

CASE STUDY 2

INTRODUCTION

GH Estates Pvt. Ltd. is one of Sri Lanka's large tea plantation companies, operating across multiple highland and lowland zones with a mix of CTC and orthodox tea production. In response to mounting operational inefficiencies, declining margins, and increased input costs, GH launched a company-wide **Cost Rationalization and Operational Efficiency Study**. The initiative aimed to identify structural bottlenecks, estate-level inefficiencies, and areas of best practice replication across plucking, irrigation, processing, and logistics.

The review was carried out across selected estate clusters with the objective of aligning cost structures with yield efficiency, enhancing quality through better field-to-factory control, and improving governance.

Key operational areas such as green leaf handling, gas usage in CTC plants, manpower productivity, and estate-level decision-making were assessed in depth.

This case study presents a consolidated view of the audit findings, including **field practices, factory utilization, logistics planning, and compliance frameworks**, with a focus on improving the overall cost-per-kilo of made tea. With Sri Lanka's tea industry facing both **global price pressures and climate uncertainties**, the study provides actionable insights on how a traditional plantation model can evolve through **data-driven decisions, structured governance, and estate-level innovation**.

BUSINESS MODEL AND CORE OPERATIONS

GH Estates Pvt. Ltd. operates a vertically integrated tea production model, covering the entire value chain from plantation to processing to dispatch. Spread across high-grown, mid-grown, and low-grown regions in Sri Lanka, the company manages multiple estates with varying acreage, yield profiles, and rainfall patterns. Each estate is managed by an estate superintendent and divided into divisions overseen by field staff responsible for crop planning, manpower deployment, and basic operational controls.

The core field operations involve **manual tea plucking**, supported by seasonal labor, with timing and frequency adjusted based on leaf maturity, rainfall, and bush type. The plucked green leaf is transported to nearby factories either within the estate or in adjoining units. These factories typically follow **CTC (Crush-Tear-Curl) or Orthodox processing**, depending on the estate type and market demand. Leaf quality is critical, as any delay in transport or inconsistent leaf standards impacts liquor quality, affecting sale price at auction or export channel.

Post-processing, the made tea is stored and dispatched via third-party logistics or cooperative warehousing models. Transportation is often centralized, with bulk dispatches moving from estate clusters to Colombo or other auction centres.

The company uses both **estate-level standalone operations** and **clustered models** where multiple estates share resources like gas-fired drying lines, with cost-sharing arrangements. However, in the absence of centralized route planning or coordinated dispatch logic, logistics costs have remained high. This structure, while comprehensive, is also ripe for optimization, particularly in areas such as fuel use, trip frequency, and plucking-to-processing lag time.

COMPANY BACKGROUND

GH Estates Pvt. Ltd. is a privately held tea plantation company headquartered in Sri Lanka, with ownership distributed between a group of long-standing agro-investment firms and a regional sustainability-focused private equity fund. The company was formed through the

consolidation of multiple mid-sized estates across the central and southern highlands of Sri Lanka, bringing them under a unified operational and governance structure.

The estate network is divided into three operational zones—**Highland, Midland, and Lowland Clusters**—each characterized by distinct agro-climatic conditions. These zones differ in elevation, rainfall patterns, plucking cycles, and bush types, impacting both yield and processing strategies. While the **Highland estates** focus on Orthodox teas with high export value, the **Midland and Lowland clusters** predominantly produce CTC teas for both domestic and international markets.

Tea cultivation in Sri Lanka is heavily seasonal, with **flush periods** concentrated during monsoon transitions and lean periods affecting productivity and labor planning. GH's operations are structured to adapt to these seasonal fluctuations, balancing workforce allocation, factory loads, and dispatch schedules accordingly.

Over the years, the company has aimed to standardize estate practices and integrate sustainability into its core plantation model. However, with legacy systems, decentralized management, and rising input costs, a focused cost rationalization study was commissioned to align its operations with long-term profitability.

STRATEGIC DECISION-MAKING

GH Estates initiated a strategic restructuring exercise aimed at standardizing operational efficiency across its diverse tea estate clusters. The decision was driven by rising costs, inconsistent estate-level performance, and the need to adopt best practices from high-performing units. The company realized that without a structured approach to cost control and process alignment, profitability across many estates would remain vulnerable to seasonal yield fluctuations and market price volatility.

The first strategic step was conducting a **zone-wise estate performance benchmarking**, where estates were ranked based on key cost indicators—cost per kg of made tea, labor productivity, gas consumption per batch, and downtime in field-to-factory transport. This analysis revealed that a small number of estates consistently outperformed others due to tighter supervision, plucking discipline, better gas dryer control, and streamlined irrigation methods. These estates became **reference models** for designing best-practice templates to be implemented across underperforming zones.

To facilitate this rollout, a **"Cluster Rationalization Task Force"** was formed with representation from field, factory, and finance functions. They were tasked with redesigning trip planning, evaluating gas conversion ratios, and introducing route consolidation for inter-estate logistics. Estates with duplicate or underutilized assets—such as gas burners, tractors, or field rest rooms—were flagged for shared usage or phase-out.

Importantly, GH chose a **bottom-up approach**—empowering estate-level managers to recommend practical changes based on field realities, while central leadership provided guidance and monitoring. This balance of strategic oversight with grassroots involvement has laid the foundation for sustainable operational transformation.

CHALLENGES AND RESPONSES

GH Estates faced several estate-specific operational challenges that significantly impacted cost efficiency and output quality. Among the most pressing issues were **plucking delays, fuel inefficiencies, irrigation mismanagement, and lack of coordination in inter-estate logistics**. These inefficiencies, although estate-specific, collectively resulted in a higher cost per kg of made tea and quality inconsistencies across batches.

In one cluster, it was observed that plucking cycles extended up to 12 days, whereas high-performing estates maintained 6–7 day cycles. Delayed plucking led to coarse leaf quality, lower out-turn ratios, and higher rejections at the factory level. To counter this, GH rolled out a **"7-Day Pluck Discipline"** guideline along with a supervisory training program to enforce tighter control.

Gas usage in CTC factories was another area of concern. Factories with **manual dampers and poorly insulated pipelines** had up to 20% higher fuel consumption per MT. Retrofitting these facilities with **digital temperature monitors** and upgrading insulation helped standardize gas-to-output ratios, leading to measurable cost savings.

In irrigation, some estates were operating outdated sprinkler systems with poor reach, while others had abandoned drip infrastructure due to maintenance neglect. GH initiated a **zonal irrigation overhaul**, reallocating idle pumps and investing in low-cost drip repair kits sourced centrally.

Logistics inefficiencies were addressed by revisiting **inter-estate dispatch routes**, consolidating trips, and rotating vehicles between estates with staggered plucking schedules. This not only reduced diesel wastage but also minimized idle hours for drivers.

These countermeasures were crucial steps toward harmonizing costs and unlocking estate-level productivity.

CURRENT OPERATIONAL POSITION

Following the cost rationalization and estate benchmarking exercise, GH Estates Pvt. Ltd. has begun to witness early signs of operational stabilization and productivity improvement. Across its three estate zones, notable enhancements have been made in field operations, processing efficiency, and logistics planning.

One of the most impactful changes was the **implementation of weekly plucking cycles**. Over 60% of estates now maintain a 6–7 day schedule, resulting in improved leaf quality, higher yield, and a reduction in wastage. The average **green leaf-to-made tea conversion efficiency** improved from 21.8% to 23.5% in key estates, increasing total output without proportional increase in labor hours.

Gas consumption in factories has also become more consistent. Estates that adopted **thermo-controlled dryers** and improved fuel line insulation reported a **15–18% drop in gas cost per batch**, while batch output consistency improved. This contributed directly to reduced cost-per-kg of made tea by 4–6 (LKR equivalent), particularly in the CTC-heavy lowland estates.

From a logistics standpoint, vehicle utilization has improved due to **route clustering and shared vehicle usage** across adjoining estates. Idle truck hours dropped by 22%, and fuel costs were optimized by clubbing dispatch trips, especially during peak plucking seasons.

Overall, while some estates are still transitioning, GH now operates at a more **standardized cost baseline**, with key performance metrics being monitored monthly. These changes have not only improved financial control but also enhanced operational discipline and estate-level accountability.

COST & PRODUCTIVITY OBSERVATIONS

The cost rationalization exercise at GH Estates Pvt. Ltd. uncovered several key insights into estate-level productivity drivers. Among the most significant were variances in **gas consumption, plucking efficiency, and irrigation management**, all of which directly influenced the cost per kilogram of made tea.

In factory operations, **gas consumption** emerged as a high-impact cost area. Estates using manual damper controls and older burners showed a **20–25% higher cost per batch** compared to those with modern thermostatic controls. On average, well-performing estates recorded **gas consumption of 0.68 kg per kg of made tea**, while lagging estates consumed as high as 0.85–0.9 kg/kg. These differences translated to a 6–8 (LKR equivalent) per kg cost impact in the final product.

In field operations, **plucking efficiency** varied due to gaps in cycle adherence, labor allocation, and supervisory practices. Estates with better pluck discipline achieved **400–425 kg of green leaf per plucker per month**, compared to 280–300 kg in poorly managed units. This 35% variance created ripple effects on made tea volume, quality, and labor cost per kg.

Irrigation inefficiencies were another source of hidden cost. Some estates with functioning sprinkler and drip systems failed to maintain uniform coverage, leading to uneven bush health. Others had idle pumps or mismatched layouts. Estates that optimized irrigation reported a **15–18% increase in bush yield per hectare**, showing a direct link between water management and productivity.

These findings reinforced the need for **data-backed cost tracking**, targeted estate interventions, and standard operating practices across zones.

GOVERNANCE AND COMPLIANCE

During the estate-level review, GH Estates identified **critical governance gaps** that were contributing to operational leakage and cost overruns. Many of these were rooted in inconsistent record-keeping, poor cross-verification mechanisms, and the absence of a unified compliance framework across estate clusters.

One major issue was **plucking record variance**. In several estates, the daily plucking logs did not reconcile with green leaf intake at the factory. This pointed to a lack of robust gate pass systems and leaf weighing protocols. In contrast, top-performing estates used **weighbridge-linked tracking sheets** and daily plucker-level dashboards, ensuring real-time visibility and labor accountability.

Factory controls also showed disparity. While some units had clear **SOPs for gas usage, shift logs, and dryer settings**, others lacked documentation entirely, leaving room for operational discretion and inflated resource use. This inconsistency led to cost variance as high as **3–5 per kg of made tea** between comparable estates.

Additionally, **irrigation pump usage logs, fuel vouchers, and trip dispatch records** were often maintained manually, with little oversight. Estates that implemented **digital logbooks and QR-code-based driver tracking** achieved improved fuel reconciliation and reduced misuse.

To address this, GH launched a **"Controls Harmonization Program"**, aiming to align all estates under a standard set of procedures for field, factory, and transport activities. Training modules on compliance reporting, internal audit walkthroughs, and KPI-linked estate grading were introduced.

The company recognizes that strong estate-level governance is not only a compliance requirement but a **strategic enabler** of sustained cost leadership and investor confidence.

STRATEGIC FINANCIAL & COST MANAGEMENT ANALYSIS

GH Estates Pvt. Ltd. undertook a detailed **spend analysis** across its estate operations to identify high-impact cost drivers and asset utilization gaps. The review revealed that while labor and fuel formed predictable cost blocks, significant leakages stemmed from

underutilized estate assets, untracked diesel consumption, and inconsistent procurement practices for inputs like gas, fertilizers, and irrigation spares.

At the factory level, **gas and electricity usage per kg of made tea** emerged as a key metric for cost benchmarking. Well-performing estates operated with a gas cost of 6–8 per kg, while poorly monitored units touched 10–12, largely due to burner inefficiencies and lack of batch-size alignment. These variations were mapped using **estate-level energy dashboards**, introduced as part of the turnaround project.

Transport costs, particularly inter-estate movements, were another spend hotspot. Vehicles ran partially loaded or made repeated trips due to poor route planning. By clubbing dispatches and rotating vehicles among estates, diesel costs per MT fell by 15–20% in pilot clusters. A **central fleet log with trip-wise costing** was launched to ensure real-time tracking.

In terms of asset deployment, estates with idle irrigation pumps, old vehicles, and redundant factory equipment were flagged for rationalization. GH initiated a **cluster-level asset pooling strategy**—sharing underused resources like tractors, pump sets, and dryers—to maximize utilization and reduce Capex duplication.

This financial lens helped GH shift from a **reactive cost monitoring model to a proactive, data-led cost management culture**, ensuring long-term operational viability.

FORWARD ACTION PLAN

GH Estates Pvt. Ltd. has laid out a structured forward action plan to embed cost discipline, operational consistency, and governance excellence across its tea estate operations. Based on the findings of the cost rationalization and productivity study, the company's immediate priorities include **rolling out cluster-wise Standard Operating Procedures (SOPs)** covering field plucking, factory fuel usage, and irrigation scheduling.

A key initiative is the creation of a **centralized Estate Analytics Dashboard**, which will track plucking cycles, green leaf yield, gas consumption, and per kg production cost in real-time. This tool will empower estate managers with performance insights and support data-driven interventions.

In parallel, GH plans to implement a **training calendar** for supervisors, focusing on pluck discipline, transport cost optimization, and quality control protocols. Pilot projects for **shared asset pools** and **seasonal route-clubbing logistics models** are also underway.

From a governance standpoint, estate-level compliance reviews will be made quarterly, with special checks on fuel logs and labor cost records.

The overall goal is to **create a lean, accountable, and replicable estate operating model**, enhancing margins while maintaining GH's reputation as a responsible, high-quality tea producer.
