T2. Deploy solar panels for irrigation and community energy needs. T3. Install units to convert organic waste into energy and fertilizers. T4. Establish clean water supply through purification and recycling. T5. Deploy electrolysers for hydrogen fuel generation. T6. Connect ECHO to power grids and irrigation systems. T7. Install FlexSus sensors for real-time resource and emissions monitoring.

	in SADC member states. T1. Convene a regional inception workshop for all SADC Member States, to develop a roadmap for regional bioprotectant registration, harmonization and commercialization . T2. Conduct assessment of bioprotectant regulatory frameworks. 2.2. Developed a harmonized bioprotectant registration regulations for SADC member states. T1. Consultative Technical	Mapping and Forums. T3. Organise regional Workshops/Forums for network Establishment. T4. Facilitate establishment and coordination of multistakeholder collaboration. T5. Facilitate workshop and seminars at national level - at least 4 workshop/seminar per partner state. T6. Facilitate Public Private Dialogue workshop and seminars at Regional level. T7. Resource Mobilisation systems for	T1. Accessing the existing national commodity exchange available in the SADC region in terms of commodity policy/ credit act and regulatory framework and review capacity gaps to strengthen them. T2. Supporting furthering systems (exchange or electronic) development between existing national commodity exchanges and facilitate market information system (including regional food balance sheet and informal cross border	T1. Conduct a critical review and analysis of existing subsidy programs in the SADC region and elsewhere to determine key principles and associated actions for developing “smart” fertilizer subsidy programs for the region.		stakeholders to create an enabling policy and regulatory environment for climate-resilient livelihood programs. T2. Advocate for the integration of climate change adaptation and sustainable livelihood strategies into regional and national development plans. T3. Strengthen local institutions and community-based organizations to ensure the sustainability of the initiatives beyond the project duration.	T8. Train technicians to maintain and troubleshoot ECHO systems. T9. Develop facilities to process waste into renewable energy. T10. Test and scale modular ECHO systems in selected regions. 7.4. PPP System Enhancements (GSIA). T1. Develop policies aligned with global standards for transparency. T2. Establish ESG criteria and reporting systems for sustainability. T3. Engage auditors to validate ESG compliance and reporting. T4. Train stakeholders in ESG principles and project management. T5. Design structured leasing agreements for non-creditworthy countries.

	Workshops for the development of SADC Harmonised Bioprotectants' regulations. T2. Develop Mutual Recognition Pillars and Modalities on Bioprotectant regulations SADC Legal Drafting Committee convened. T3. SADC Organs Meetings: Committee on Agriculture; SADC Council of Ministers to review and adopt the SADC Harmonized Bioprotectants Regulations. 3.1. Strategic implementation plan of the SADC bioprotectant	Botswana HA enhanced. T8. Establish strategic partnerships and collaborations and strengthen existing ones. 2.2. Trade Information, data Management and other instruments for Deepening Trade Agreements and integration developed and operationalized. T1. Leveraging the platform to integrate digital trading systems, improving market visibility and connectivity across the region. T2. Support the enhancement of the Trade Information	monitoring already in place). T3.Development of regulatory framework for national commodity exchanges where nonexistence or in draft form. T4. Enhance private sector and smallholder farmers' capacity to comply with regional and international market standards for staple food trade. T5. Conducting a regional workshop to come up with a roadmap on harmonization of the commodity trade exchanges			6.5. Monitoring, Evaluation, and Knowledge Sharing. T1. Establish robust monitoring and evaluation mechanisms to assess the impact and effectiveness of the climate-resilient livelihood programs. T2. Document best practices, lessons learned, and case studies to inform future initiatives and policy development. T3. Facilitate knowledge sharing and networking among project participants,	T6. Include insurance and maintenance in lease agreements. T7. Establish a pool for early adoption of modular systems like ECHO. T8. Enable scalable infrastructure through flexible leasing terms. T9. Align PPP initiatives with regional policies and SADC goals. T10. Track project outcomes and compliance with ESG and PPP standards.

	registration harmonization and commercialization regulations developed. T1. Development of Implementation Plan of the SADC Registration Harmonization and Commercializatio n Regulations, taking into consideration the input from the SADC Member States. T2. Launch and sensitization of Registration Harmonization and Commercializatio n Regulations in all SADC Member States.	Portals through addition of processes for prioritized FV and Nuts VC and include the regional corridor mapping, agricultural commodities, and products. T3. Develop Centralized digital platform to address information gaps along the FV and nuts VCs, providing real-time data on market trends, production forecasts, logistics, and quality standards. T4. Engage IT Providers to develop/Improve digital trading platform.	in the Botswana and SADC region. T6. Come up with a SADC Regional Commodity exchange and co-ordinate spot and futures exchanges in the ESA Region dealing with inputs markets.			local communities, and relevant stakeholders through workshops, conferences, and online platforms.	

	3.0. Establish and Institutionalize a regional Biosafety risk assessment mechanism. T1. Technical review meeting to nominate PoE members. T2. Review, update National Biosafety Authorities including Standardisation of application forms and Standard Operating Procedures (SOPs). T3. Establish, institutionalize a regional biosafety risk assessment mechanism through selection, and technical support to SADC Regional Panel of Experts on	T5. Support Training of stakeholders on Platform Use. T6. Facilitate the establishment of integrated digital trading system for market visibility and connectivity for value chain actors. T7. Support Convening platform to pool resources from private investments, public sector initiatives, and donor funding to support infrastructure, capacity building, and technology adoption along the FV and nuts VCs. T8. Undertake detailed regional assessment to					

	biotechnology and biosafety. T4. Induction training for PoE members, including a review of dossiers for a specific product or products. 3.2. Strengthen Biosafety regulatory capacity in selected SADC member states. T1. Annual data collection in SADC Member States for updating policies and products' development. T2. Testing of the regional risk assessment process through appropriate case studies. Import	identify potential areas for establishing production clusters based on comparative advantages, resource availability and market demand. 2.3. Support establishment/improvement of regional production cluster. T1. Support Capacity Building for Aggregation and Cooperative - strengthen the operational skills of producer cooperatives and aggregation centres to improve efficiency and bargaining power within the value chain.					

	application: Crop-specific trait. T2. Popularize the “case study” PoE opinion among select Member States. T3. Strengthen Biosafety Capacities in SADC member states through SADC Member States Biotechnology and Biosafety status updates, case study meeting/data transportability, Popularize the case study and Economic Assessment. T4. Economic Assessment of Regional Harmonization Approach Using Data	T2. Support Market Systems Linkage - Develop stronger connections between producers’ processors, and buyer to ensure a smooth flow. T3. Support investments in shared infrastructure and logistics (appropriate storage, aggregation centres and packaging. T4. Needs assessment conducted of potential cooperatives/associations/SMEs targeting women, youth. T5. Technical support provided					

	Transportability in Risk Assessment. 3.3. Enhance communication awareness and communication about Botswana and SADC Biotechnology and Biosafety Policy among member states and stakeholders. T1. Review and put in place data driven Communication Strategy. T2. Strengthen awareness of the Botswana Biotechnology and Biosafety Policy among Member States. T3. Engage and build the capacity of regional networks for	to cooperatives and associations to register, develop business and sustainability plans, business management, governance, negotiations, financial management. T6. Link SMEs/cooperatives /associations to local markets, regional and international markets. T7. Women's and youth's businesses linked to large companies' product buyers locally, regionally and globally. 2.4. Reinforce the extension system and delivery.					

	media, youth, women and special interest groups to effectively popularize the policy. T4. Publicize the experiences of farmers and traders with GM crops in SADC Member States and other parts of the world. T5. Awareness and Communications through development of model data-driven Communication strategy and validation with lead countries including regional workshop with biosafety authorities.	T1. Support convening of regional workshop for research institutions, academia and private sector players to formulate deployment mechanisms of innovative solutions, and adoption within local contexts. T2. Support research initiative aligned deliver climate smart technologies. T3. Support accessibility and adoption of appropriate climate smart agriculture technologies and mechanisation. T4. Support the translation of the					

	T6. Hold annual regional Biosafety and Biotechnology meetings in moving forward Botswana-BBIP. T7. Report progress on moving forward Botswana-BBIP to the Ministers of Agriculture and Natural Resources / Council of Ministers and SADC Summit.	developed and validated Publications to the commonly most used languages in the region. T5. Promote Access to Genomic technologies - Support investments in technologies that accelerate the breeding of high yielding and resilient crop varieties. T6. Support establishment of trial farms in Different agro - ecological zones to test and validate the performance of new varieties under varying climatic conditions. T7. Establish a private-sector					

		logistics engagement platform to enhance regional coordination, foster strategic partnerships, and support evidence-based research and advocacy in the logistics sector. T8. Support compliance to Private Voluntary Sustainability standards systems to promote sustainable production and business practices. T9. Development and rollout of early warning and monitoring systems (EWS) to mitigate shocks. T10. Mapping, review and needs assessment of					

		existing early warning systems. T11. Establish early warning systems to help value chain actors anticipate and mitigate climate risks. T12. Design programme to support existing EWS frameworks or development to enhance planning and mitigate against shocks.					

Executive Summary: GreenPro Africa Essential Oil and Vertical Hydroponic Farm (Molalatau, Botswana)

The GreenPro Africa project is a transformative USD 236 million agricultural investment located near Molalatau, Botswana. It aims to establish a state-of-the-art vertical hydroponic farm and essential oil extraction facility, serving as a national anchor for rural development, food security, and export diversification.

Project Vision

To create a high-yield, climate-resilient, and export-oriented agricultural hub that empowers communal farmers, drives inclusive economic growth, and positions Botswana as a leader in sustainable agribusiness across Southern Africa.

Project Overview

- **Location:** Molalatau, Botswana (Tuli Karoo Transboundary Aquifer)
- **Land:** 300 hectares leased (179 ha used for farming)
- **Budget:** USD 236 million
- **IRR:** 32.6%
- **Annual Revenue:** USD 139M (Years 5–12), USD 169M (Year 13+)
- **Job Creation:** 1,122 direct jobs

Core Components

- **Vertical Hydroponic Farming:**
  SMART greenhouses using 1% of traditional water volumes, producing fresh vegetables and essential oil crops year-round.
- **Essential Oil Extraction Facility:**
  Targeting USD 247M in annual exports, with global off-take agreements and support from SAEOPA.
- **In-Vitro Lab & R&D:**
  For plant propagation, varietal improvement, and biosafety testing.
- **Community Development Trust (CDT):**
  10% of profits reinvested into communal farmer support, training, and social infrastructure.
- **Energy Transition Plan:**
  From diesel to a 73-Megawatt solar PV and ice-energy storage system by Year 4.

Market & Impact

- **Exports:** Essential oils to global markets.
- **Local Sales:** USD 12M in fresh produce annually.
- **Food Security:** Year-round production and reduced import dependency.
- **GDP Contribution:** Significant boost through agro-industrial development.

Risk Mitigation

- Comprehensive strategies for plant species selection, market volatility, security, and climate resilience.
- Strong governance via a Project Management Plan (PMP) and real-time financial reporting.

Government & Institutional Support

- Approved by **SPEDU** and backed by the **Government of Botswana**.
- Aligned with Vision 2036 and NDP 12 for economic diversification and rural development.

Budget and use of funds

PROJECT 1: Botswana Fertilizer Access and Utilization Programme (Botswana-FAUP)

OUTCOME 1: Accelerates the development and harmonization of regulatory frameworks and Implementation Plan for Organic fertilizer for Botswana, as reference to SADC Member states

Output 1.1. Develop and Harmonize Organic and Inorganic Fertilizer Frameworks for Botswana

Description	***Means***	***Unit Cost***	***Persons***	***Man days / Months***	***Frequency***	***Total (USD)***
Regional inception and planning meeting.	Regional workshop	1500	30	1	1	45,000.00
Technical assessment of fertilizer policy and regulations in Botswana and the SADC Member States	National consultants	250	10,5	20	1	52,500.00
Regional synthesis report taking into consideration national reports, SADC, EAC and COMESA.	Regional consultant	500	1	20	1	10,000.00
Development of SADC Harmonised Fertilizer Regulations.	Technical workshops	1500	30	3	1	135,000.00
Development of the SADC Harmonised Fertilizer Regulations Implementation Plan.	Regional consultant	500	1	20	1	10,000.00
					Sub total(USD)	**252,500.00**

Output 1.2. Establish Zero Tarrif and common external tarrifs (CET) Harmonisation for Fertilizer Trade in the SADC Member states.						
Description	***Means***	***Unit Cost***	***Persons***	***Man days / Months***	***Frequency***	***Total (USD)***
Development of SADC Fertilizer CET.	Regional consultant	500	1	40	1	10,000.00
Technical customs meetings held on fertilizer CET drafting of the SADC CET conducted.	Regional workshop	1500	40	2	4	240,000.00
Validation and launch of SADC Fertilizer CET conducted.	Regional workshop	1500	40	2	5	300,000.00
					Sub total(USD)	**550,000.00**
Output 1.3. Development of new SADC Soil Fertility Maps to assist fertilizer Blending companies in coming up with new suitable fertilizer Blends.						
Description	***Means***	***Unit Cost***	***Persons***	***Man days / Months***	***Frequency***	***Total (USD)***
Conduct soil analysis and develop soil fertility maps based on the soil analysis for the SADC region	National consultant	300	21	20	1	126,000.00
Develop new fertilizer recommendations based on the soil analysis that will include the missing nutrients, validate the findings via fertilizer trials	Regional consultant	500	1	30	1	15,000.00

Work with fertilizer blending companies to develop the new fertilizer blends (promote the sourcing of the nutrients from both organic and mineral fertilizer sources).	Regional consulant	500	1	30	1	15,000.00
					Sub total(USD)	**156,000.00**
Output 1.4. Developing SADC Regional Fertilizer Subsidy Guidelines with existing strategies						
Description	***Means***	***Unit Cost***	***Persons***	***Man days / Months***	***Frequency***	***Total (USD)***
Conduct a critical review and analysis of existing subsidy programs in the SADC region and elsewhere to determine key principles and associated actions for developing "smart" fertilizer subsidy programs for the region.	Regional consultant	500	1	30	1	15,000.00
Develop Regional Fertilizer Subsidy Guidelines comprised of best practices to support SADC Member States in the implementation of "smart" subsidies that use e-vouchers and have exit strategies.	Regional consultant	500	1	20	1	10,000.00
Regional validation and launch of the SADC Fertilizer Subsidy Guidelines.	Regional Workshop	1500	50	1	2	150,000.00
					Sub total(USD)	**175,000.00**

OUTCOME 2: Establish and Strengthen the Agriculture input distribution networks using the hub agrodealer model including national and regional fertilzier trade and agrodealer association in the SADC member states						
Output 2.1. Support the Establishment of New and Strengthening of Existing Regional and National Fertilizer Trade Associations						
Description	***Means***	***Unit Cost***	***Persons***	***Man days / Months***	***Frequency***	***Total (USD)***
Conduct needs assessments of the existing regional fertilizer associations; 5 existing national fertilizer associations; and 5 existing agrodealers associations	Regional consultancy	500	1	30	1	15,000.00
Develop and deliver capacity building support	National consultants	300	21	55	1	346,500.00
Conduct a study and recommend 5 countries for the establishment of new fertilizer associations or agrodealers associations	Regional consultant	500	1	20	1	10,000.00
Convene a regional meeting of regional and national fertilizer associations to raise awareness about the initiative, share lessons learned and agree on next steps to strengthen/establish regional and national fertilizer associations in SADC.	Regional fertilizer stakeholder Forums	1500	30	1	1	45,000.00
					Sub total(USD)	**416,500.00**

Output 2.2.Implement credit guarantee schemes to Hub Agrodealers through Agribusiness Partnership Contracts						
Description	***Means***	***Unit Cost***	***Persons***	***Man days / Months***	***Frequency***	***Total (USD)***
Establish a credit guarantee fund for the project	Regional fund	600,000.00	1	1	1	600,000.00
Profile Screen and select 5 hub-agrodealers in 10 selected countries.	National Consultants	300	10	10	1	30,000.00
Implement capacity building of hub agrodealers	Direct National engagement	10000	1	1	5	50,000.00
Develop linkages with suppliers and execute the credit guarantee scheme	Regional consultancy	500	1	5	5	12,500.00
Provide support, monitor and report on APC performance	National Consulatnst	300	10	10	1	30,000.00
					Sub total(USD)	**722,500.00**
Output 2.3. Implement the fertilizer and soil health capacity building programme						
Description	***Means***	***Unit Cost***	***Persons***	***Man days / Months***	***Frequency***	***Total (USD)***
Conduct capacity needs assessment of existing Hubs and agrodealers in 10 countries for: a) business and technical services; b) safe application and use of nutrient technology;	National Consultants	300	10	10	1	30,000.00

Develop an appropriate training curriculum	Regional Consultants	650	1	5	1	3,250.00
Provide appropriate training to the targeted groups in each country	Regional consultancy	650	1	3	5	9,750.00
Convene a regional trade fair to facilitate business linkages with suppliers in the region	Regional workshop	1500	50	1	5	350,000.00
					Sub total(USD)	**393,000.00**
Output 2.4. Conduct out-scaling of green ammonia fertilizers by fertilizer blenders in the Botswana and SADC region						
Description	***Means***	***Unit Cost***	***Persons***	***Man days / Months***	***Frequency***	***Total (USD)***
Conduct feasibility of green ammonia production.	Regional consultancy	500	1	40	1	20,000.00
Link fertilizer blenders with green ammonia for blending through matching grants.	Regional workshop	1500	5	2	4	60,000.00
					Sub total(USD)	**80,000.00**
	-	-	-	**Total Project Fund**		**2,745,500.00**

PROJECT 2: Botswana Bioprotectants Harmonization Programme (Botswana-BHAP)						
OUTCOME 1: Assesment reports of existing Bioprotectants registration and commercialization in SADC member states						
Description	***Means***	***Unit Cost***	***Persons***	***Man days / Months***	***Frequency***	***Total (USD)***
Convene a regional inception workshop for all SADC Member States, to develop a roadmap for regional bioprotectant registration, harmonization and commercialization	Regional workshop	1000	40	2	1	80,000.00
Conduct assessment of bioprotectant regulatory frameworks	National, regional and international consultants	650	5	25	1	81,250.00
					Sub total(USD)	**161,250.00**
OUTCOME 2: Production of a synthetic report on regional regulatory framework for Bioprotetants registration						
Output 2.1. Developed a harmonized bioprotectant registration regulations for SADC member states						
Description	***Means***	***Unit Cost***	***Persons***	***Man days / Months***	***Frequency***	***Total (USD)***
Consultative Technical Workshops for the development of SADC Harmonised Bioprotectants' regulations.	National workshops	1500	50	2	1	150,000.00

Develop Mutual Recognition Pillars and Modalities on Bioprotectant regulations SADC Legal Drafting Committee convened.	Regional consultants	650	7	25	1	113,750.00
Validation workshop of the SADC Harmonized Bioprotectants Regulations.	Regional workshop	1500	50	2	1	150,000.00
SADC Organs Meetings: Committee on Agriculture; SADC Council of Ministers to review and adopt the SADC Harmonized Bioprotectants Regulations	Regional workshop	1500	50	2	1	150,000.00
					Sub total(USD)	**563,750.00**
OUTCOME 3. SADC Harmonised Bioprotectants regulations strategic Implementation Plan in place						
Output 3.1. Strategic implementation plan of the SADC bioprotectant registration harmonization and commercialization regulations developed						
Description	***Means***	***Unit Cost***	***Persons***	***Man days / Months***	***Frequency***	***Total (USD)***
Development of Implementation Plan of the SADC Registration Harmonization and Commercialization Regulations, taking into consideration the input from the SADC Member States.	Regional consultants	650	7	25	1	113,750.00

Launch and sensitization of Registration Harmonization and Commercialization Regulations in SADC Member States	National workshop	1500	25	1	21	787,500.00
					Sub total(USD)	**901,250.00**
				Total Project Funds (USD)		**1,522,500.00**
PROJECT 3: Botswana Biotechnology and Biosafety Implementation Programme (Botswana-BBIP)						
Output 3.1.Establish and Institutionalize a regional Biosafety risk assessment mechanisms						
Description	***Means***	***Unit cost***	***Persons***	***Man days / Months***	***Frequency***	***Total (USD)***
Technical review meeting to nominate PoE members	Regional workshop	1500	30	1	1	45,000.00
Review, update National Biosafety Authorities including Standardisation of application forms and Standard Operating Procedures (SOPs).	Consultant	650	1	25	1	16,250.00
Establish, institutionalize a regional biosafety risk assessment mechanism through selection, and technical support to SADC Regional Panel of Experts on biotechnology and biosafety.	Consultant	650	1	25	1	16,250.00

Induction training for PoE members, including a review of dossiers for a specific product or products.	Consultant	650	1	10	1	6,500.00
					Sub total(USD)	**84,000.00**

Output 3.2. Strengthen Biosafety regulatory capacity in selected SADC member states

Description	***Means***	***Unit cost***	***Persons***	***Man days / Months***	***Frequency***	***Total (USD)***
Annual data collection in SADC Member States for updating policies and products' development.	Consultant	650	1	20	1	13,000.00
Testing of the regional risk assessment process through appropriate case studies. Import application: Crop-specific trait.	Consultant	650	1	20	2	26,000.00
Popularize the "case study" PoE opinion among select Member States.	Consultant	650	21	10	1	136,500.00
Strengthen Biosafety Capacities in SADC member states through SADC Member States Biotechnology and Biosafety status updates, case study meeting/data transportability, Popularize the case study and Economic Assessment.	Workshops	1500	50	5	1	375,000.00

Economic Assessment of Regional Harmonization Approach Using Data Transportability in Risk Assessment.	Consultant	650	1	10	1	6,500.00
					Sub total(USD)	**557,000.00**

Output 3.3. Enhance communication awareness and communication about SADC Biotechnology and Biosafety Policy among member states and stakeholders.

Description	***Means***	***Unit cost***	***Persons***	***Man days / Months***	***Frequency***	***Total (USD)***
Review and put in place program data driven Communication Strategy.	Consultant	650	1	20	1	13,000.00
Strengthen awareness of the SADC Biotechnology and Biosafety Policy among Member States.	Consultant	650	1	20	1	13,000.00
Engage and build the capacity of regional networks for media, youth, women and special interest groups to effectively popularize the policy.	National Consultant	300	21	10	1	63,000.00
Publicize the experiences of farmers and traders with GM crops in SADC Member States and other parts of the world.	Consultant	650	1	30	1	19,500.00

Awareness and Communications through development of model data-driven Communication strategy and validation with lead countries including regional workshop with biosafety authorities.	Consultant	650	1	20	1	13,000.00
Hold annual regional Biosafety and Biotechnology meetings in moving forward program.	Workshops	1500	25	1	1	37,500.00
Report progress on moving forward program to the Ministers of Agriculture and Natural Resources / Council of Ministers and SADC Summit.	Consultant	650	1	15	1	9,750.00
					Sub total(USD)	**168,750.00**
				Total Project Funds (USD)		**809,750.00**
PROJECT 4: Botswana Seed Harmonisation and Cerification Programme (Botswana-SHCP)						
Description	***means***	***Unit cost***	***Persons***	***Man days / Months***	***Frequency***	***Total (USD)***
Develop SADC Regional Seed digital tracking and traceability systems.	Consultant	650	1	25	1	16,250.00

Support small and medium private seed companies through testing their varieties in second SADC Member State to enable them to register their varieties on the SADC Variety Catalogue.	workshops and Meetings	1500	25	5	1	187,500.00
Support full domestication of the SADC Seed Trade Harmonisation Regulations	Workshops and Meetings	1500	25	3	2	225,000.00
Provide technical assistance to support seed companies with application, registration of varieties on SADC Variety Catalogue and acquisition, activation and trading using SADC Regional Seed Labels conducted.	Consultant	650	1	25	1	16,250.00
Support the full implementation of the Seed Labels in close collaboration with the Botswana and SADC Seed Committee.	Consultant	650	1	50	1	16,250.00
Support data collection and Input into the COMSIS platform	Consultant	650	1	60	1	19,500.00
Conducting COMSIS Data validation meeting.	workshops and Meetings	1500	80	3	1	180,000.00
Development of the COMSIS software	Procuring	190000	1	1	1	95,000.00
Maintenance of COMSIS Software	Procuring	25000	1	1	1	12,500.00

				Total Project Funds (USD)		**768,250.00**
PROJECT 5: Botswana Horticulture Accelerator (Botswana-HA)						
OUTCOME 1: Faciliatte Development of sustainable and resilient Value Chain(s)						
Output 5.1.1. Established Regional Platforms and mechanisms for coordination among value chain actors						
Description	***means***	***Unit cost***	***Persons***	***Man days / Months***	***Frequency***	***Total (USD)***
Facilitate Establishment of Botswana HA National Chapters	Workshop	1,500.00	25	1	5	187,500.00
Conduct Botswana HA StakeHolders Mapping and Forums	Workshop	1,500.00	25	1	5	187,500.00
Organise regional Workshops/Forums for network Establishment	Workshop	1,500.00	30	1	1	45,000.00
Facilitate establisment and coordination of multistake holder collaboration	Workshop	10,000.00	1	1	1	10,000.00
Facilitate workshop and seminars at national level - at least 4 workshop/seminar per partner state	Workshop	1,500.00	25	1	4	150,000.00

Facilitate Public Private Dialogue workshop and seminars at Regional level	Workshop	1,500.00	25	1	2	75,000.00
Resource Mobilisation sytems for Botswana HA enhannced	Workshop	10,000.00	1	1	1	10,000.00
Establish strategic partnerships and collaborations , and strengthen existing ones	Workshop	10,000.00	1	1	1	10,000.00
				SUB TOTAL (USD)		**675,000.00**
Output 5.1.2. Trade Information, data Management and other instruments for Deepening Trade Agreements and integration developed and operationalized						
Description	***means***	***Unit cost***	***Persons***	***Man days / Months***	***Frequency***	***Total (USD)***
Leveraging the platform to integrate digital trading systems, improving market visibility and connectivity across the region	Consultant	500	1	10	1	5,000.00
Support the enhancement of the Trade Information Portals through addition of processes for prioritized products and include the regional corridor mapping, agricultural commodities, and products.	Consultant	500	1	10	1	5,000.00
Develop Centralized digital platform to address information gaps, providing real-time data on market trends, production forecasts, logistics, and quality standards	Consultant	500	1	10	1	5,000.00

Engage IT Providers to develop/Improve digital trading platform	Consultant	500	1	10	1	5,000.00
Support Training of stakeholders on Platfrom Use	Consultant	500	1	10	1	5,000.00
Faciliate the establishemet of integrated digital trading system for market visibility and connectivity for value chain actors	Consultant	500	1	10	1	5,000.00
Support Convening platform to pool resources from private investments, public sector initiatives, and donor funding to support infrastructure, capacity building, and technology adoption.	Regional workshop	1500	25	1	1	37,500.00
Undertake detailed regional assessment to identify potential areas for establishing production clusters based on comparative advantages, resource availability and market demand.	Regional consultant	500	1	10	1	5,000.00
				SUB TOTAL (USD)		**72,500.00**
Output 5.1.3. Support establishment/improvement of regional production cluster						
Description	***means***	***Unit cost***	***Persons***	***Man days / Months***	***Frequency***	***Total (USD)***
Identify potential cluster locations	Consultant	500	1	10	1	5,000.00

Support Capacity Building for Aggregation and Cooperative -strengthen the operational skills of producer cooperatives and aggregation centres to improve efficiency and bargaining power within the value chain	Consultant	500	1	15	1	7,500.00
Support Market Systems Linkage - Developstronger connections between producers processors, and buyer to ensure a smoothflow	Consultant	500	1	10	1	5,000.00
Support invetsments in shared infrastructure and logistics (appropriate strorag, aggregation centersand packaging	Consultant	500	1	10	1	5,000.00
Needs assessment conducted of potential cooperatives/associations/SMEs targeting women, youth	National Consultant	300	1	10	1	3,000.00
Technical support provided to cooperatives and associations to register, develop business and sustainability plans, business management, governance, negotiations, financial management.	National Consultant	300	1	10	1	3,000.00
Link SMEs/cooperatives/associations to local markets, regional and international markets	National Consultant	300	1	10	1	3,000.00

Women's and youth's businesses linked to large companies product buyers locally, regionally and globally	National Consultant	300	1	10	1	3,000.00
				SUB TOTAL (USD)		**34,500.00**
OUTCOME 2: Strengthen Research Innovation and Technology for inputs and extension systems						
Output 5.2.1. Reinforce the extension system and delivery						
Description	***means***	***Unit cost***	***Persons***	***Man days / Months***	***Frequency***	***Total (USD)***
Support convening of regional workshop for research institutions, academia and private sector players to formulate deployment mechanisms of innovative solutions, and adoption within local contexts	Consultant	500	1	10	5	25,000.00
Support research initiative aligned deliver climate smart technologies	Consultant	500	1	10	5	25,000.00
Support accesability and adoption of appropriate climate smart agriculture technologies and mechanisation	Consultant	500	1	10	5	25,000.00
Support the translation of the developed and validated Publications to the commonly most used languages in the region	Consultant	500	1	10	5	25,000.00

Promote Access to Genomic technologies - Support investments in technologies that accelerate the breeding of high yielding and resilient crop varieties	Consultant	500	1	10	5	25,000.00
Support establishment of trial farms in Different agro -ecological zones to test and validate the perfomance of new varieties under varying climatic conditions	Consultant	500	1	10	5	25,000.00
Leverage Public Private Partnerships by engaging private seed companies in co developing and disseminating improved crop varieties for rapid commercialisation and farmer adoption	Consultant	500	1	10	5	25,000.00
Establish a private-sector logistics engagement platform to enhance regional coordination, foster strategic partnerships, and support evidence-based research and advocacy in the logistics sector.	Consultant	500	1	10	5	25,000.00
Support compliance to Private Voluntary Sustainability standards systems to promote sustainable production and business practices	Consultant	500	1	10	5	25,000.00
Development and rollout of early warning and monitoring systems (EWS) to mitigate shocks	National Consultant	300	1	15	5	22,500.00

Mapping, review and needs assessment of existing early warning systems	National Consultant	300	1	15	5	22,500.00
Establish early warning systems to help value chain actors anicipate and mitigate climate risks	National Consultant	300	1	15	5	22,500.00
Design programme to support existing EWS frameworks or development to enhance planning and mitigate against shocks (SADC food balance sheet)	Regional consultant	500	1	10	5	25,000.00
				Sub Total (USD)		**317,500.00**
Output 5.2.2. Improved post-Harvest management circulatory						
Description	***means***	***Unit cost***	***Persons***	***Man days / Months***	***Frequency***	***Total (USD)***
Advocate circularity by repurposing of agricultural waste into value by-products, such compost or bioenergy, to reduce environmntal impact and generate additional income streams	Consultant	1500	1	5	1	7,500.00
Develop and disseminate post Harvest Handling Technologies	Consultant	1500	1	5	1	7,500.00
Support market systems linkages	Consultant	1500	1	5	1	7,500.00

				Sub Total (USD)		**22,500.00**
Output 5.2.3. Support Implentation of SADC Food Safety Regulatory and Operational framework initiated in key trade corridors						
Description	***means***	***Unit cost***	***Persons***	***Man days / Months***	***Frequency***	***Total (USD)***
Information awareness	Consultant	5000	1	5	5	125,000.00
Identify Key Trade corridors in the region	Consultant	750	1	5	5	18,750.00
Support consultancy to identify and address Foodsafety Gaps	Consultant	750	1	5	5	18,750.00
				Sub total (USD)		**162,500.00**
Output 5.2.4. Access to Finance across the value chain facilitated						
Description	***means***	***Unit cost***	***Persons***	***Man days / Months***	***Frequency***	***Total (USD)***
Strengthen of working capital and bridgingfinance	Consultant	500	1	10	5	25,000.00

Improve the processing and handling infrastructure, primary and secondary packaging	Consultant	500	1	5	5	12,500.00
Support SMEs through matching Grants funds and agribusiness incubators (MGFIAM)	Funding seed	500 000	1	1	5	2,500,000.00
Advocate for targeted finance policyreform on the composition of the loan book	Consultant	500	1	1	5	2,500.00
Facilitate trade missions and partnerships to expand domestic, regional and international markets	Consultant	500	1	1	5	2,500.00
Targeted capacity building on credit worthiness, keeping good records and developing bankable business proposals	Training	1500	25	10	5	1,875,000.00
				Sub Total (USD)		**4,417,500.00**
Output 5.2.5. Faciliating regional and international collaboration for Harmonisation of Trade stands and SPS Regulations						
Description	***means***	***Unit cost***	***Persons***	***Man days / Months***	***Frequency***	***Total (USD)***
Facilitate the reduction or elimination of firmal and informal Tariff and Non Tariff Barriers	Consultant	500	1	5	5	25,000.00

Support the harmonmisation of regional food safety regulations, pesticides, and quality standards to facilitae trade	Consultant	500	1	5	5	25,000.00
Develop simplified and guides on compliance with manuals and guides on compliance with SPS regulations and harmoised quality strandars	Consultant	500	1	5	5	25,000.00
Support the establishment of Trade Experts Engagement Networks to enable provision of rapid responses on emerging issues related to trade policy, trade facilitation, SPS and SQI. The delivery modality shall be as follows:	Consultant	500	1	10	5	25,000.00
Consultancy services from Trade Policy Expert; SPS Expert and SQI Expert	Regional Consultant	500	1	10	5	25,000.00
Dissemination and communication services for purposes of facilitating sharing the analysis and information collected.	Regional Consultant	500	1	10	5	25,000.00
Capacity building to VC actors within the clusters on GAPS, Plant health, Social, Environment and Food safety standards	National Consultants	300	5	5	5	37,500.00
Support the translation of the developed and validated NTBs toolkit/factbook to the commonly most used languages in the region	National Consultants	300	5	5	5	37,500.00

Selection and profiling of target border points and target via a review of existing cross-border assessment reports and conducting cross-border assessments.	National Consultants	300	5	5	5	37,500.00
Regional stakeholder engagement for validation and dissemination of border assessment findings	workshop	1500	25	2	5	375,000.00
Conduct Assessment of key phytosanitary risks affecting trade in plants and plant products	Consultant	500	1	10	1	5,000.00
Consultancy to conduct study on key pest risks of food security and trade concerns in plant and plant products in the region (harmful organisms, plant protection products, etc)	Consultant	500	1	10	1	5,000.00
Expert Group meeting to develop pest risk management recommendations/options on plants and plant products (seed, pest control products, etc)	Regional workshop	1500	25	1	1	37,500.00
Expert Group meeting to develop risk management recommendations/options for plant health risks	Regional workshop	1500	25	1	1	37,500.00

Support compliance with qualiy control and SPS standards - provide technical assistance and training to help stakeholders comply with domestic and international quality and SPS requirements, ensuring market readiness	Regional Consultant	1500	25	1	1	37,500.00
				Sub Total (USD)		**760,000.00**

Output 5.2.6. Support development and validation of Botswana HA Cross Cutting strategies/methodology and impact assessment informed by gender and youth analysis

Description	***means***	***Unit cost***	***Persons***	***Man days / Months***	***Frequency***	***Total (USD)***
Develop a job creation strategy and data collection methodology and model, integrating gender and youth analysis	Consultant	500	1	10	5	25,000.00
Support rollout of validated strategy and rollout of data collection on job creation across the Member states with a focus on jobs for women and youth	Consultant	500	1	10	5	25,000.00
Capacity building of Botswana HA National Chapters on approved job creation methodology and market systems approach	Consultant	500	1	10	5	25,000.00

Support access to Job Creation and employment opportunities for Women/Youth through MGFIAM	Consultant	500	1	10	5	25,000.00
Support development and validation of climate change strategy/methodology and impact assessment informed by gender and youth analysis	Consultant	500	1	10	5	25,000.00
Support development and validation of ME& L strategy	workshop	1500	25	2	5	375,000.00
Support development and validation of Botswana HA marketing and information	workshop	1500	25	2	5	375,000.00
				Sub Total (USD)		**875,000.00**
Botswana HA IMPLEMENTATION AND COORDINATION						
Description	***means***	***Unit cost***	***Persons***	***Man days / Months***	***Frequency***	***Total (USD)***
Hosting of the Botswana HA General Assembly		1500	50	2	5	750,000.00
Botswana HA Board Meetings		1500	5	1	4	30,000.00
Technical Committee Meetings		1500	5	1	4	30,000.00
National Chapter Consultative Meetings		20000	5	1	4	400,000.00
Support B2B Business Forums		1500	5	1	4	30,000.00

Project Visibility		20000	1	1	1	10,000.00
Support to Private Business to improve and out scale Botswana HA Operations Inclusive of Small-Holders		10000	1	1	5	25,000.00
M&E (Baselines, data collection, project evaluations)		1500	1	10	5	75,000.00
Communication		10000	1	1	5	25,000.00
Host Forum on Gender/Youth and climate Change		5000	1	1	5	25,000.00
Support participation in the National Chapters forums		5000	2	1	5	50,000.00
Mainstreaming activities (Environment, Climate Change and Gender)		5000	1	2	5	50,000.00
				Sub Total		**1,450,000.00**
				Total Project Funds		**8,787,000.00**
				Combined Program Funds		**14,633,000.00**

SOCIAL DEVELOPMENT AND EMPOWERING PROGRAMME

Description	***means***	***Unit cost***	***Persons***	***Man days / Months***	***Frequency***	***Total (USD)***

Description	**means**	Unit ***cost***	Persons	**Man *days / Months***	**Frequency**	**Total *(USD)***
Pre-study of ECHO implementation	Soil and Environmental Analysis	50 000			**4**	200 000
	Stakeholder Engagement Workshops	10 000			**10**	100 000
	Infrastructure Feasibility Study	150 000			**1**	150 000
	Policy Alignment Reviews	25 000			**2**	50 000
	Climate Risk Assessment	50 000			**1**	50 000
	Coordination and Overhead	1 750 000			**Fixed**	1 750 000
Total						**2 300 000**
Skills Training						
	Vocational Training (Climate-Smart Agriculture)	50 per participant	30 000			1 500 000

	Renewable Energy Training	1 000 per session			300 sessions	300 000
	Water Management Practices	1 500 per module			120 sessions	180 000
	Post-Harvest Management	750 per session			300 sessions	225 000
	Leadership Training	1 000 per program			250 programs	250 000
	Digital Literacy Programs	1 000 per session			75 sessions	750 000
	Coordination and Overhead	1 000 000			**Fixed**	1 000 000
Total						**4 205 000**
ECHO Deployment				**Aprox Capacity / T.C and p/day**		
	Solar generation	300 000		500 to 750 kWh capacity p/day	**8**	2 400 000
	Solar storage	155 000		1350 kWh capacity	**8**	1 240 000
	Water Purification Systems	480 000		1000 cubic meter p/day	**8**	3 840 000

	Water storage	190 000		1000 cubic meter p/day	**8**	1 520 000
	Hydrogen Production Electrolysers	375 000		500 kWh p/day = 240 kg Hydrogen p/day	**4**	1 500 000
	Hydrogen Storage	350 000		240 kg capacity	**4**	1 400 000
	Water Treatment Plant	370 000		250 cubic meters/day	**5**	1 850 000
	Installation and maintenance	145 000			**5 years**	725 000
Total						**14 475 000**
FlexSus and Research						
	Real-Time Monitoring sensors	5 000 per system			**25 systems**	125 000
	Data Analysis and Reporting tools	10 000 per tool			**25 tools**	250 000
	Training for Local Teams	5 000 per session			**20 sessions**	100 000
	Research and Development	2 250 000			**Fixed**	2 250 000

Total						**2 725 000**
GSIA: PPP Enhancement and connected Research	Compliance Framework Development	250 000			**1 program**	250 000
	ESG Criteria and Reporting Tools	5 000 per tool			**20 tools**	100 000
	Leasing of ECHO Model Setup	1 000 000			**Fixed**	1 000 000
	Training for Stakeholders	5 000 per session			**150**	750 000
	Risk Mitigation	25 000 per package			**5 packages**	125 000
	Administration and overhead	900 000			**Fixed**	900 000
Total						**3 125 000**
Merger of Programs	Botswana HA, FAUP etc	500 000			1	500 000
Total						**500 000**

				Total SDEP	**27,330,000.00**
				Program + SDEP Total	**41,963,000.00**

GreenPro Strategic Revenue

GreenPro Africa is more than a farm—it is a national platform for agricultural transformation. By combining cutting-edge technology, renewable energy, and inclusive development, it will serve as a blueprint for scaling sustainable agribusiness across Botswana and the region.

All figures in USD millions

Category	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
Capex (Infrastructure, Greenhouses, Equipment)	127.6	43.7	5.3	101.7	0.0	0.0	0.0
Funder Arrangement Fees	11.8	0.0	0.0	0.0	0.0	0.0	0.0
Sales Revenue	0.0	30.8	136.0	259.0	260.0	266.0	266.0
Cost of Sales (COS)	0.0	3.4	9.4	9.9	10.1	11.6	11.6
Overheads incl. Community Development	16.2	35.9	52.7	67.0	58.1	60.6	61.4
Tax (5% for 5 years, 10% thereafter)	0.0	0.0	0.0	5.9	7.1	15.5	16.0

Category	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
Loan Repayments	0.0	0.0	0.0	35.7	35.7	35.7	35.7
Net Cashflow per Year	80.4	-52.3	67.9	39.4	149.0	142.0	141.0
Cumulative Net Cashflow	80.4	28.1	96.0	135.4	284.4	426.4	567.4
Loan Balance	245.0	255.0	265.0	240.0	214.0	187.0	159.0

Indicative Capital Expenditure (Capex) Breakdown for GreenPro Africa Project

Category	Estimated Allocation (USD)	Notes
Greenhouse Infrastructure (20 SMART greenhouses)	~80–90 million	Includes vertical hydroponic systems, climate control, and microclimates
Essential Oil Extraction Plant	~20–25 million	Cold extraction technology, processing, and packaging
In-Vitro Lab & Experimental Unit	~10–12 million	Tissue culture lab, R&D greenhouse, and biotech equipment
Cold Chain & Logistics Infrastructure	~15–20 million	Refrigerated storage, transport, ERP integration

Category	Estimated Allocation (USD)	Notes
Energy Infrastructure (Diesel + PV + Ice Storage)	~30–35 million	13MW diesel, 73MW PV, batteries, ice storage, biomass heating
Buildings & Facilities (LSF construction)	~15–18 million	Offices, staff housing, cafeteria, clinic, guest lodge
Water Infrastructure & Irrigation Systems	~10–12 million	Boreholes, reservoirs, recycling, and aquifer-fed irrigation
ERP & Technical Control Systems (Qmuzik, Canobi)	~5–7 million	Full integration of operations and traceability
Vehicles & Aircraft (for logistics and security)	~5–6 million	Includes 2 aircraft for export and emergency use
Community Development Trust (CDT) Setup	~5 million (initial)	10% of profits allocated annually thereafter
Contingency, Legal, and Professional Services	~10–15 million	Engineering, legal, auditing, and project management
Funder Arrangement Fees	11.8 million	As stated in the financials

Total Estimated Capex: ~USD 236 million

SECTION 3 – FEASIBILITY

3.1 Risk Management

3.1.1 Significant Risks Facing the Programme

The SFPSEI, anchored by the GreenPro Africa farm, and led by the SFPSEI CEO, is primarily a capacity development and infrastructure programme. It carries limited environmental or social risk due to its controlled, modular implementation and strong community engagement model. Risks such as time constraints, stakeholder alignment, and shifts in regional priorities (e.g., SADC or AfCFTA) will be mitigated through embedded monitoring tools, real-time ERP systems, and continuous stakeholder dialogue.

SFPSEI's governance model includes a Project Management Plan (PMP) and Steering Committees that ensure proactive risk identification and mitigation. The farm's ERP system (Qmuzik) provides real-time visibility into operations, enabling early detection and resolution of risks.

3.1.2 Environmental and Social Risks

Botswana recognizes that agriculture-based enterprises can generate environmental and social impacts. As such, SFPSEI will align with the country's Environmental Impact Assessment (EIA) regulations and SPEDU's sustainability guidelines. The GreenPro farm already incorporates circular water use, renewable energy, and organic waste recycling, minimizing its ecological footprint.

Each communal farmer supported by the project will be required to develop a localized environmental mitigation plan before establishing production assets. These plans will be guided by SFPSEI's environmental specialists and reviewed by relevant government agencies.

3.1.3 Risk Management Strategy

A comprehensive internal control framework will be established under the direct supervision of the SFPSEI CEO and the Programme Steering Committee. This includes:

- A detailed Risk Log tracking risk levels, assumptions, and mitigation strategies.
- Annual updates aligned with work planning and budgeting cycles.
- Regular briefings to the Programme Steering Committee and implementing partners.
- Transparent communication of residual risks to all stakeholders.

ENTERPRISE	NATURE OF POTENTIAL IMPACTS	POTENTIAL IMPACTS	SOURCES OR CAUSES OF THE PREDICTED IMPACTS	MITIGATION MEASURES	EFFECTS
Crop and fruit production enterprises	Negative environmental impacts	i. Deforestation	- Clearing of marginal land to increase production areas, poor farming methods	- Focus on increased yields rather than additional land	- Loss of tree cover and biodiversity - Accelerating soil erosion - Enhancing climate change by removing trees as a carbon sink to reduce carbon dioxide as a greenhouse gas
		ii. Land degradation	- Growing of crops and fruits as monocultures	- Promote multi-cropping and soil management	- Loss of soil fertility and soil biodiversity - Food diversification poor - Nutritional input low
		iii. Pollution of the environment	- Use of pesticides to achieve crop/fruit protection against pests and diseases - Crop/fruit processing wastes during value addition	- Support the use of organic fertiliser, biochar, parythm products, and other agro-ecological practices and products	- Loss of biodiversity - Crop and fruit produce contamination due to pesticide residues - Water, air and soil pollution - Poisoned food - Low nutrient value in crops

ENTERPRISE	NATURE OF POTENTIAL IMPACTS	POTENTIAL IMPACTS	SOURCES OR CAUSES OF THE PREDICTED IMPACTS	MITIGATION MEASURES	EFFECTS
		iv. Pest resistance and build-up	- Excessive and improper use of agricultural pesticides	- See above - Build awareness of the danger and impact of synthetic pesticides to human health	- Increased economic cost of production and reduced enterprise profitability - Spread of crop diseases to other areas - Poor nutritional value of food crops
		v. Waterlogging and Salinity	- Irrigated production systems	- Utilisation of improved technologies such as drip irrigation - Integration of solar water pumps	- Loss of land productivity - Low crop yield and stunted growths - Poor quality of produce - Limited cultivating times and options
All enterprises	Negative social impacts	i. Water scarcity	- High water demand and abstraction rates for aquaculture, livestock, crop and fruit production	- The Project will work with other projects focusing on water and watershed management practices	- Increases costs and time to access water for non-agricultural uses - Depleting water level - Scarcity of water availability throughout the year

ENTERPRISE	NATURE OF POTENTIAL IMPACTS	POTENTIAL IMPACTS	SOURCES OR CAUSES OF THE PREDICTED IMPACTS	MITIGATION MEASURES	EFFECTS
				- Technologies that require less water will be favoured including fruit tree varieties, which are more adaptable to local conditions	
		ii. Poor human health	- Fertiliser and Pesticide exposure during application - Consumption of food products with fertiliser and pesticide residues	- Sustainable agricultural practices including climate and environmentally smart agriculture will be part of all agronomic training	- Morbidity, loss of human life and increased healthcare costs - Labour constraints due to poisoning - Lack of Awareness of danger to human health
		i. Social disturbances	- Improved household income	- Gender awareness, education, and communications including Dimitra Clubs	- Migration - Increase in gender-based violence - Creation of islands of wealth within a region

ENTERPRISE	NATURE OF POTENTIAL IMPACTS	POTENTIAL IMPACTS	SOURCES OR CAUSES OF THE PREDICTED IMPACTS	MITIGATION MEASURES	EFFECTS
				and Household Approaches will be delivered across the Project	- Breaking up of social systems due to competition
		ii. Labour constraints	- Increased demand for labour	- Training and technical assistance provided by the prospective employers as, supported by the Project	- Shortage of labour
		iii. Spread of communicable diseases including HIV	- Increased social interaction due to increased household incomes - Increased access to diversified food	- Community education - Awareness campaigns on the impact of nutrition	- Poor human health (morbidity) - Rise in 1st world illnesses - Weakened immune system

🏛️ SECTION 4 – IMPLEMENTATION & MANAGEMENT STRUCTURE

Programme Governance

The SFPSEI programme will be overseen by the **CEO**, who will serve as the budget holder and lead operational, financial, and strategic management. The programme will be implemented in close coordination with the **Ministry of Agriculture**, **SPEDU**, and relevant SADC divisions (e.g., Climate Change, Gender, Statistics).

The Botswana programmes will be implemented by the ministry of agriculture or relevant ministry in close cooperation and coordination with SADC secretariate with oversight responsibility for the targeted countries governments. Regular technical support will be provided by other divisions of SADC including Statistics, Gender, Climate Change. As an agriculture development programme built along with the geo clustering of value chain, the programme may also work with sector wide as well as value chain umbrella bodies such as the SACAU, EAFF and AFSTA, AUDA NEPAD, and the secretariat of AFCTA as well as regional producer and processor associations. These organizations may be replaced or extended with others.

Programme Steering Committee (PSC)

As described in section 1.4.3 above, a Programme Steering Committee (PSC) or the SFPSEI covering the three components will be established by the Botswana ministry of agriculture, with participation from relevant governments, AfDB and EUSL senior officials, among others. The PSC will be established as the overall "Flagship Programme's" oversight body for all Projects under it, responsible for providing strategic direction, general policy guidance, and for approving annual budgets, work plans and progress reports for each of them. Actual mandate and membership will be determined during the inception phase in coordination with the other Flagship Programme components. In principles, the PSC shall meet semi-annually, or more often if warranted, to review progress and performance of the various Flagship Programme components.

A **Programme Steering Committee (PSC)** will be established to provide strategic direction, approve budgets, and monitor progress. Membership will include:

- Representatives from the Government of Botswana
- SPEDU and Ministry of Agriculture
- AfDB and EUSL officials
- GreenPro Africa leadership
- Regional producer and processor associations (e.g., SACAU, EAFF, AFSTA, AUDA-NEPAD)

The PSC will meet semi-annually to review performance and guide implementation.

Programme Implementation Unit (PIU)

A Programme Implementation Unit (PIU) comprised of SFPSEI Project staff at the SADC secretariat will be established under the Flagship Programme to support the PTC and PSC in order to ensure efficient and effective implementation and coordination of all the technical aspects of the Projects, led by the SFPSEI CEO or equivalent. The PIU will be responsible for the day-to-day oversight and management of the Project to ensure coherence, alignment, achievement of the Key Performance Indicators (KPIs), and delivery of the annual work plans. The PIU will meet regularly as needed. In principles, its membership will comprise of project implementation staff, drawn for each country, along with representation from select Botswanan and SADC divisions and

units. More specifically, the PIU at the secretariat will comprise an Agriculture Inputs specialist, Legal and Grants Management Specialist, Organizational Development and Capacity Building Specialist, Administrative assistant, and a Plant, Protection and Biotechnology specialist (See ***Annex 10*** for job descriptions for key staff.)

A **Programme Implementation Unit (PIU)** will be established at the GreenPro Africa farm and SPEDU regional office. It will be responsible for day-to-day coordination, technical oversight, and KPI delivery. The PIU will include:

- Agriculture Inputs Specialist
- Legal and Grants Management Specialist
- Organizational Development and Capacity Building Specialist
- Administrative Assistant
- Plant Protection and Biotechnology Specialist

These roles will be supported by GreenPro's internal teams and ERP systems, ensuring alignment, transparency, and efficiency.

Environmental and Social Screening form

PART A: General information

GENERAL PROJECT INFORMATION	
Project Name	
Estimated Cost (K)	
Project Site	
Funding Agency	
Project Objectives	
Proposed Main Project Activities	
Name of Evaluator/s	
Date of Field Appraisal	

PART B: Brief description of the proposed activities

Botswana and SADC Region's total hectarage of farming that is attributable to Smallholder stands at hundreds of thousands of Square meters. For the SFPSEI project we envisage half of the available land mass to be impact by this project. A number of agriculture production activities will take place during the implementation phase. Activities such as putting up Irrigation structures which including solar panel, irrigation pipes and other water system will entail clearing and levelling the land to the accepted levels hence a lot of trees will be cut to accommodate the changes. Other notable areas will be the construction of productive assets to spurn economic growth in the area which include construction of warehouses and other value addition centers. The construction as well as acquisition of these productive assets will have an impact on the environment therefore every beneficiary of the project will design their own environmental mitigating measures before development of the production assets.

A detailed action plan will have to be developed containing the mitigating measures for any environmental impacts according to the laws and regulations of that particular country.

PART C: Environmental and social baseline information of the site brief description

Category of Baseline Information	Brief Description
Geographical location ✗ Name of the Area (Name of the FO, District, T/A, Village) ✗ Proposed location of the project (Include a site map of at least 1:10,000 scale / or coordinates from GPS)	
Land resources ✗ Topography and Geology of the area ✗ Soils of the area ✗ Main land uses and economic activities	
Water Resources ✗ Surface water resources (e.g. rivers, lakes, etc.) quantity and quality ✗ Groundwater resources quantity and quality	
Biological resources ✗ Flora (include threatened/ endangered/ endemic species) ✗ Fauna (include threatened/ endangered/ endemic species) ✗ Sensitive habitats including protected areas e.g. national parks and forest reserves	
Climate - This is needed in flood-prone regions ✗ Temperature ✗ Rainfall	
Social ✗ Number of people potentially impacted ✗ Type and magnitude of impacts (i.e. impact on land, structures, crops, the standard of living)	

Category of Baseline Information	Brief Description
𝓧 Socio-economic overview of persons impacted	

PART D: Environmental and social screening form

NO	AREAS OF IMPACT			IMPACTS EVALUATION						POTENTIAL MITIGATION MEASURES
1.0	Is this sub-project site within and/or will it affect the following environmentally sensitive areas?			Extent or coverage (on-site, within 3-5km or beyond 5km)			Significance (Low, Medium, High)			
		Yes	No	On-site	Within 3-5 km	Beyond 5 km	Low	Medium	High	
1.1	Sensitive habitats 𝓧 National Parks and Game Reserve, 𝓧 Wet-lands; 𝓧 Areas with rare or endangered flora or fauna 𝓧 Areas with outstanding scenery/tourist site									
1.2	Productive traditional agricultural /grazing lands									
1.3	Within steep slopes/mountains with potential for erosion									
1.4	Dry tropical forests such as Brachystegia species									
1.5	Along lakes, along beaches, riverine									

1.6	Near industrial activities									
1.7	Near human settlements									
1.8	Near cultural heritage sites									
2.0 Screening Criteria for Impacts during Implementation and Operation										
Will the implementation and operation of the activity within the selected site generate the following externalities/ costs/impacts?										
2.1	Deforestation									
2.2	Soil erosion and siltation									
2.3	Siltation of watercourses									
2.4	Environmental degradation arising from obtaining construction materials									
2.5	Damage of wildlife species and habitat									
	Hazardous wastes, Asbestos, PCB's, pollution from unspent PV batteries									
	Nuisance - smell or noise									
	Incidence of flooding									
3.0 Screening Criteria for Social and Economic Impacts										
Will the construction of classrooms within the selected site generate the following socioeconomic costs/impacts?										
3.1	Loss of land/land acquisition for human									

	settlement, farming, grazing									
3.2	Loss of assets, property, houses									
3.3	Loss of livelihood									
3.4	Require a RAP									
3.5	Loss of cultural sites, graveyards, monuments									
3.6	Loss of income-generating Capacity									
3.7	Consultation (comments from Beneficiaries)									

PART E: Overall evaluation of screening excercises

The results of the screening process of the proposed activity would be either exempted or subjected to further environmental and resettlement assessments. The basis of these options is listed in the table below:

Review of Environmental Screening (OP 4.01)	Tick	Review of Resettlement Screening (OP 4.12)	Tick
1. The project is cleared. No serious impacts. (When all scores are "No" in form)		1. The project is cleared. No serious social impact. (Where scores are all "No", or "few" in form)	
2. There is a need for further assessment. (when some scores are "Yes, High" in form)		2. There is a need for resettlement/compensation. (When some scores are "Yes, High" in the form)	
Endorsement by the Environmental Country Officer		Endorsement by the Director of Planning and Development	
Name:		Name:	
Signature: Date:		Signature: Date:	

ENVIRONMENTAL & SOCIAL MANAGEMENT MONITORING PLAN

No	Project activity	Expected impacts	Proposed mitigations/ mitigation activities	Indicators	Target	Responsibility for Implementation	Estimated Cost

STAFF REQUIREMENTS

NEW SFPSEI STAFF

Senior Inputs and Biotechnology Officer (SIB Officer)

Monitoring and Evaluation Officer (M&E Officer)

Legal and Contracts Officer (GD Officer)

Senior Administrative and Human Resource Officer (SAHR Officer)

SFPSEI Chief Executive Officer

SFPSEI HA Regional Coordinator

SFPSEI Agri-Business and Policy Advisor

SFPSEI Finance and Planning Officer

SFPSEI Knowledge, Events, Communication and Programme Officer.

EUSL SFPSEI STAFF

Programme Development Manager

FlexSus and Technical Manager

Visual Design Manager

Implementation Manager