



# Transforming Rural Agriculture: Organising Farmers, Leveraging Technology

**Global Leaders Programme 2024**  
Hong Kong & Cambodia  
Executive Summary





## Global Leaders Programme

The Global Leaders Programme (GLP) is GIFT's flagship experiential leadership development programme. It is designed for high potential senior executives from leading global organisations to think critically about the drivers of change in the 21st century and to develop new business models that address the defining challenges of our times.

During this GLP, a group of 21 participants representing 10 countries convened in Hong Kong for blended classroom sessions. They then travelled to Phnom Penh, Cambodia, and were joined by 4 additional participants from the local project partner, Soma Group, for stakeholder meetings, site visits, and business planning sessions.

The highlights of their proposal were presented at GIFT's Public Forum on 13th September 2024 in Phnom Penh, which was attended by over 130 attendees that included H.E. Krasna Cham, CEO of Soma Group, H.E. Sok Puthyvuth, Secretary of State at the Ministry of Posts and Telecommunications, H.E. Loek Sothea, Undersecretary of State for the Ministry of Agriculture, Forestry and Fisheries, representatives from the Ministry of Industry, Sciences, Technology & Innovation and the local media.

GIFT would like to thank everyone involved who put in their valuable time and efforts to make this possible. Special thanks to Soma Group for partnering with us for this programme.





# Project Background



## CAMBODIA

Officially the Kingdom of Cambodia, Cambodia occupies 181,035 square kilometers on the southwestern Indochina Peninsula, with 20% of its land used for agriculture.



## CASSAVA

Cassava is a carbohydrate-rich crop with a wide range of uses, which has resulted in strong global demand growth leading to it being the world's **5th** most important crop by output.



## CASSAVA IN CAMBODIA

Cassava is a key agricultural commodity in Cambodia, where it ranks second only to rice in terms of production and consumption.

Cassava cultivation practices follow guidelines influenced by neighbouring countries like Thailand. Planting occurs at the start of the dry or early wet season, involving stem selection, land preparation, cultivation, pest control, and harvesting.

The Cambodian government implemented a National Cassava Policy in 2020 to increase cassava production and quality, in addition to encouraging local processing of cassava into higher value goods for export.



## RATIONALE FOR INCREASING CASSAVA PRODUCTION IN CAMBODIA

- **Market Alignment:** Increasing exports and expanding into high-value processed products.
- **Competitive Advantage:** Cambodia's climate is well-suited for cassava and has lower production costs.
- **Economic and Social Benefits:** Contributing to rural development and attraction of foreign investment into the country.



## CHALLENGES IN CASSAVA VALUE CHAIN

- Lack of infrastructure
- Insufficient labour force
- Poor soils and underutilised lands
- Difficulty in obtaining high quality planting material
- Lack of suitable machinery
- Susceptibility to climate change
- Lack of supplementary water sources
- Risk of insect and disease problems

# Project Scope



## Improving the Livelihood of Farmers in Cambodia Through Increasing Productivity

### THE KEY OBJECTIVES FOR THIS PROJECT ARE AS FOLLOWS:

- Develop a **sustainable business plan** for **Soma Group** to consider to improve yield and profitability of cassava farmers with technology.
- **Create partnerships** with relevant stakeholders, institutes, and government to enhance farmer welfare by improving the agricultural sector through education, policies, partnerships, research and technology development.
- Define a **scalable and inclusive value chain** to ensure financial viability and a positive social impact of the business
- The proposed solution has **potential to be replicated** to other farms and crops.

### METHODOLOGY:

- Site visits and key stakeholder meetings to explore and gain deeper insights on the agricultural sector of cassava farming, including the challenges of smallholder-farmers.
- Information gathering and analysis.

### INSIGHTS FROM THE FOLLOWING KEY STAKEHOLDERS

- Sal Sopheapeanich Cassava Farm
- Kampong Thom Local Farming Community
- Collection point owner
- Commune chief and local government commune officials of Sala Visai, Prasat Balank District Community
- C.A.D.I. Mega Farm
- Royal University of Agriculture (RUA)
- Ministry of Agriculture, Forestry and Fisheries (MAFF)
- Cambodia Development & Resource Institution (CDRI)
- Cassava Federation



### Project Partner: Soma Group Co. Ltd.

Soma Group Co. Ltd. was founded in 2007 and is one of Cambodia's leading local conglomerates, comprised of 11 subsidiaries operating in 6 industries, employing more than 2,500 staff countrywide.

Soma Group started as, and remains to be, a committed employer in the agriculture sector, a key driver of Cambodia's current and future economy. Soma Group aims to make significant advancements and a positive impact on farming practices in the agricultural sector and food security.

Soma Group currently have a 3,000-hectare pilot cassava plantation (Sal Sopheapeanich), in Kampong Thom close to the border with Preah Vihear.



# Proposed Solution

A new subsidiary created by Soma Group, **Soma Domnam**, will partner with communes and farmers organised as cooperatives. The company will help to incorporate technological advances into traditional farming practices to create a more sustainable agricultural sector for Cambodia.



## Overview

The new venture, Soma Domnam ("Domnam" meaning "crop" in Khmer), aims to bridge the gap between traditional farming practices and modern agricultural technology by creating a comprehensive solution that enhances production, value addition, and market competitiveness.

The company will foster strong relationships with key partners, including government agencies, universities, development organisations, and NGOs. The Relations & Partnerships Unit will be responsible for nurturing these relationships, securing funding, and exploring opportunities for infrastructure development, particularly for irrigation systems and logistical support.

While the company will initially focus on cassava production, the business model is designed to scale to other crops, enhancing the agricultural landscape in Cambodia more broadly. By establishing a replicable model for cooperative farming, advanced technology adoption, and data-driven decision-making, the company aims to drive long-term economic growth, empower rural communities, and contribute to Cambodia's food security and export potential.





# Business Model and Services

The proposed services for the new Soma Domnam venture are summarised below.

## Subleasing of Equipment and Sale of High-Quality Inputs

Provide cooperatives with access to modern farming equipment through subleasing agreements, and to high-quality agricultural inputs, such as fertilisers and seeds.

## Post-harvest Processing and Storage Facilities

Establish a warehouse and storage facility that will semi-process cassava by drying and cutting it into chips, then the dried material can be stored until export.

## Farmer Cooperatives and Dividends

Cooperatives will be given training in sustainable farming practices through technical programs and the cooperatives in the company's ownership will be given a 30% equity stake.

## Collection of Real-Time Data

Collect and share real-time agricultural data with the government to align its activities with national agricultural strategies.

## Digital Platform

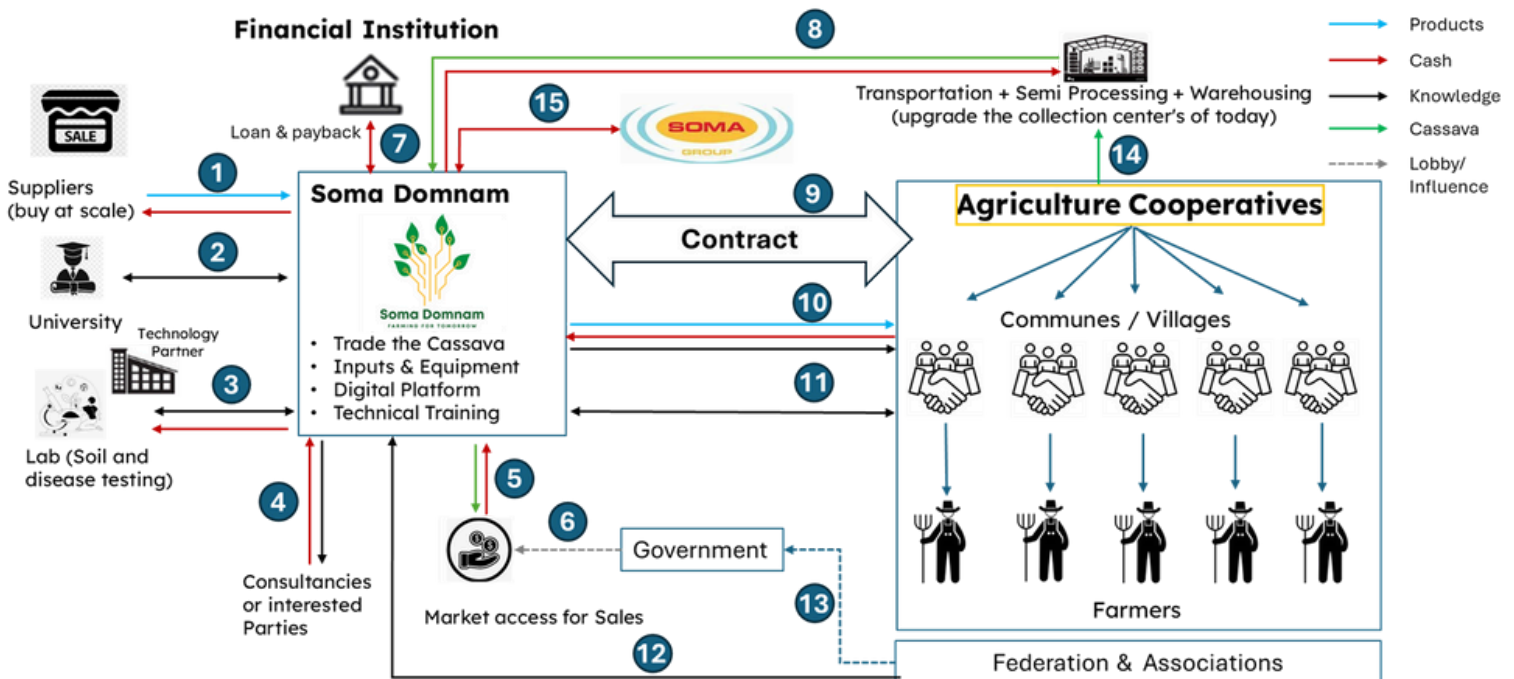
Provide insights into crop performance, soil fertility, weather conditions and market trends through the digital platform, with real-time data collected from the cooperatives.

## Value Proposition

- Maximise the value of cassava
- Guarantee the market with a fair price for farmers
- Improved productivity
- Enable access to the best quality inputs, technology and equipment
- Socio-economic empowerment
- Implementing data-driven agricultural practices (precision agriculture)
- Shared growth and investment for farmers and communes
- Capacity building and knowledge transfer
- Strengthening governmental collaboration and trust
- Introduce more sustainable farming practices



## Business Model Flow





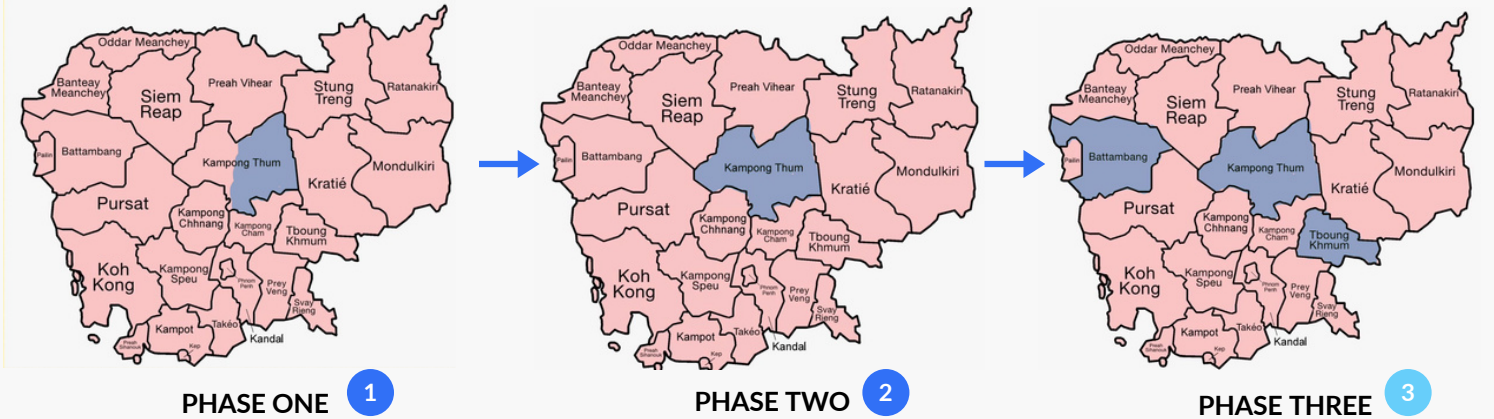
# Implementation Plan and Financials

The business plan will be implemented starting with a pilot project on the Sal Sopheapreanich cassava farm, followed by a 3-phase rollout.

## PILOT PHASE P

For the pilot phase, Soma Domnam will start with 2,000 hectares of the Sal Sopheapreanich cassava farm in Year 0. The pilot project is carried out for these purposes:

- Gain trust from the communes
- Allow course correction
- Gain yield improvements through good agricultural practice



### PHASE ONE 1

Following the successful implementation of the pilot phase, Phase one will commence. This will target 4 districts in Kampong Thom (Prasat Balank, Prasat Sambo, Sandan and Santouk). Estimation of 50% participations will lead to the involvement of 380 villages.

### PHASE TWO 2

Targeting the entire Kampong Thom province, with an expected participation of 60%, covering 37,200 hectors.

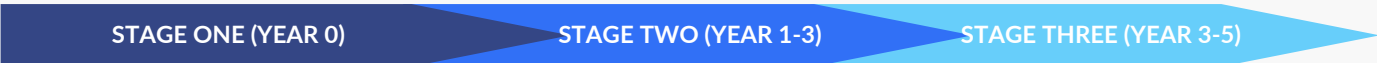
### PHASE THREE 3

Targeting Battambang and Tbong Khmum provinces. Expected participation of 75% to cover 182,000 hectors.

## Funding Strategy

The financial calculations and key assumptions are that net cash is reinvested to prioritise minimisation of external loans.

A conservative 3-stage funding model is proposed:



P The pilot phase will be funded entirely by Soma Group, with an estimated initial investment of US\$5.7 million. This will cover capital expenditure including software system development, warehouse and irrigation system and initial working capital requirement.

1  
2 Phases 1 and 2 rollout will be funded 50% by Soma Group and 50% by external investors and loans.

3 Phase 3 rollout will be funded through reinvestment of returns from phases 1 and 2, plus external loans.

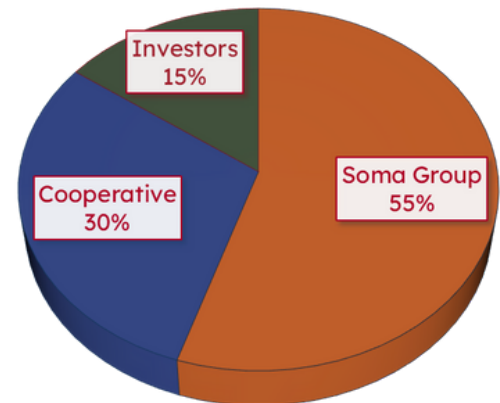
Note: The detailed financial modelling can be found in the full business report.

## Shareholding Structure of the Company

The suggested shareholder structure is dependent upon details to be negotiated.

The proposed structure:

- Soma Group 55%: Soma Group holds the majority stake and will oversee the key aspects of the business.
- Cooperatives 30%: The newly formed agricultural cooperatives will own 30% of the company as sweat equity, giving farmers a meaningful stake in the business and fostering a sense of ownership and belonging.
- External Investors 15%: Investors will own the remaining shares, bringing in strategic value beyond capital and will have advisory roles and voting rights.





# Policy & Partnerships

## Enabling Policies

Enabling Policies are critical to the increase in the productivity of Cassava by leveraging **Technology and Infrastructure**, **Sustainable Farming Education**, and **Access to Credit**. The following Policy Recommendations will enable Soma Domnam and others in the agriculture sector to work alongside the government and other key stakeholders to improve farmer welfare.



### Irrigation

A policy to establish reservoirs and install efficient irrigation systems is proposed, jointly funded by Soma Domnam and the government. This will allow multi-cropping all year around and improve climate resilience of the farms.



### Finance & Economy

Introduction of a **Minimum Support Price (MSP)** is proposed to ensure that farmers receive a guaranteed price, protecting them from market fluctuation.

**Tax breaks and incentives** are also proposed to be offered to financial institutions investing in agricultural projects and to organisations and/or farmers purchasing smart technology for use on their farms.

Creation of a **financial platform** for farmers to provide access to real-time market prices, loan products and insurance is also proposed, in collaboration with the private sector to give farmers access to credit.



### Sustainability

Sustainability policies aim to promote the adoption of more sustainable farming practices through incentives, such as giving **subsidies** for farmers purchasing organic fertilisers or herbicides as alternatives to chemical inputs, and **banning destructive practices** such as opening burning of crops and waste. Initiatives to **educate farmers** on more sustainable farming practices and know how is proposed, through collaboration with knowledge partners, communes and Soma Domnam.

## Guiding Principles



To upgrade infrastructure to enable sustainable growth, climate resilience and enhance agricultural productivity.



To ensure farmer livelihoods through guaranteed pricing.



To offer financial incentives to promote smart farming and sustainable farming practices.



Promote environmentally responsible farming practices through education and knowledge transfer initiatives.



To reduce the use of chemical inputs such as pesticides and fertilisers, opting instead for environmentally friendly alternatives.



Increase awareness among farmers on sustainable farming and climate resilience to inspire mindset shifts and behavioural change.

## Recommended Partnerships

Through strategic partnerships, Soma Domnam aims to work alongside the government and other key stakeholders to improve farmer welfare by leveraging technology, education and data-driven farming.



- Partner with **financial institutions** to improve access to credit for farmers and communes.
- Partner with **insurance companies** to provide crop insurance to agricultural cooperatives to improve social security for the farmers.
- Collaborate with the **government** to finance infrastructure development and R&D for improved farming productivity.



- Partner with **agritech and R&D companies** to develop a digital platform with precision agriculture capabilities.
- Partner with the **government, agricultural cooperatives/federations** to promote the use of agricultural technology and introduce smart farming techniques.
- Partner with the **government and technology companies** to create a Geographical Information System to enhance productivity.



- Partner with **financial institutions** to create a digital ecosystem that allows farmers access to Market Information.
- Partner with **farmer organisations** to facilitate information dissemination, knowledge sharing and training/education on better farming practices.
- Partner with **knowledge partners** to provide disease management, soil health analysis and weather information to farmers.



# Socioeconomic and Environmental Benefits

## Key Targets



Increase average household income by 20% in Phase One, and up to 50% by Year 5, through increased sales prices and dividends.



Train 15,000 farmers in sustainable farming practices in Phase One.



Increase food production by up to 65% based on today's average.

## Benefits to Farmers and the Commune

- **Financial:** Cost benefits owing to bulk purchase of input materials and increased income due to higher yield of cassava and improved quality.
- **Knowledge:** Training in collaboration with knowledge partners and government initiatives to improve the skill and knowledge levels of farmers on sustainable farming practices.
- **Health:** Reduced use of chemical inputs will decrease the risks of hazardous chemicals being introduced to the population. The use of agricultural technology such as drones for precise pesticide application, will also reduce pesticide use and avoid direct contact of the pesticide with farmers.
- **Social:** Formation of cooperatives will aid investment into community development such as infrastructure, healthcare, access to procurement, market, finance and education.

## Benefits to the Environment

- Soma Domnam's data-driven approach will reduce excess use of pesticide, by giving precise information on the amount of pesticide needed.
- The use of data, technology and knowledge transfer will also promote sustainable agricultural practices, ensuring that the land and environment is maintained for future use.
- Water conservation initiatives and improved infrastructure will encourage judicious utilisation of water.
- The banning of open burning and education initiatives to shift farmer mindsets towards more conserving the environment will reduce air pollution and other environmental impacts of crop burning.



## Measure of Impact during Pilot Project

In order to maintain the integrity and sustainability of the partnership, the socioeconomic and environmental impacts will be measured based on diverse indicators.



### Environmental Impact

The quality of the ground and lake water will be monitored to ensure that harmful chemicals from chemical inputs are reduced.



### Farmer Skill

Soma Domnam will report on training initiatives, the number of farmers that have participated and any outcomes from the training sessions.



### Farmer Income

Cooperatives will produce financial reports with the earnings of the cooperatives and yield per hectare to ensure that the yield and income are increasing.



### Market Stability

Soma Domnam's digital app will be used to track market fluctuations.



### Soil Quality

Soil analysis will be conducted to ensure that the nutrients in the soil are not depleted.



Regular monitoring will ensure long term sustainability and success of Soma Domnam's business.





## Empowering Farmers through Cooperatives, Technology and Data

This report is a summation of the cohort's business model to improve farmer livelihoods, following their fieldwork in Kampong Thom and Preah Vihear, Cambodia.

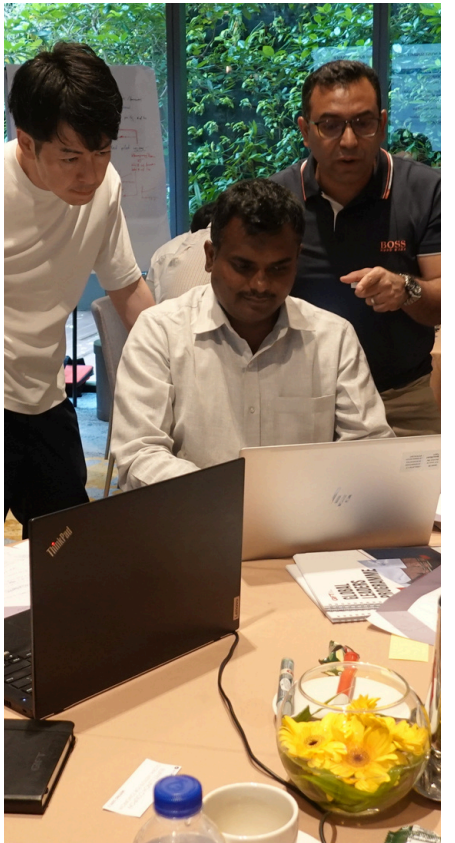
Through emphasis on technology incorporation, data collection, and the coordination and education of farmers, the business plan seeks to enhance the livelihoods and welfare of every Cambodian farmer.



It is hoped that this business model can be replicated for other crops in Cambodia and serve as a model framework for other countries.









# Tomorrow Matters.

If you would like to speak about the report or explore GIFT's public programmes, please write to us:

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You can download the full report. Link [here](#)  
or scan the QR code below.



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