

TEA DIALOGUE

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Ministry of Plantation and Community Infrastructure



PLANTATION HOUSING IN SRI LANKA: FROM
COLONIAL BARRACKS TO NATIONAL
RESPONSIBILITY

SARNIA ESTATE – A TIMELESS LEGACY OF
BEAUTY AND HERITAGE

LEOPARDS, TEA AND LANDSCAPES:
STORIES FROM SRI LANKA'S HIGHLANDS

THIGH-DENSITY MANGO CULTIVATION IN
UNCULTIVATED REGIONAL PLANTATION
LANDS

REDUCING UNDERNUTRITION IN EARLY
CHILDHOOD

PLANTING THE FUTURE:
HOW DIGITALIZATION AI CAN TRANSFORM
SRI LANKA'S PLANTATIONS



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TEA DIALOGUE

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Designed by
Jayanath Gamage

Plantation Housing in Sri Lanka: From Colonial Barracks to National Responsibility

Continually 1st Quarter

Slavery in Ceylon

Though the British abolished slavery in 1833, they replaced it with “legalized bondage.” Workers were bound by contracts, debts, and housing tied to employment. The line system was slavery by another name a system of captive labour disguised as free employment. This has to be discussed further and Housing reforms cannot be understood without confronting this history. The line rooms were not a failure of design, but a deliberate architecture of control. They denied sanitation, light, privacy, and dignity because they were never meant to empower workers only to bind them.

To move forward, Sri Lanka must acknowledge that plantation housing is not just about infrastructure. **It is about dismantling a system of bondage that has lasted for centuries.**

It is about dismantling a system of bondage that has lasted for centuries.

- **Plantation Economy and Indentured Labour**
- **19th century plantations:** Coffee, tea, and rubber estates expanded under British rule.
- **Imported labour:** Large numbers of **South Indian Tamils** were brought under indenture contracts, forming the **Plantation Tamil community**.
- **Conditions:** Workers faced debt bondage, **poor housing**, restricted mobility, and harsh discipline echoing slavery’s coercive structures.
- **Continuity:** The shift from slavery to indenture shows colonial adaptation: coercion persisted under new legal frameworks.



L.R. PERERA

Historical Continuity and Legacy

Slavery — Bonded labour — Indentured plantation work:

A clear trajectory of coercion shaped Ceylon’s labour systems.

Forgotten history: Despite its significance, slavery in Sri Lanka has largely vanished from collective memory among Sinhalese and Tamil communities.

Modern impact: Plantation Tamil communities remain marginalized, a legacy of colonial labour exploitation.

For hundreds of years, the island of Sri Lanka was a crucial stopover for people and goods in the Indian Ocean. For the Dutch East India Company, it was also a crossroads in the Indian Ocean slave trade. Slavery was present in multiple forms in Sri Lanka then Ceylon when the British conquered the island in the late eighteenth century and began to gradually abolish slavery.

Yet the continued presence of enslaved people in Sri Lanka in the nineteenth century has practically vanished from collective memory in both the Sinhalese and Tamil communities. Wickramasinghe explores the **hidden histories of slavery and servitude** in Sri Lanka during the colonial period, focusing on everyday practices rather than just legal frameworks. The book highlights how **domestic servitude, bonded labour, and caste-linked hierarchies** shaped social relations in the island. It emphasizes **resistance and agency**, showing how enslaved and servile individuals negotiated, resisted, and sometimes subverted colonial power structures. *Slave in a palanquin*: captures the paradox of visibility and invisibility: servants were physically present in elite spaces but socially erased from historical narratives.

Key Sources

- Carter, M & Wickramasinghe, N 2018, Forcing the archive: Involuntary migrants 'of Ceylon' in the Indian Ocean World of the 18–19th centuries, *South Asian History and Culture*, vol. 9, no. 2, pp. 194–206.
- Wickramasinghe, N 2020, *Slave in a Palanquin: Colonial Servitude and Resistance in Sri Lanka*, Columbia University Press.

Colonial Legacies and Line Rooms

The origins of estate housing lie in the colonial era, when South Indian labourers were recruited to work on plantations. They were housed in “line rooms,” barrack-style dwellings, either single or double barracks lines, built to maximize control rather than foster community. These structures were stark, cramped, and uniform, designed to keep workers captive to the estate system.

The kangany, or head recruiter, was granted special privileges: two line rooms and extra land, enabling him to command authority over the labourers he brought from India.

This arrangement entrenched hierarchies and reinforced caste-linked divisions. While official records often downplay the coercive strategies used to recruit and retain workers, the lived experience of estate communities reveals the authoritarian management styles that defined the era.

Decades later, the physical and social legacies of these colonial arrangements remain. Government-funded housing programmes have struggled to mobilize estate communities not only because of structural inadequacies but also due to hidden divisions rooted in caste and occupational hierarchies. Housing interventions that fail to address these social realities risk reproducing inequality rather than dismantling it.

A Head Kangany in a Sri Lankan estate was historically the chief labour recruiter and supervisor, acting as the intermediary between estate management and workers. He held significant authority over labourers, managed recruitment from South India, oversaw work, and often controlled workers through debt and wage deductions.

- Fixed tense consistency and grammatical slips.
- Clarified sentences for readability and flow.
- Removed redundancies while keeping emphasis on hierarchy, coercion, and dignity.

The Kangani System: Colonial Labour Recruitment and Judicial Scrutiny

An extract from a 1911 case illustrates the judicial stance on the kangani system. Counsel for the respondent was unable to cite any precedent in the long series of planting cases where judicial notice had been taken of the alleged custom. The record contained no evidence of such a custom having the force of law.

As Chief Justice Lascelles observed, the alleged custom was manifestly unreasonable: the proprietor had no control over advances made by the head kangani to sub-kanganis, and could not equitably be held liable when those advances exceeded the head kangani's debt to him. The first claim was therefore bad in law and failed. Since the second claim depended on the first, and the third had been abandoned, the appeal was allowed and the action dismissed with costs both in the lower court and on appeal (Lascelles CJ and Middleton J, May 18, 1911).

Origins and Operation of the Kangani System

The kangani system was one of the most significant labour recruitment mechanisms in Southeast Asia under British colonial rule, operating from the eighteenth century into the early twentieth century. It was particularly prevalent in Myanmar, Malaysia, and Sri Lanka, where plantation economies required a steady supply of workers.

While indentured servitude was widespread during this period, the kangani system gained prominence in the late nineteenth century because it relied on informal social networks rather than rigid legal contracts.

- Indentured servitude: Highly structured, with workers bound by five-year contracts overseen by colonial administrations. Though contracts offered nominal legal protection, conditions were harsh and exploitative.
- Kangani system: Functioned without formal contracts. Recruitment was carried out by intermediaries known as kanganis, derived from the Tamil word meaning "the one who observes." The root kan ("eye") reflected their role as overseers. Kanganis recruited labourers from Tamil-majority areas in South India through kinship ties, friendships, and village networks, and then supervised them on plantations.

Power and Exploitation

This dual role gave kanganis immense influence. Workers often trusted them due to cultural and familial bonds, but the system also created opportunities for exploitation. Kanganis controlled wages, housing, and even freedom of movement. Unlike indentured servitude, where colonial authorities exercised some oversight, the kangani system concentrated power in the hands of intermediaries, leaving workers vulnerable. For plantation owners, however, it was efficient: it reduced administrative costs, ensured a steady labour supply, and shifted responsibility for discipline and supervision onto the kangani.

Global Comparisons

The kangani system can be compared to other colonial labour regimes:

- Caribbean: The "coolie trade" brought Indian and Chinese labourers under indenture to sugar plantations.
- Africa: Contract labour tied workers to mines and plantations with varying degrees of coercion.
- What distinguished the kangani system was its reliance on informal social contracts rather than state-sanctioned indenture. It blurred the line between voluntary migration and coercion, embedding recruitment within community networks while perpetuating dependency and hierarchy.

The Kangani System: Colonial Labour, Control, and Political Legacy

The kangani system represents a hybrid form of colonial labour organisation. It combined elements of trust and familiarity with structures of control and exploitation. While it avoided the rigid legalism of indentured servitude, it offered workers little protection and entrenched the authority of intermediaries.

In the broader history of colonial labour migration, the kangani system illustrates how empire adapted recruitment strategies to local contexts, balancing efficiency with social control. Its legacy is a reminder that informal arrangements could be just as exploitative as formal contracts, shaping the lives of thousands of migrant workers and leaving lasting imprints on the societies of South and Southeast Asia.

Colonial Economy and Labour Demand

During most of the nineteenth century, the economy of the British crown colony of Ceylon depended almost exclusively on the export of plantation products. After modest beginnings in the 1820s and 1830s, coffee cultivation spread rapidly in the 1840s. By the 1880s, however, coffee plantations were devastated by disease and were replaced by tea, which soon became the island's dominant crop. Both cultivation systems were almost pure export monocultures, and both relied almost exclusively on imported wage labour from South India.

It is striking that labour immigration, a process vital to the efficient functioning of the plantation economy, received practically no government attention for much of the nineteenth century. Migration between South India and Ceylon remained free of government control, support, or regulation. Instead, functional equivalents such as the kangani system organised immigration and coordinated supply and demand.

Labour and the Plantation Economy in 19th Century Ceylon

The establishment and expansion of plantations in 19th century Ceylon marked a decisive transformation in the island's economic and social landscape. From the 1830s onwards, the colonial state and European planters faced a pressing challenge: securing a sufficient and inexpensive labour force to sustain the burgeoning plantation economy.

Coffee and the Early Labour Question

Coffee was the first major plantation crop introduced on a large scale. Its cultivation required comparatively less labour, and demand was seasonal, peaking during harvest periods. Consequently, the coffee sector could rely on temporary or supplementary labour without fundamentally disrupting the subsistence ties of the local peasantry to their land. The plantations were largely situated at higher altitudes, which limited direct competition with peasant agriculture. This meant that the classic process of "primitive accumulation", where peasants were dispossessed to create a pool of wage labour, did not occur in its full form in Ceylon during the coffee era.

The Rise of Tea and Intensified Labour Demand

The situation changed dramatically with the introduction and rapid expansion of tea plantations in the 1880s. Tea cultivation was far more labour-intensive, requiring a permanent and disciplined workforce to manage planting, plucking, and processing throughout the year. The local peasantry, still tied to their land and subsistence economy, proved unwilling to abandon traditional livelihoods for plantation work. This compelled planters to look beyond the island for labour recruitment.

Recruitment from South India

The search for labour led planters to the famine-prone districts of the Madras Presidency in South India. Here, large numbers of impoverished and socially marginalized individuals predominantly from so-called "low-caste" communities were vulnerable to destitution and thus more willing to migrate for survival. As Hjejle (1967) notes, this pool of labour became the backbone of Ceylon's plantation workforce.

Gough's study of Thanjavur, a key source region for plantation labour, reveals that systematic recruitment to Ceylon began in the 1830s. This process was facilitated by significant social and legal changes in India, particularly the abolition of slavery. Freed individuals, often landless and impoverished, were susceptible to recruitment agents who employed coercion, deception, or outright kidnapping to secure workers. For landlords in South India, this system was advantageous: debt bondage ensured a retained labour force at home, while the export of destitute peasants to Ceylon relieved them of the burden of supporting the most vulnerable (Gough 1981:119–121).

Reluctance and Coercion

Despite these mechanisms, migration was not a natural or voluntary choice for most workers. As Kurian (1989:59) observes, labourers were unwilling to migrate to Ceylon if alternative means of livelihood were available locally. The plantation system thus relied heavily on structural poverty, coercion, and the absence of viable alternatives to sustain its workforce.

The development of plantations in 19th century Ceylon illustrates the intersection of colonial economic imperatives with social hierarchies and vulnerabilities in South India. Coffee's relatively modest labour demands gave way to tea's insatiable need for a permanent workforce, reshaping recruitment strategies and embedding patterns of exploitation that would define the plantation sector for generations. The reliance on impoverished South Indian labour not only transformed Ceylon's economy but also entrenched a transnational system of dependency and marginalization whose legacies continue to resonate in the present.

Advances and the Kangany System of Recruitment

During the early period of plantation labour recruitment in Ceylon, workers often organized themselves into gangs ranging from 25 to 100 persons.

From among these groups, they would select a leader – the kangany – who was entrusted with conducting their journeys, negotiating engagements with planters, supervising their labour, and receiving in return a small proportion of their wages. Over time, however, this informal arrangement evolved into a systematic recruitment mechanism deliberately developed by planters to secure a steady supply of cheap, disciplined labour.

The Role of Advances

A central feature of this system was the use of advances. Planters provided kanganies with money to cover voyage expenses, food, and incidental costs, thereby incentivizing them to recruit labour from their home villages in South India. These advances served multiple purposes:

- Recruitment incentive: Workers who were reluctant to migrate were persuaded by the promise of upfront payments.
- Debt settlement: Families often used advances to pay off local debts, while landlords accepted them to redeem bonded workers.
- Binding mechanism: Advances tied workers to the plantation until repayment, creating a cycle of dependency that ensured labour discipline.

In some cases, kanganies themselves advanced money to recruits for transportation and subsistence, with repayment deducted from wages once employment began. This practice entrenched a form of debt bondage, making workers financially obligated to both the kangany and the planter.

Expansion and Abuse

The system was not without exploitation. Historical accounts record instances of abuse, coercion, and even kidnapping of workers. Some kanganies did not personally travel to India but remitted money to relatives who recruited on their behalf, thereby expanding recruitment networks. As a result, old kangany gangs grew in size while new gangs emerged, creating a layered recruitment structure.

By the 1870s, when coffee cultivation reached its peak, a hierarchical order had developed within the kangany system. Head kanganies controlled several sub-kanganies, each responsible for smaller groups of workers. This hierarchy reinforced planter control while decentralizing recruitment, making the system highly efficient but also deeply exploitative.

Estate Shops, Kangani Power, and Colonial Dependency

The colonial plantation economy in Ceylon was not only about fields and factories; it was also about **control through everyday transactions**. The kanganis, already powerful as labour recruiters and overseers, extended their influence into the domestic and economic lives of workers.

Refusal to Move from the Lines

Kanganis wielded immense authority over the line-room settlements. Their refusal to move out of the barrack-style housing was not simply personal preference, it was a deliberate assertion of dominance. By staying within the lines, they reinforced their role as gatekeepers of the community. Workers feared that leaving the lines for new settlements would mean losing protection, wages, or access to estate resources. This fear was cultivated and maintained by the kanganis themselves, who thrived on dependency.

Estate Shops as Instruments of Control

Colonial reports often noted the peculiar role of estate shops. These shops were not independent businesses; they were tied directly to estate management. Workers were compelled to purchase food, clothing, and household goods from them, often at inflated prices. Credit systems ensured that wages flowed back into the estate economy, keeping workers perpetually indebted.

- **Transactional dominance:** Shops acted as intermediaries between management and labour, reinforcing estate authority.
- **Perpetual debt:** Workers became trapped in cycles of borrowing and repayment, unable to break free from estate control.
- **Community dependence:** The shop was not just a marketplace it was a mechanism of surveillance and discipline.

The Kangani Shop Nexus

Kanganis were closely linked to these shops. Their authority extended beyond recruitment and supervision into economic life. They controlled who could buy on credit, who received favours, and who was punished for disobedience. This nexus made workers dependent “forever,” as you put it, ensuring that plantation labour was not just about wages but about **total dependency on estate structures**.

Colonial Urban Imprints

Even today, the legacy of this system is visible in the small towns of Norwood, Dickoya, Talawakelle, and Hatton.

The boutiques and shops that line these towns mirror the estate shop model small, tightly controlled, and embedded in community life. They are living reminders of how colonial economic structures shaped settlement patterns and social organisation.

Historical Significance

Colonial reports from the late nineteenth and early twentieth centuries repeatedly highlighted these dynamics. They noted that:

- Workers were reluctant to leave line rooms because of kangani influence.
- Estate shops created artificial dependency, ensuring labour stability.
- Fear and debt were deliberately cultivated as tools of control.

These reports are invaluable for future reference, as they show how **colonial rule was not only about land and labour but also about everyday economic coercion**. The plantation system was designed to make workers dependent in every aspect of life ,housing, wages, food, and even community identity.

Structural Significance

The kangany system was more than a recruitment method , it became a pillar of plantation labour management. Advances functioned as both carrot and stick: they attracted impoverished workers while binding them to the estate through debt obligations. The reliance on kinship and village ties in recruitment also meant that entire communities were drawn into plantation labour, perpetuating cycles of migration and dependency across generations.

Although later reforms and legislation sought to regulate recruitment practices, the kangany system left a lasting imprint on the plantation economy. It institutionalized informal debt bondage, entrenched hierarchical labour relations, and reinforced the dependence of South Indian migrant workers on both planters and their intermediaries.

Key Insights

- Advances were not merely financial incentives; they were instruments of control that shaped migration patterns and labour discipline.
- The kangany system institutionalized kinship-based recruitment, embedding social hierarchies into plantation labour structures.
- Its legacy highlights the intersection of economic necessity, coercion, and colonial labour management, which continued to influence plantation communities well into the 20th century.

The Kangany System and Plantation Hierarchies in Ceylon

The kangany controlled the labour force under him in multiple ways. It was not uncommon for the Head Kangany to operate the estate shop, where “the workers were the victims of all the evils of the ‘truck system’” — a system also prevalent in Britain, in which workers’ needs were supplied through company-owned shops. This system was based on inflated prices and indebtedness to the shopkeeper, who provided loans at exorbitant interest rates (Jayawardena 1972:17).

The Head Kangany supervised and transacted all financial affairs of the estate concerning “his coolies,” even if he was not directly responsible for paying their wages. He was often the sole debtor to the estate, serving as the medium through whom all advances were made. In this role as lender, he worked through sub-kanganies,

Entrenched Estate Power: A Timeline of Control



who managed day-to-day debts at the individual level. This arrangement not only gave the Head Kangany immense power but also created opportunities for personal enrichment.

Even after workers became resident on the estates and the need for direct recruitment diminished, the kangany continued as “headman, patriarch, money-lender, and shopkeeper.” While he might occasionally serve both the estate and the workers, more often “too many opportunities existed for tyranny, extortion, and embezzlement.”

Plantation Hierarchies After Slavery

Although plantations in Ceylon developed after the abolition of slavery, they perpetuated hierarchical practices rooted in race, colour, and gender prejudices associated with slave plantations. At the peak of this hierarchy stood the planter, a white British man known as the *periya dorai* (big master). He was supported by *sinna dorais* (small masters, also white and male), and office staff composed of Tamils or Euro-Asians from outside the estate who had received an English education (Kurian 1989:99–101).

Race and colour distinctions were reflected not only in occupational roles but also in residential arrangements. The planter lived in a relatively palatial bungalow, his assistants occupied less luxurious but still comfortable houses, and the office staff resided in modest “quarters” resembling cottages. Social demarcation between the planter and his assistants on one hand, and the office staff on the other, reinforced class, race, and colour hierarchies, with little or no social contact across these groups.

Workers occupied the lowest rung of this pyramid, under the authority of management, and were housed in barrack-like structures known as “line-rooms.” These buildings, with metallic roofs, were characterized by inadequate water supply, poor sanitation, and overcrowding.

According to contemporary planters, workers “had objection to be packed tolerably close.” The cost of constructing a line-room was around five pounds sterling, while the superintendent’s bungalow cost approximately five hundred pounds sterling (Sabonadiere 1866:66, cited in Kurian 1989:72).

Legacy in Sri Lanka

The boutiques in **Norwood, Dickoya, Talawakelle, and Hatton** are not just shops they are echoes of colonial dependency. Their presence shows how estate-linked commerce shaped settlement patterns and continues to influence community life.

For Future Reference

When developing this into a **colonial rule story**, you can cite:

- **Ceylon Labour Commission Reports (early 20th century)** – documenting kangani power and estate shop dependency.

- **Caribbean indenture reports** – showing parallels in debt and company store systems.
- **Studies on company towns in the US** – useful for comparative framing.

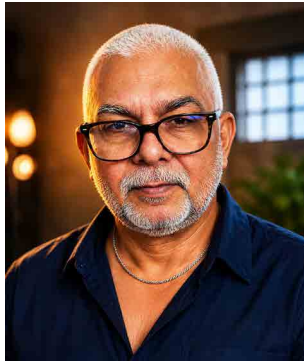
Key Takeaway

- New houses are being established through Estate cooperatives and bilateral projects, but management struggles with land release, worker reluctance, and entrenched estate power structures.
- For long-term success, housing cooperatives must be empowered as transparent, community-driven institutions rather than extensions of estate management.

Continues.....

FROM LABOUR TO LEADERSHIP: MONETIZING HUMAN CAPITAL IN SRI LANKA'S PLANTATION ECONOMY

Dammike Kobbekaduwe



Sri Lanka's plantation sector stands today at a defining crossroads. For over a century, it has served as the backbone of export agriculture, shaping not only the national economy but also the social and cultural identity of the country. Yet, beneath this legacy lies a growing contradiction that cannot be ignored. While estates struggle with labour shortages and declining productivity, a new generation of educated youth many emerging from plantation communities themselves remain underemployed, disengaged, or forced to seek opportunities outside the sector. This paradox signals not a temporary disruption, but a deep structural imbalance that demands urgent attention..

As highlighted in Tea Dialogue, nearly one million people continue to live within plantation communities, supported by over 120,000 direct workers, while a steady pipeline of educated youth is emerging through improved access to early childhood development and education.

Notably, more than 100 estateorigin students now enter universities annually, marking a historic shift in the social trajectory of these communities . This transformation represents far more than social progress it reflects the emergence of a powerful economic asset. However, the system has not yet evolved to fully absorb or utilize this new human capital.

At the national level, the situation becomes even more pronounced. According to the Department of Census and Statistics (2024), approximately 200,000 students qualify each year for university entrance,

yet only a limited number gain access to higher education, and even fewer transition into productive, high-value employment. Youth unemployment remains disproportionately high, particularly among educated individuals. At the same time, agriculture continues to employ a large share of the workforce hile contributing a declining percentage to GDP, reinforcing the existence of a low-productivity economic structure. This is not an issue of individual capabilityit is a systemic failure to align education, employment, and economic opportunity. Historically, plantation communities were viewed through a narrow labourcentric lens, where generational continuity was expected and even assumed. Children of estate workers were destined to follow the same path, reinforcing a cycle that limited upward mobility. That model is no longer valid. Investments in Child Development Centres, educational support programs, and community-level interventions have quietly but fundamentally altered the social fabric of plantation regions

Children who once faced significant disadvantages now possess the knowledge, confidence, and ambition to participate in a modern economy. Yet, the absence of structured pathways means that many of these individuals either leave the plantation sector entirely, enter low-value urban jobs, migrate abroad, or remain underemployed. This represents a significant leakage of human capital, translating directly into lost economic potential for the country. The cost of this misalignment is substantial. When a large segment of the workforce remains trapped in low-productivity roles, national output suffers. When youth become disengaged, social instability increases, and sectors lose their attractiveness to future generations. Most critically, Sri Lanka risks losing its competitive edge in global plantation markets at a time when other countries are rapidly modernizing their agricultural systems. Without a shift in approach, the plantation sector risks becoming structurally irrelevant, despite its historical importance.



Global experience offers valuable lessons. Countries and industries that have successfully transformed themselves have done so by investing in human capital. Colombia's coffee industry, for example, evolved by turning farmers' children into skilled professionals in agronomy, marketing, and sustainability, thereby enhancing both productivity and global positioning. India's IT sector leveraged educated youth to build a globally competitive, multi-billion-dollar export industry. Similarly, the wine industries of Europe redefined traditional agricultural roles by developing expertise in branding,

nutrient absorption, reduces dependence on chemical fertilizers, and increases yield stability. At the same time, carbon sequestration opens access to international carbon credit markets, creating entirely new revenue streams for plantation communities.

Central to all these changes is the integration of a skilled workforce. Educated youth must be systematically absorbed into roles that go beyond traditional labour. These include positions such as plantation data analysts, sustainability managers, agritech specialists, and export professionals. However, this transition cannot occur organically; it requires structured programs and institutional support.

A coordinated national strategy is therefore essential. One possible approach is the establishment of a Plantation Graduate Corps, designed to deploy educated youth into estates in roles that combine management, innovation, and community development. Such a program would create immediate productivity gains while building a pipeline of future leaders. In parallel, public-private partnerships can play a transformative role. As demonstrated by global models such as the Toyota Production System, the integration of discipline, precision, and continuous improvement can elevate entire sectors. Adapting similar principles within the plantation context could drive operational excellence and global competitiveness.



Policy support will also be critical in accelerating this transformation. Incentives for value-added exports, funding for agritech innovation, and support for international certification and branding can create the conditions necessary for sustained growth. Furthermore, the empowerment of women who form a significant portion of the plantation workforce can act as a powerful multiplier of productivity and social development when combined with skills training and financial inclusion.

The vision that emerges is one of a “Plantation Economy 2.0,” where the sector transitions from labour to leadership, from commodity production to premium value creation, and from subsistence agriculture to investment-grade enterprise. In such a future, plantation youth would lead global agribusiness initiatives, estates would operate as data-driven organizations, soil would be recognized as a measurable economic asset, and Sri Lankan products would command premium positioning in international markets. The transformation from labour to leadership is not optional it is inevitable. The only question that remains is whether Sri Lanka will take the lead in shaping this future, or be left behind as others move forward.





Sarnia Estate – A Timeless Legacy of Beauty and Heritage

Planters Association of Ceylon

Nestled amidst the breathtaking landscapes of Uva, Sarnia Estate has stood the test of time, transforming from a coffee plantation in the 19th century into a beacon of the highest quality tea cultivations, while preserving its rich historical essence. Bordering the Randenigala Reservoir and the wild life sanctuary of Randenigala, Sarnia stands on the eastern slope of a picturesque mountain range rising from an elevation of 900 meters at the lowest to 1180 meters at the highest point on the foothills at Narangala Mountains.

It is a lesser-known fact, outside of the plantation industry is the significant influence of Scottish planters on then Ceylon's agricultural landscape. The Scottish impact dates back over 200 years, with figures such as James Taylor pioneering tea cultivation in the island. Among these notable figures, was E.C. Sweeting, who contributed significantly to the island's transition from coffee to tea, while establishing advanced agricultural practices within the tea industry.

Sri Lanka experienced a coffee boom in the 1860s attracting investment from London and leading to the rapid expansion of plantations across the central highlands. It was during this period that E.C. Sweeting established Sarnia Estate in 1864, set amidst the lush slopes of the Badulla-Hali Ela region. The term 'estate' itself, widely used across Sri Lanka's plantations, is a legacy of Scottish influence.

Originally known as 'Kandegadera' in Tamil, Sarnia flourished under the coffee trade, its fertile soil yielding a promising harvest. However, by the late 19th century, a devastating leaf disease led to the collapse of Sri Lanka's coffee industry, marking the end of an era. The crisis, however, paved the way for a new chapter tea.

A New Dawn: The Rise of Tea

The introduction of tea at Sarnia in the early 1880s brought about a significant shift, setting the stage for its growth. By 1905, the estate was fully converted into tea cultivation, under the stewardship of the Scottish Trust & Loan Company of Ceylon and management by Cumberbatch & Company. The estate thrived, expanding to 570 acres of tea, with an additional 170 acres dedicated to timber and grasslands.

The Scots left an indelible mark on Sarnia, shaping not only its agricultural practices but also its cultural landscape. The terraced hillsides, stone pathways, and colonial bungalows bear testimony to their meticulous craftsmanship and unwavering dedication.

For over seven decades, Sarnia remained under Scottish ownership. However, in 1975, the Sri Lankan government nationalized the plantation sector under the Land Reform Act, bringing Sarnia under the management of the Janatha Estates Development Board (JEDB). Though nationalization aimed at greater economic equity, state management struggled to maintain profitability.



Recognizing the need for reform, the government privatized the sector in 1992, leasing estates to regional plantation companies (RPCs). Sarnia was placed under Malwatte Valley Plantations, breathing new life into its operations and reinvigorating its global reputation since 1999. MVPL is managed by Wayamba Plantations.

A Blend of Tradition and Modernity

Today, Sarnia Estate remains one of the largest tea plantations in the Uva district, covering 311.29 hectares. Sarnia Estate's continuing success is built on a legacy for unmatched quality that stems from the quality of leaf grown on its verdant hills. By ensuring meticulous care for these Old Seedling Teas which still comprise over 70% of the estate's total cultivation – Sarnia has maintained a unique premium quality tea with direct roots back to the 19th and early 20th centuries.

The estate experiences a unique climate, with the northeast monsoon bringing rainfall from October to January, and dry, gusty winds from June to September.

This ultimately results in a liquor that is characterized by a smooth, golden amber hue and a flavor profile that perfectly blends briskness and mild sweetness, with a lingering, slightly honeyed finish that enhances its overall depth making it a delightful and refreshing experience. This distinct Uva flavour makes Sarnia's teas among the most sought after by tea connoisseurs worldwide.

The estate is home to a harmonious blend of Tamil and Sinhalese communities, with a workforce of over 680 people and a resident population exceeding 4,100. Sarnia has invested in its workers, establishing housing projects along with the Plantation Housing and Development Trust, crèches for children, and cooperative societies that uplift their quality of life. Crèche's are operated for the benefit of the children of workers and free feeding programs are conducted for the children in these crèches.

Malwatte Valley shares 5% of the estate profits with its workforce annually it has distributed over 290 million to its workers as at date.



A Commitment to Excellence and Sustainability

Sarnia Tea Processing Center, perched at 972 meters above sea level, produces over a million kilograms of made tea annually. It has embraced sustainable practices, utilizing renewable energy to power its operations. This Processing Center is equipped to manufacture two different types of orthodox tea, which is Orthodox small leaf type tea using Rotorvane machines and Orthodox large leaf type tea using Rollers. It also has the facility to produce Green Tea. More recently, this center has developed the capability to produce high-quality specialty teas as well.

Certified under, Rainforest Alliance, HACCP, GMP & ISO 22000 for food safety, environmental protection and management, the estate upholds rigorous standards to ensure its teas meet international benchmarks, manufactured adhering to Good Manufacturing and Management Practices under strict hygienic conditions. The estate's flagship brand, 'Sarnia Plaiderie,' continues to fetch premium prices at the Colombo Tea Auctions, a testament to its superior quality.

Sarnia's excellence has been recognized globally, winning awards at the Ceylon Specialty Tea of the Year competition in North America and Japan. These accolades reaffirm its status as a producer of world-class tea, revered by experts and enthusiasts alike.

The tea industry however is plagued with an acute labour shortage and hence Sarnia has commenced automating its production lines. Malwatte Valley Plantations PLC has an in-house team who are systematically working on improving this further. The acute shortage of workers along with the high fluctuation of global commodity prices has forced Sarnia to look in the direction of diversifying its crop portfolio. In this regard it has gone in for the cultivation of Avocado targeting the export market. Planting material has been imported from various countries to cater to the hunger for this fruit internationally.

The crop requires much less labour than Tea and is highly profitable. This would therefore make good entry into Sarnia's portfolio to face any challenges that lie ahead. Apart from above labour-saving strategies Sarnia has also commenced mechanized harvesting of green leaf. This has resulted in improved leaf standard and finally a better end product. This would be expanded on in the months ahead.



Preserving the Past, Embracing the Future

From its humble beginnings as a coffee plantation to its transformation into a premier tea estate, Sarnia embodies the resilience, beauty, and heritage of Sri Lanka's plantation industry. It stands as a living monument to the visionaries who carved their dreams into its central hills and the generations who have nurtured it through time.

As Sarnia moves forward, it does so with a deep respect for its past, a commitment to sustainability, and an unwavering dedication to crafting the finest teas a legacy steeped in history, yet ever-evolving with the future.

THE TEA ACADEMY: A NATIONAL BLUEPRINT TO REINVENT CEYLON TEA FOR THE FUTURE



Lalin I De Silva

Sri Lanka stands today at a defining moment in the history of its tea industry. For more than a century, Ceylon Tea has carried the identity of the nation across the world, earning global recognition for quality, aroma, flavor, and heritage. Yet, despite this extraordinary legacy, the industry now faces serious structural challenges: declining profitability, climate vulnerability, fragmented branding, weak value addition, aging plantation systems, labour shortages, inconsistent quality standards, and increasing global competition from technologically advanced tea-producing nations.

The answer to these challenges cannot be found merely through increased production. The future of Sri Lanka's tea industry depends on transforming tea from a commodity into an integrated ecosystem of culture, wellness, sustainability, traceability, tourism, education, and premium global branding. It is within this context that the newly proposed "Tea Academy Sri Lanka" initiative emerges as one of the most visionary plantation-sector concepts proposed in recent years.

The initiative, developed under the governance framework of Proprietary Planters Alliance (Private) Limited, seeks to create a nationwide network of Tea Academies operating across all provinces and districts through a regulated franchise model. However, this is not simply another training institution or tea promotion campaign. It represents a strategic attempt to reposition Sri Lanka as a global leader in premium tea culture, traceability

systems, sustainability governance, plantation tourism, and scientifically standardized tea preparation.



At the heart of the initiative lies the recognition that tea is not merely a beverage. Tea is heritage. Tea is science. Tea is wellness. Tea is tourism. Tea is environmental stewardship. Tea is digital traceability. Tea is national identity.

The Tea Academy model proposes a future in which every Sri Lankan district can become part of a coordinated national tea literacy movement. Under this concept,

independently operated Tea Academy centers would function under nationally approved quality assurance standards and governance protocols.

The role of PPA would not necessarily be to directly operate all centers, but rather to regulate quality, curriculum standards, sustainability compliance, traceability systems, and branding integrity across the network.

One of the most transformative aspects of the proposal is the introduction of the “Ceylon Certified Tea” (CCT) concept. This framework aims to establish scientifically traceable and ethically governed tea consumption standards for both domestic and export markets. In a world increasingly driven by consumer transparency, ESG compliance, food authenticity, and digital verification, Sri Lanka has a unique opportunity to position itself ahead of competing tea-producing nations.

The proposed CCT system incorporates QR-enabled authentication, estate traceability, origin mapping, sustainability indicators, digital records, and AI-assisted monitoring systems. In practical terms, this could allow consumers anywhere in the world to scan a tea package and identify where the tea was cultivated, how it was processed, whether ESG standards were followed, and whether the product meets approved traceability and quality benchmarks.

Such a system has the potential to fundamentally change how Ceylon Tea is marketed globally. Sri Lanka must strategically move beyond being merely an exporter of bulk tea and instead become a producer of premium traceable tea experiences. The country should aim for minimum export realizations of USD 15 per kilogram for authentic value-added Ceylon Tea. This transformation will require aggressive branding, traceability, specialty tea development, wellness positioning, and digital storytelling.

Sri Lanka must strategically target a minimum export realization of USD 15 per kilogram for authentic Ceylon Tea through aggressive value addition, traceability, branding, specialty tea innovation, and global market positioning. In this transformation journey, the Tea Brokering firms can become a tower of strength by evolving beyond conventional auction functions into fully integrated Ceylon Tea Marketing Companies capable of driving international branding, premium market development, digital traceability, consumer engagement, and global distribution partnerships for value-added Ceylon Tea products.



Importantly, the initiative also recognizes the enormous potential of herbal medicinal beverages (HMB). Around the world, consumers are increasingly seeking wellness-oriented beverages linked to immunity, relaxation, detoxification, mental clarity, and natural healing. Sri Lanka’s biodiversity and Ayurvedic heritage provide exceptional opportunities to develop globally competitive tea-based wellness products integrated with cinnamon, ginger, moringa, gotukola, ranawara, iramusu, and numerous endemic herbs.

The Tea Academy concept therefore extends beyond conventional tea drinking. It seeks to establish scientifically standardized tea preparation and wellness beverage culture capable of positioning Sri Lanka within the rapidly expanding global wellness economy.

Another significant strength of the proposal is its emphasis on digital governance and AI-enabled systems. The future tea economy will not be driven solely by plantations and factories. It will be driven by data, traceability, digital trust, consumer engagement, and intelligent systems. The proposed framework includes AI-assisted learning platforms, digital dashboards, GIS-linked plantation systems, QR traceability, online certification systems, and cybersecurity protocols aligned with modern digital governance standards.



This aligns closely with broader global trends where agriculture, tourism, sustainability, and digital ecosystems are converging into integrated value chains. The Tea Academy model recognizes that modern consumers no longer purchase only products; they purchase stories, authenticity, transparency, and experiences.

The initiative also carries major economic implications. Through franchise fees, licensing income, educational programs, tea tourism experiences, digital subscriptions, certification systems, and wellness products, the Tea Academy network could evolve into a recurring revenue ecosystem capable of supporting plantation communities, youth entrepreneurship, women-led enterprises, and rural economic diversification.

the Tea Academy network could evolve into a recurring revenue ecosystem capable of supporting plantation communities, youth entrepreneurship, women-led enterprises, and rural economic diversification.

Equally important is the proposal's emphasis on ESG and climate-smart plantation governance. Modern international markets increasingly demand evidence of sustainability, biodiversity protection, ethical labour standards, carbon-conscious cultivation, and environmental responsibility. By integrating these principles into the Tea Academy and CCT frameworks from inception, Sri Lanka can position itself as a premium ethical tea origin rather than merely a low-cost supplier. The initiative further recognizes the strategic role of plantation tourism. Tea estates possess extraordinary untapped tourism value. Properly developed Tea Academies could function as educational tourism centers where local and foreign visitors learn tea tasting, tea preparation, plantation history, sustainability systems, tea gastronomy, and wellness practices. Such integration between plantations and tourism could significantly enhance rural economic activity while strengthening the global image of Ceylon Tea.

Perhaps most importantly, the proposal reflects a shift in thinking. Sri Lanka's tea industry can no longer depend solely on auction systems and commodity exports. The future lies in creating a complete tea ecosystem built around traceability, branding, wellness, sustainability, technology, tourism, and consumer trust.

The Tea Academy initiative represents an ambitious attempt to build such an ecosystem. If implemented with discipline, professionalism, and national collaboration, it could become one of the most important plantation-sector transformations attempted in Sri Lanka in decades. For a country whose global identity has long been associated with tea, the time may finally have arrived to move from selling tea as a product to presenting Ceylon Tea as a globally trusted experience, culture, and lifestyle.

HIGH-DENSITY MANGO CULTIVATION IN UNCULTIVATED REGIONAL PLANTATION LANDS

A Strategic Opportunity to Conserve Sri Lanka's Rare Mango Germplasm and Build a Commercial Fruit Economy



Dr. Sampath Niroshan

Introduction

Sri Lanka possesses a rich mango heritage with a wide range of traditional and commercially important cultivars grown across the wet, intermediate, and dry zones. In addition to popular commercial varieties such as Karutha Colomban, Willard, Vellai Colomban and Betti Amba,

the country is also home to several rare and regionally valued mango types including Dampara, Mee Amba, and Gira Amba. These traditional mangoes represent not only cultural and culinary value, but also important genetic resources for future breeding, climate resilience, taste diversity, and niche-market development.

At the same time, many lands under regional plantations and surrounding underutilized estates remain either uncultivated or only partially productive. With rising interest in fruit-based diversification, export agriculture, and climate-smart perennial cropping systems, these lands offer a strong opportunity for high-density mango cultivation. A scientifically designed mango development programme can serve two important purposes at once: conserving Sri Lanka's rare mango varieties and developing commercial fruit production using selected improved varieties under modern orchard systems.

Mango in Sri Lanka: A Crop with Strong National Potential

Mango (*Mangifera indica* L.) is one of the most widely cultivated fruit crops in Sri Lanka and is second only to banana in distribution. It is grown across the dry zone, intermediate zone, and parts of the wet zone depending on variety and management. Mango has strong value as a fresh dessert fruit, for juice and pulp processing, and for domestic as well as export markets. Sri Lanka's agro-climatic diversity also allows staggered production across regions, helping to extend market supply seasons.

The traditional mango landscape of Sri Lanka includes several distinctive local cultivars such as Dampara, Gira Amba, Mee Amba, Pol Amba, Kohu Amba, Vellai Colomban, Karutha Colomban, Willard, Betti Amba and Peterpasand. Many of these cultivars are linked to particular regions and local consumer preferences, making them important not only as fruit crops but also as elements of the country's agricultural heritage.

Why Rare Mango Varieties Matter

Sri Lanka's rare mango varieties should not be seen merely as home-garden fruits. They are valuable national plant genetic resources. Their conservation and field-level multiplication are important for several reasons.

Firstly, they provide genetic diversity and may carry useful traits related to taste, aroma, adaptability, disease tolerance, bearing behaviour and climatic resilience. Secondly, they offer strong potential for niche-market development and premium branding. Varieties such as Mee Amba and Dampara have unique eating qualities and traditional consumer appeal, which can be marketed as heritage Sri Lankan mangoes.

Thirdly, conservation through productive cultivation is one of the best ways to preserve rare fruit germplasm. Establishing these varieties in organized blocks within plantation lands can combine conservation with income generation. Finally, fruit-based diversification can help regional plantations reduce dependence on a narrow crop base and create medium- to long-term perennial income streams.

Rare and Commercial Mango Varieties for a Plantation Diversification Programme

A regional plantation mango programme can be designed with two varietal groups: (1) heritage and rare Sri Lankan varieties for conservation, mother blocks and niche markets, and (2) improved or commercial varieties for high-density production blocks.

Among the rare local varieties, Dampara is recognized as a traditional Sri Lankan cultivar with distinctive local value. Mee Amba is well known for its soft flesh, sweet taste and nostalgic consumer appeal. Gira Amba, another established local type, deserves inclusion in any varietal conservation orchard in the plantation sector. In addition to these, plantation companies may evaluate commercial or introduced varieties such as Capdan, Taiwan F1 and Yuwen 6 for pilot high-density blocks.

These varieties should, however, be treated as trial candidates until their flowering behaviour, yield potential, fruit quality, pest susceptibility and market acceptance are validated under Sri Lankan conditions.



Why Uncultivated Regional Plantation Lands Are Ideal for Mango Expansion.

Regional plantations often contain underutilized, marginal or non-core lands that are not currently contributing adequately to estate revenue. These lands can be strategically converted into mango orchards if they have good drainage, reasonably deep soil, low risk of prolonged waterlogging, road access for fruit transport, and the ability to support irrigation during the establishment period.

For plantation companies, mango is especially attractive because it can transform idle land into a productive perennial fruit asset while also supporting intercropping during the first two to three years before canopy closure. This makes mango a practical diversification option in plantation landscapes.

A Proposed Orchard Model: High-Density Mango Planting for Plantation Lands

Instead of relying only on traditional low-density systems, plantation lands can adopt a high-density or semi-high-density orchard model. The exact spacing should depend on variety vigour, rootstock behaviour, soil fertility, irrigation availability and the intensity of canopy management.

For rare and heritage varieties such as Dampara, Mee Amba and Gira Amba, moderate spacing such as 6 m × 6 m or 7 m × 7 m is more suitable because the objective is both conservation and long-term tree health. This spacing also supports mother-tree maintenance, varietal evaluation and scion collection.

For commercial varieties such as Capdan, Taiwan F1 and Yuwen 6, high-density pilot blocks may be established at spacings such as 5 m × 3 m, 4 m × 3 m or 5 m × 2.5 m, depending on tree vigour and management intensity. Such systems can increase early returns if the orchard is managed scientifically with pruning, irrigation, nutrition and pest management.



Key Technical Considerations for High-Density Mango in Plantation Lands

Only healthy grafted or budded plants should be used for plantation-scale mango projects. Planting material must be true-to-type, uniform and sourced from reliable nurseries or developed internally through a certified propagation programme. A long-term strategy should include establishing mother blocks of rare varieties and multiplying selected scion material on vigorous, locally adapted rootstocks.

Land preparation should include clearing scrub, assessing drainage, preparing contour drains or soil conservation structures where necessary, and incorporating organic matter into planting pits. In most plantation conditions, pit sizes of 60 cm × 60 cm × 60 cm or 75 cm × 75 cm × 75 cm may be suitable depending on soil condition.

Supplementary irrigation, particularly drip irrigation, is essential during establishment and highly beneficial in high-density orchards. Nutrition should be guided by soil testing, tree age and growth stage, and should integrate organic matter, balanced nutrient supply and beneficial microbial inputs.

Canopy management is the heart of high-density mango cultivation. Formative pruning during the first three years, annual post-harvest pruning, height control and canopy opening are all essential to maintain a productive orchard structure. Intercropping with short-duration crops such as cowpea, mung bean, groundnut or pineapple can improve cash flow during the juvenile stage.

A Recommended Plantation Strategy: Dual-Purpose Mango Estate Model

A practical regional plantation strategy would be to allocate 10–20% of the project area to a rare mango conservation and mother block.

This section can include Dampara, Mee Amba, Gira Amba, Pol Amba, Kohu Amba and other locally important cultivars where planting material is available. Such a block can function as a living germplasm bank, a source of scion wood, an educational orchard and a premium fruit branding platform.

The remaining 80–90% of the project area can be allocated to commercial high-density production blocks using selected market-oriented varieties, including proven local commercial cultivars and promising introduced types such as Capdan, Taiwan F1 and Yuwen 6. This commercial component should be managed for productivity, fruit quality, market timing, packhouse suitability and profitability.

Economic and Strategic Benefits to Regional Plantations

If properly designed, mango development in uncultivated plantation lands can deliver several long-term benefits. It can convert idle land into a productive perennial fruit asset, diversify plantation income, conserve Sri Lanka's rare mango heritage, and create stronger domestic and future export opportunities. Well-managed mango orchards can also improve land cover, reduce erosion and contribute to climate-smart perennial land use within regional plantation systems.

Challenges That Must Be Managed

A plantation mango programme must also address several practical constraints from the beginning. These include lack of uniform certified planting material, poor canopy management, fruit fly and anthracnose pressure, postharvest losses, irregular flowering linked to rainfall, weak orchard record-keeping, and the absence of a dedicated market and branding plan for rare mangoes. These issues are manageable, but only if mango is treated as a serious commercial horticultural project rather than a secondary activity.

Conclusion

Sri Lanka has both a rich mango heritage and a clear opportunity to use underutilized plantation lands more productively. A carefully planned mango programme in regional plantations can do far more than simply plant fruit trees. It can conserve disappearing local varieties such as Dampara, Mee Amba and Gira Amba, create mother blocks for future propagation, and at the same time establish commercial high-density orchards of selected market-oriented varieties such as Capdan, Taiwan F1 and Yuwen 6.

The real opportunity lies in combining conservation, commerce and climate-smart land use in one integrated plantation model. With proper planting material, irrigation, nutrition, pruning and market planning, mango can become a major diversification crop for Sri Lanka's plantation landscape while protecting a valuable part of the country's fruit heritage for future generations.

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Leopards, Tea and Landscapes: Stories from Sri Lanka's Highlands

Globally renowned for the iconic Ceylon tea, Sri Lanka is also one of the biodiversity hotspots in the world. Its megafauna attracts many local and international tourists including the charismatic Sri Lankan leopard (*Panthera pardus kotiya*). The Sri Lankan leopard is an endemic subspecies of the country and one of the two island subspecies in the world. Leopard is the largest member of the Felidae family found in Sri Lanka, and with the absence of other big cats such as lions and tigers in the wild, leopards play a vital role as the apex predator of terrestrial ecosystems, keeping the herbivore numbers in check as the top predator. Given their ecological importance also as a keystone species and an umbrella species, leopards are an integral part of maintaining healthy ecosystems. Sri Lanka's national parks have become major destinations among local and international tourists to spot these charismatic animals in the wild drawing an economic significance. Leopards show an island wide distribution and are found in a mosaic of habitats including low land tropical rainforests, arid and low land dry zone forests and scrublands, sub montane habitats, montane forests in the hill country as well as in agricultural landscapes with human activities. Their population is estimated to be less than 1000 mature individuals in the wild with a declining trend.

Growing threats beyond protected areas....

Habitat loss and forest fragmentation limit the habitable space for leopards, which are large ranging animals while the loss of habitat connectors escalates the issues as leopards have to navigate through human settlements and cultivated lands when moving across forest patches.

Vihangi de Mel

Declining prey availability in forests due to intensive poaching for bush meat is also driving leopards to move out of forested habitats in search of prey, which they often find in alternative prey causing domestic animal predation on dogs and livestock. Littering around neighborhoods which often attract wild boars and dogs, stray dogs in abundance, and livestock raised with inadequate safety infrastructure make it easier for the leopards to prey on them further attracting them into human territories. In the hill country, snaring is the major threat faced by leopards where they often get trapped in wire snares set for other herbivores, yet certain incidents also indicate targeted snaring for leopards causing fatal injuries or death. Leopards are also threatened by gun shooting, poisoning, poaching for body parts and road kills in and around human settlements contributing to heightening leopard mortality and conservation challenges in the human-dominated landscapes.

Towards human-leopard coexistence....

In light of this, the Wildlife and Nature Protection Society (WNPS), Sri Lanka's oldest conservation organization, launched the "Multi-Regional Leopard Research and Conservation Project" (MLRCP) in partnership with LOLC Holdings in 2022 to study leopard populations outside protected areas and facilitate human-leopard coexistence, administering its activities through six field stations located island wide (Panama, Sigiriya, Kilinochchi, Kotagala, Belihuloya, and Kalawana).

The project majorly focuses on research in understanding dynamics of human-leopard interactions, raising public awareness and conservation initiatives for conflict mitigation which is led by Scientific Advisor Prof. Enoka Kudavidanage and a dedicated team of field researchers. It has conducted baseline surveys among regional officers of wildlife and forest sectors and residents of rural communities for identifying leopard distribution outside protected areas, profiling the status of human-leopard interactions and detecting spatial conservation priority zones within study regions.

Following this, camera trapping has been initiated in identified locations while continuing monitoring of leopard-related incidents, field observations and dietary analysis of leopard scats. The public campaign over the past years have reached out to over 20,000 participants through over 270 programs including different focal groups such as school students, public sector officials, estate and rural communities.

On the project's vision, Prof. Enoka Kudavidanage, Scientific Advisor to the MLRCP, noted: "Conserving leopards requires not only science-based research but also informed communities, strong partnerships, and collective action to enable people and leopards to coexist, which we are aiming to facilitate through our project. Therefore, we expect that our efforts will contribute both in knowledge dissemination and informing practical solutions".

Also, noting on the partnership with LOLC Holdings, Kithsiri Gunawardena, Chief Operating Officer of LOLC shared: "At LOLC, we believe in long-term, meaningful collaboration for conservation and the important role of the private sector in driving it forward. We aim to lead by example and inspire other partners to engage in similar efforts. We are proud to support an initiative that brings together multiple disciplines for conservation of iconic leopards".



WNPS has conducted the sessions through the MLRCP and also in collaboration with Rainforest Alliance (RA), especially in the hill country, aiming to empower estate communities with proper knowledge and better understanding to promote human-leopard coexistence.

These awareness programs are designed to educate the public on leopards and other wildcats, ecological and economic importance of leopards, threats faced by leopard populations, legal provisions for leopard-related offences and precautions to minimize negative human-leopard interactions.

These programs target key groups within estates, including community leaders, field officers, workers, and non-workers while each session features a short drama, informative presentations followed by open discussions conducted in native languages.

Prompt reporting of leopard-related incidents is crucial in conserving these animals, therefore the measures of reporting incidents to the Department of Wildlife Conservation (DWC), their hotline, and WNPS regional official's contacts are shared among the public encouraging their engagement during any leopard-related emergency.

Communities are educated on dos and don'ts when confronted by leopards or if they found leopard cubs in the field explaining how people's sudden movements or actions harassing the animals can provoke unfortunate consequences and why handling of cubs can reduce the likelihood of being successfully reunited with their mothers

At the conclusion of each program, participants received handouts and certificates, while informational posters were distributed among the estates for display in public spaces. Since 2022, WNPS LOLC project had successfully conducted programs together with collaboration through RA in eight Regional Plantation Companies, engaging over 70 estates and reaching over 5000 participants through its Kotagala regional center.

Reflecting on the importance of this partnership, Jehan CanagaRetna, Country Representative of Rainforest Alliance in Sri Lanka, shared: "Sri Lanka's plantation landscapes requires collaboration between conservation organizations, the private sector, and local communities. Our partnership with WNPS demonstrates how empowering estate communities can help reduce human-leopard conflict creating positive outcomes".

Awareness to action, engaging communities....

Snare removal sessions held by the field team under RA collaboration, working together with the DWC and Forest Department focused on addressing the widespread use of wire snares, which account for the majority of recorded leopard deaths. During these sessions, site inspections are conducted to locate and remove snares across estates and surrounding landscapes, alongside targeted community awareness programs that highlight the ecological consequences of snaring and the legal penalties associated with it. These initiatives were also complimented with the donation of wire cutters to estate management and DWC offices, along with the provision of a leopard rescue cage to the Nallthanniya DWC Range Office.

As the Police is often among the first responders to during leopard-related incidents in most regions, the WNPS LOLC project conducted a specialized awareness session for officers of Sri Lanka Police representing 20 police stations in the hill country to enhance their understanding on wildlife crime with a particular emphasis on leopards, legal provisions, and appropriate response procedures.



A notable positive case study emerged from Logie Estate in Talawakelle in August 2022, where a leopard fell from the roof while it was chasing a dog and got trapped in a house at night while the residents were inside. This occurred in a region where community awareness programs had previously been conducted. Showing a commendable understanding of appropriate responses, the homeowners locked the leopard inside the house without causing it any harm and immediately informed the DWC. After a rescue operation lasting around 16 hours, the leopard was successfully rescued and subsequently released back into the wild by the DWC. In recognition of the homeowners' responsible actions and active support in mitigating human-leopard conflict, assistance was provided through RA to repair damage to the roof and compensating the property damage during the incident. These measures of engagement helps to maintain community goodwill and reduce negative sentiments toward leopards facilitating conservation efforts.

Lend a hand: Be part of the solution

The long-term conservation of the Sri Lankan leopard depends not only on conservation organizations and government agencies but also on the collective efforts of everyone who shares the landscape with this remarkable species. As much as leopards need people to make responsible actions for their survival in the challenged landscapes, people also need leopards to maintain healthy, balanced ecosystems. By understanding leopard behavior, adopting responsible practices, and supporting conservation initiatives, communities can help build a future where people and leopards coexist safely.

To support these efforts or explore opportunities to collaborate with the MLRCP, please connect with the Wildlife and Nature Protection Society (WNPS). Your support will help strengthen research, education, and conservation initiatives to secure a future for Sri Lanka's iconic leopard.

For more information, please contact:

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Suggested “Box” highlights to be featured:

WNPS–LOLC Multi-Regional Leopard Research and Conservation Project (2022–Present)

- 6 regional field centers
- 270+ awareness programs
- 20,000+ people reached
- 70+ tea estates engaged
- 5,000+ estate community members trained
- Camera trapping, leopard incident monitoring and conflict mitigation across Sri Lanka



Nutrition, Its Importance to Life, and the Role of Knowledge and Community Development in Reducing Undernutrition in Early Childhood

Introduction

Nutrition is the process by which the body obtains and uses nutrients from food for growth, energy production, tissue repair, and maintenance of normal body functions. Good nutrition is essential for health and well-being throughout life. During early childhood, adequate nutrition is particularly important because children experience rapid physical growth and brain development. When children do not receive sufficient nutrients, they may suffer from undernutrition, which can have lifelong consequences.

Undernutrition remains a major problem in many low-income communities. While poverty is an important factor, poor knowledge about nutrition and limited community support often contribute significantly to the problem. Therefore, improving nutrition education and strengthening community-based interventions are essential strategies for reducing undernutrition among young children.

Importance of Nutrition to Life

Nutrition is a fundamental requirement for human survival and development. It provides the energy needed for daily activities and supports healthy growth and development. Proper nutrition strengthens the immune system, reduces the risk of disease, improves learning ability and enhances overall quality of life.

Achini Weerasinghe



In children, nutrition is especially important because it supports the development of the brain, muscles, bones and organs. Well-nourished children are more likely to perform better in school, have stronger immunity, and grow into healthy adults. On the other hand, poor nutrition can lead to illness, developmental delays, poor academic performance, and reduced productivity in later life.

Maternal nutrition

Maternal nutrition and adequate rest during pregnancy are essential for the healthy growth and development of the foetus. A mother who consumes a balanced diet rich in energy, protein, vitamins, and minerals, while also getting sufficient rest and sleep, is more likely to have a healthy pregnancy and deliver a baby with an appropriate birth weight. In contrast, poor maternal nutrition, excessive physical workload, and inadequate rest can increase the risk of low birth weight and premature birth. Low-birth-weight infants are more vulnerable to infections, poor growth, developmental delays, and learning difficulties. They are also at greater risk of developing chronic diseases such as diabetes, hypertension, and cardiovascular disease later in life.

Undernutrition in Early Childhood

Undernutrition occurs when a child does not receive enough energy, protein, vitamins, or minerals to meet the body's needs. It can result in stunting (poor growth in height), wasting (low weight for height), underweight and micronutrient deficiencies.

Children living in disadvantaged communities are particularly vulnerable to undernutrition. In many cases, families may have access to some food but lack knowledge about appropriate feeding practices, balanced diets, breastfeeding, and child care. As a result, undernutrition is not only a problem of food availability but also a problem of education and awareness.

Alcoholism is another significant factor contributing to undernutrition in plantation communities. Excessive spending on alcohol reduces the household income available for nutritious food, healthcare, and education, thereby increasing poverty and financial insecurity. Alcohol abuse can also negatively affect family relationships, creating stress and reducing overall family well-being and happiness. Research has shown that children of mothers experiencing stress, depression, or unhappiness are more likely to have inadequate weight gain and poor growth during early childhood. Maternal emotional well-being influences childcare practices, feeding behaviours, and the overall nurturing environment of the child. These factors, together with poverty, limited nutrition knowledge, poor feeding practices, and inadequate access to healthcare services, represent some of the many underlying causes of undernutrition in the plantation sector.

The Impact of Poor Knowledge on Child Undernutrition

Poor nutritional knowledge among parents and caregivers is one of the most important causes of undernutrition in early childhood.

Many parents may not understand the nutritional needs of infants and young children. Some mothers stop breastfeeding too early or introduce inappropriate foods before the recommended age. Others may not know how to prepare balanced meals using locally available and affordable foods.

Other unhealthy feeding practices observed among plantation families include providing children with junk food, long gaps between meals, offering milk immediately before mealtimes, and serving inadequate portion sizes. These practices can reduce children's appetite for nutritious foods and contribute to poor dietary intake. In addition, continued breastfeeding beyond one year is often limited, and the introduction of appropriate complementary (weaning) foods among infants is frequently inadequate in terms of both quantity and nutritional quality. Such feeding practices increase the risk of undernutrition and may negatively affect children's growth and development.

Furthermore, limited education often affects a caregiver's ability to access and understand health information. Studies have shown that children of mothers with higher levels of education generally have better nutritional status than children whose mothers have limited educational opportunities



The Role of Poor Communities in Undernutrition

Undernutrition is more common in poor communities where families face economic and social challenges. These communities often have limited access to healthcare services, clean water, sanitation facilities, and nutritious foods.

Low-income families may rely on inexpensive foods that fill hunger but do not provide essential nutrients. In addition, unemployment, poor housing conditions, and food insecurity can make it difficult for parents to meet the nutritional needs of their children.

Community factors also influence child nutrition. In areas where nutrition education programmes are lacking, harmful feeding practices can become common and persist across generations. Without community support systems, vulnerable families may struggle to obtain the resources and information needed to raise healthy children.

Strategies to Reduce Undernutrition Through Knowledge Improvement and Community Action

1. Nutrition Education for Parents and Caregivers
2. Community Awareness Programmes
3. Strengthening Maternal Education
4. Community Health Worker Programs
5. Promoting Home Gardening
6. Improving Water, Sanitation, and Hygiene
7. Community Support and Food Assistance
8. Encouraging Community Participation



The Plantation Human Development Trust (PHDT) has implemented several programmes to address undernutrition among children in plantation communities. PHDT coordinates the Government Midday Meal Programme in Child Development Centres (CDCs) and provides start-up grants of Rs. 25,000 to selected CDCs to strengthen and sustain meal programmes. The organization also coordinates the distribution of Thripasha to eligible CDC children and supports initiatives aimed at improving child nutrition.

To enhance household food security, PHDT encourages home gardening and has established demonstration gardens in CDCs to promote the cultivation of nutritious foods. Regular monitoring of children's weight and growth is conducted to identify and support undernourished children at an early stage.



PHDT works closely with Child Development Officers (CDOs) and public health teams by providing training on growth monitoring, nutrition awareness, and the identification of undernutrition among children under five years of age. Educational programmes are conducted for pregnant mothers on household food security, maternal nutrition, and the importance of a balanced diet during pregnancy. Parents of undernourished children are also educated on appropriate feeding practices, food security, and measures to address factors contributing to undernutrition.

Community participation is encouraged to support undernourished children and vulnerable families. Nutrition education programmes are conducted for children to promote healthy eating habits and proper dietary practices from an early age. In addition, CDOs receive comprehensive training on child nutrition, food preparation, parental awareness, food demonstrations, growth monitoring, family-based interventions, disease prevention, and home gardening. As frontline workers who maintain close relationships with families, CDOs play a vital role in promoting nutrition, monitoring child growth, and supporting community-based interventions to reduce undernutrition in plantation communities

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If your lecturer requires **5–8 references only**, the first five sources above are sufficient and are highly credible international sources for a nutrition and undernutrition assignment.

Heartburn is a common concern for many Sri Lankans. It's something that many people experience, and you're not alone in this. If you're feeling discomfort, know that help and advice are available to **make you feel better.**

Dr. Harold Gunawardena



Heartburn is a common symptom of a condition known as GastroEsophageal Reflux Disease (GERD).

It's interesting to see that about 25.3% of Sri Lankans may experience probable GERD, which is quite a bit higher than the global average of 13.8%. Factors such as meal-related lifestyle habits such as often skipping breakfast or eating late along with mental stress and specific dietary choices seem to play a significant role.

This happens because of a physical issue in the valve system, which stops gastric acid and food from refluxing and aids in digestion.

A chronic cough caused by acid reflux can be uncomfortable, but understanding it can help you manage the symptoms effectively.

If you're experiencing acid reflux that reaches your throat or airways, it might lead to a persistent cough. Often, people mistake this for a bronchial problem or a lingering cold. The irritation from stomach acid or enzymes can affect your throat and vocal cords or trigger a nerve reflex, prompting you to cough. Understanding this connection can help you find the right way to address it.

Understanding the difference between hyperacidity and acid reflux can really help you manage heartburn more effectively. Hyperacidity occurs when your stomach produces too much acid, leading to discomfort, while acid reflux occurs when that acid flows back into your oesophagus, causing the familiar burning sensation. Knowing these differences empowers you to find the right relief and take better care of your digestive health. The core distinction lies between hyperacidity (having too much stomach acid) and mechanical reflux (where normally acidic stomach contents wash into the oesophagus due to a faulty valve). Understanding this difference is vital for effective treatment. Treating a mechanical valve problem as an overproduction issue can sometimes make the underlying problem worse.

Here's what you can do first if you're experiencing GERD. Making some simple changes to how you eat and sleep can really help manage GERD better! For example, try to eat your last meal at least 3 hours before lying down, so your stomach has enough time to empty. When you sleep, instead of just stacking pillows, consider elevating your entire upper body by 6 to 8 inches with a special wedge pillow or adjustable bed. Sleeping on your left side can also make a difference, as it keeps your stomach lower than the oesophageal valve, making it harder for acid to rise. These little adjustments can make you feel more comfortable and help reduce symptoms.

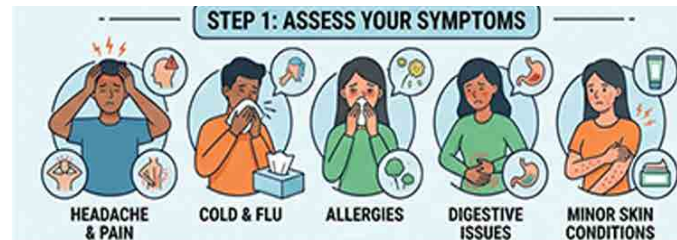
GERD medications treat acid reflux by neutralising stomach acid, reducing its production, or healing oesophageal inflammation.

Choosing the right medication really depends on your symptoms, and typically, treatment starts with simpler, over-the-counter options before moving on to prescriptions.

For mild and occasional heartburn, antacids like Tums, Rolaids, or Mylanta can provide quick relief by neutralising stomach acid. If your symptoms are a bit more persistent or tend to flare up in the evening, H2 blockers such as Pepcid, Tagamet, or Axid can help by reducing acid production. These are available both over the counter and by prescription.

For more serious or ongoing issues, Proton Pump Inhibitors (PPIs) like Prilosec, Prevacid, Nexium, or Protonix can be very helpful in healing your oesophagus and easing your symptoms by completely blocking acid production. Just keep in mind that some PPIs need a prescription, and it's a good idea to check with your doctor about long-term use to ensure you're staying healthy and avoiding any nutritional gaps.

If you're dealing with regurgitation or acid reflux, foaming agents or alginates like Gaviscon can help by forming a protective barrier in your stomach, making it less likely for acid to come back up.



If standard treatments don't quite do the trick, your doctor may recommend stronger options, such as P-CABs like vonoprazan or prokinetics. These can help your stomach empty more efficiently and support the lower oesophageal sphincter. Remember, it's always a good idea to chat with your healthcare provider to find the safest and most effective solution tailored just for you.

If you experience heartburn after a heavy night of drinking, the quickest remedy might be right in your fridge. A cold glass of milk can offer temporary relief from GERD-related burning because its cool temperature helps soothe the irritated oesophagus, and its calcium provides a brief buffer against stomach acid. Just keep in mind, though, that this isn't a long-term fix. Dairy fats and proteins could trigger an "acid rebound," which might make your symptoms worse 20 to 60 minutes later.

Other concerns involve reducing stomach acidity to help with GERD.

Lowering gastric acid with medications like antacids, H2 blockers, or PPIs to manage GERD can sometimes affect digestion and nutrient absorption. Our stomach needs to be quite acidic (pH < 2) to activate pepsin, which helps digest proteins, and to absorb important micronutrients properly. Long-term use of these medications might lead to deficiencies in nutrients like vitamin B12, calcium, magnesium, and iron. Here's what can happen:

Impaired Protein Breakdown:

Drugs such as Proton Pump Inhibitors (PPIs) can raise your stomach pH and slow down pepsin activity, which means your body has a tougher time breaking down proteins in your food. This might lead to bloating and gas and can even affect muscle building. Nutrient Malabsorption:

Because stomach acid plays a key role in freeing vitamins and minerals from your food, lowering acid levels can sometimes make it a bit harder for your body to absorb important nutrients like calcium, magnesium, iron, and vitamin B12.

Altered Gut Microbiome:

Your stomach's acidity also helps block harmful germs. Lower acidity can alter your gut bacteria and may increase the risk of infections and conditions such as small intestinal bacterial overgrowth (SIBO).

Foods to avoid:

To keep heartburn at bay, try to steer clear of foods that relax the lower esophageal sphincter (LES) or boost stomach acid. Some common offenders include fried and greasy foods, citrus fruits, tomatoes, chocolate, caffeine, alcohol, and spicy ingredients.

You can help your digestive system feel more comfortable by reducing or avoiding these typical irritants: Fatty & Fried Foods: Greasy, deep-fried dishes and high-fat meats like bacon or marbled steak tend to stay longer in your stomach, which can slow digestion and increase acid pressure. Acidic Fruits & Veggies:

Citrus fruits such as oranges, lemons, and grapefruits, along with tomatoes (including marinara and salsa), are naturally acidic and may irritate your oesophagus. Spices & Alliums: Hot peppers, chilli powder, and raw onions or garlic often trigger heartburn. Sweets & Stimulants: Chocolate (which contains caffeine and theobromine), coffee, tea, and alcohol can relax the LES, making it easier for acid to move up. Carbonation & Mint: Fizzy sodas can increase gas and pressure, while peppermint might relax the oesophageal sphincter.

Considering eating more garlic and onions with GERD? Let's look at the best approach to managing your symptoms effectively.

It's a common misconception that garlic and onions help reduce heartburn, but they are among the most typical dietary triggers for acid reflux. They can stimulate excess stomach acid, relax the lower oesophageal sphincter, and lead to that burning sensation you might experience. Here's why they can trigger heartburn: Garlic and onions relax the oesophageal sphincter, the valve between your stomach and oesophagus, which can allow acid to flow back up. Raw garlic and onions are especially acidic and tough on digestion. Additionally, onions have high levels of fructose and fructans, which can ferment and worsen digestive discomfort.

Dear readers of my article, I sincerely hope this article offers a clear and helpful overview of the issues surrounding acid reflux. I want you to feel supported and informed after reading it.

The Green Evolution: Unlocking the Potential of Sri Lanka's MSMEs

H. A. Mahagedara



Introduction

Micro, Small, and Medium Enterprises (MSMEs) serve as the bedrock of our economy. They are not merely statistical entities; they are the neighbors and local pioneers who drive our industrial and service sectors. Data from the Department of Census and Statistics indicates that by 2018 ,

There were approximately 1.3 million active MSMEs in the nonagricultural sector a testament to the scale and significance of this segment. While official estimates suggest these enterprises contribute over 50% of our GDP and account for nearly 45% of total employment, their true value extends far beyond these figures. Drawing on a decade of active field engagement, it is evident that these businesses function as the primary engine of local resilience and innovation. As we look toward the future, the integration of sustainable, green practices presents a transformative opportunity. By aligning national sustainability goals with the practical, day-to-day realities of our entrepreneurs, we can foster a model where ecological responsibility serves as a strategic catalyst for long-term competitiveness.



The Current Landscape: Navigating a Period of Transformation

The discourse surrounding “green business” is often mistakenly framed as a novel or foreign concept. While the technical terminology may be modern, the underlying practices are deeply woven into the fabric of our MSME sector. Concepts such as the 3R framework (Reduce, Reuse, Recycle), energy conservation, and the mitigation of post-harvest losses are not alien; they are an extension of the traditional and religious values that have guided Sri Lankan communities for generations. Many local entrepreneurs are inherently familiar with the philosophy of minimizing waste and valuing resources, having inherited these practices as part of their cultural heritage.

For many, these are simply common-sense approaches to resource management, applied in various forms for decades. However, a significant gap persists between this innate knowledge and the formal, consistent practice of these principles in a modern business context. My experience over the past decade reveals that this disconnect is rarely due to a lack of interest or competence. Rather, it stems from tangible, operational realities:

- **Financial and Resource Constraints:** The high initial capital required for energy-efficient appliances often makes them inaccessible for small-scale operators. Furthermore, the limited availability of appropriate, affordable equipment in the local market remains a persistent barrier to entry.
- **The Profit-Focused Mentality:** In a sector where survival is tied to daily cash flow, the pressure to maintain immediate margins is intense. This environment prioritizes short-term stability, which often overshadows the adoption of sustainable practices that require upfront investment.
- **The “Profitability Gap” in Perception:** A fundamental barrier is the lack of clarity regarding the long-term economic dividends of green business. Many entrepreneurs struggle to visualize the “end profit” the point at which an investment in resource efficiency today yields reduced operational costs and increased competitiveness tomorrow.

Recognizing this landscape is essential. We are not starting from zero. The MSME sector possesses a foundation of traditional knowledge and a culture of resourcefulness; our challenge is to provide the practical, localized tools such as Resource Efficiency and Cleaner Production (RECP) frameworks that make these practices easier to adopt than less efficient, traditional alternatives.

Bridging the Gap: Pathways to Practical Sustainability

If we accept that the drive for efficiency is already present, the way forward is to simplify the transition. To transform traditional resourcefulness into modern, sustainable business models, we must focus on three strategic pathways:



- **From “Cost” to “Operational Excellence”:** We must shift the conversation away from the upfront costs of “green” tech and toward the immediate benefits of RECP. By treating waste, energy leaks, and post-harvest losses as “hidden costs,” entrepreneurs can view RECP as a cost-cutting strategy rather than an additional expense. The focus should be on incremental, low-cost modifications that improve the bottom line in the immediate term.
- **Localized Solutions for Local Challenges:** There is a persistent mismatch between international green technology and the operational reality of a local workshop or farm. We must encourage a market shift toward “appropriate technology” equipment that is affordable, repairable, and specifically designed for our local context. When tools are tailored to the scale of the business, the barrier of accessibility is significantly reduced.

- Visualizing the “End Profit”: Bridging the profitability gap requires a shift in perspective. Sustainability is most successful when presented as a tool for competitiveness. By documenting and sharing local success stories demonstrating how businesses reduced their material costs or accessed new markets through 3R concepts we can create a peer-led movement. When an entrepreneur sees a fellow business owner thrive through these changes, the concept of “end profit” becomes tangible and achievable.

The Vision Forward: A Sustainable Future

As we look toward the next decade, it is clear that the integration of sustainable practices is not an elective path, but an essential one. This transition must not be a top-down mandate; it must be a journey built on the foundations of our own ingenuity. Moving forward, success will depend on fostering collaborative ecosystems where knowledge is shared, aligning national policies with grassroots realities, and championing a new narrative of growth. We must move past the perception that sustainability is a luxury, and instead celebrate the entrepreneur who through simple, smart choices has turned resource efficiency into a mark of professional success.

In closing, my decade of experience in this sector has taught me one enduring lesson: our entrepreneurs are not afraid of progress. They are simply looking for the clarity, the tools, and the encouragement to take the next step. If we provide that, the green transformation of our MSME sector will serve as a catalyst for a new era of economic resilience for Sri Lanka. The future of our economy lies not just in the scale of our businesses, but in the wisdom with which we manage our resources.

Key Data Sources:

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Planting the Future: How Digitalization AI can Transform Sri Lanka's Plantations

Shanaka Rajapaksha

When I look back at my journey in the plantation industry, I realise that some of the most important milestones were not simply about technology. They were about connecting people, information and plantations in new ways.

The plantation industry is one of Sri Lanka's most important and historic sectors. It is also a very different environment from many other industries. Plantations are spread across large geographical areas, with estates, factories, field operations and people working in different locations. Managing such an environment has always required good communication, timely information and strong decision-making.

My digitalization journey in this sector began at a time when many of the technologies we take for granted today were still relatively new.

The 2010 milestone

One of the most significant milestones in my journey came in 2010, when we connected plantations through a secure network using VPN technology for the first time in Sri Lanka.

Today, connecting different locations may sound routine. But at that time, it was a significant achievement. Plantations were geographically dispersed, and getting information from one location to another was not as easy or as fast as it is today.

Connecting the plantations created a new way of working. It meant that information could move between estates and the central organization more efficiently. People could communicate better, systems could be accessed centrally, and management could begin to have a more complete picture of what was happening across different locations.

For me, this was more than an IT project. It was about breaking down the distance between plantations and the organization.

It was the beginning of a journey from individual, isolated operations towards a more connected plantation environment.

Moving towards an integrated business

The next important step was the implementation of a modern, centralized business system under my leadership.

The objective was not simply to introduce another computer system. The real objective was to bring different areas of the business together and make information more useful to management and operational teams.

A plantation generates information every day about production, labour, field activities, materials, costs, machinery and many other areas. When this information remains separated, it becomes difficult to see the bigger picture.

By bringing business information together, we started creating greater visibility across the organization. Management could move towards making decisions based not only on experience and intuition, but also on information that was available through the system. At the time, this represented a major change in thinking. Two years building a centralised plantation database

Another particularly significant chapter of my journey was spending nearly two years working on a centralised plantation database.

consider this an important milestone because data is the foundation of digital transformation.

The challenge was not simply storing information. It was bringing together information from different plantations and creating a common understanding of the business. We were effectively creating a digital memory for the plantation sector bringing together information that could be used for reporting, planning, analysis and decision-making.

Looking back, I believe this work created a foundation for what we are talking about today with artificial intelligence. At that time, our focus was on collecting, organizing and making information available. Today, the opportunity is to take the next step: making that information intelligent.

The next chapter – Generative AI

We are now entering an exciting new era with Generative AI.

When we talk about AI, it is easy to make the subject sound complicated. But for the plantation industry, the real value of AI can be very simple:

Can we use the information we already have to help our people make better decisions?

Imagine a plantation manager being able to ask:

"Why has production decreased in this estate?"

Instead of searching through multiple reports and records, an AI system could examine available information such as historical production, rainfall, weather conditions, field activities, and other relevant data, and help identify possible reasons for the decline. The manager could then ask another question: "What should we look at first?"

This is where generative AI can become a powerful assistant. AI as an assistant, not a replacement

I believe it is important that we do not look at AI as a replacement for the people who work in our plantations. The plantation industry has enormous practical knowledge accumulated over generations. Experienced estate managers, field officers, factory managers and workers understand their environments in ways that cannot simply be replaced by technology.

For example, a field officer may need information about a particular cultivation practice. Instead of going through several manuals or asking different people, an AI assistant could provide the relevant information quickly.

Similarly, an organization could capture the knowledge of experienced professionals and make it available to younger employees. In this way, AI could help preserve some of the valuable knowledge that otherwise may be lost when experienced people leave the industry.

Where can AI make a difference?

There are many practical opportunities.

Production forecasting: AI could analysis historical production, weather and field information to help estimate future production.

Early identification of problems: Changes in production, weather or field conditions could be identified earlier, allowing management to respond before a small problem becomes a major one.

Workforce planning: Better use of historical information could help organizations plan labour requirements and allocate resources more effectively.

Maintenance: Information about machinery and equipment could be used to identify potential maintenance requirements before major breakdowns occur.

Cost management: AI could help management understand where costs are increasing and identify areas where efficiency can be improved.

Knowledge management: Years of reports, manuals, procedures and professional experience could become a valuable knowledge resource accessible to managers and staff.

Decision support: Instead of simply producing reports, future systems could explain what the information means and highlight areas that require management attention.



From digital plantations to intelligent plantations. When I think about the journey, I see a clear progression. First, we connected the plantations. Then, we connected the business through integrated systems. Then, we brought information together through centralised databases.

The next step is to connect that information with intelligence.

This is where I believe Generative AI can make a real difference to the future of Sri Lanka's plantation sector. But technology alone will not create this transformation. The foundation must be good-quality data, strong processes and people who are willing to embrace change. We also need to ensure that AI is introduced responsibly, with appropriate attention to data security, privacy and the accuracy of information. AI should support human judgement, particularly when decisions have significant operational or financial consequences.

The plantation industry has already demonstrated that it can adapt to change. The digital journey that began many years ago is evidence of this.

Looking ahead

Sri Lanka has a long history and deep expertise in plantation agriculture. If we combine that experience with the digital foundations that have been built over the years, we have an opportunity to create a new generation of smart and intelligent plantations. For me, the milestone of connecting plantations through VPN in 2010 will always remain a significant part of my digitalization journey. The subsequent work of implementing integrated systems and spending two years developing a centralized plantation database were further steps along the same path.

At the time, we were solving the problems of our day.

Today, we have an opportunity to build on those foundations and solve tomorrow's challenges.

The journey started by connecting plantations. It continued by connecting information. The next chapter is about connecting information with intelligence.

And ultimately, the goal remains the same: better information, better decisions, better people and a stronger future for Sri Lanka's plantation industry.



Beyond Welfare: The Journey Towards Human Development

The story of the Plantations Human Development Trust (PHDT) is a story of people. From its origins in social welfare to its evolution into a human development organization, our journey reflects a growing commitment to dignity, opportunity and empowerment of plantation communities.



Dinushika Kahadawe Arachchi

The PDSP sought to improve the well-being of plantation communities, contribute to economic performance and employment, support productivity and labour retention, and contribute to the stability of the plantation sector. **"A better plantation sector must also mean a better quality of life for the people who sustain it."**

WHERE THE JOURNEY BEGAN

Following the nationalization of the plantation sector in the 1970s, the State Plantations Corporation (SPC) and the Janatha Estate Development Board (JEDB) became responsible for the management of the state-owned plantations. Both institutions had welfare divisions that sought to address the social needs of plantation workers.

It was in this context that the Plantation Development Support Programme (PDSP) emerged, with technical assistance from the Programme Support Group (PSG). The programme was implemented through the Plantation Housing and Social Welfare Trust (PHSWT), established in 1992 as the successor to the social development divisions of the SPC and JEDB.

MORE THAN A HOUSE

Housing and infrastructure formed an important part of the PDSP. Yet the programme also recognised that development could not stop at the doorstep of a house.

A family needs access to healthcare. Children need opportunities to learn and progress. Communities need safe and healthy surroundings. Workers need dignified working conditions.

The PDSP therefore included not only housing and infrastructure, but also complementary activities such as training, capacity building and social mobilization.

"Human development is never one-dimensional. It requires education, healthcare, nutrition, sanitation, infrastructure, social participation and opportunities for the next generation."

FROM PHSWT TO PHDT

In 2001, following the phasing out of the Programme Support Group, the Plantation Housing and Social Welfare Trust was renamed the Plantation Human Development Trust.

The change in name represented something much more meaningful. The word "Human" placed people at the centre of the organisation's purpose.

The transition reflected a growing understanding that the plantation community should not be viewed merely through the lens of welfare requirements, but as a community with aspirations, potential and the right to opportunities that can help families build better lives.

Development is not simply about providing something to someone. It is about creating the conditions in which individuals, families and communities can participate, grow and move forward with confidence.

"Human development is much broader than welfare. It is about creating opportunities and building capabilities."

DEVELOPMENT WORKS BEST WHEN COMMUNITIES PARTICIPATE

One of the notable strengths of PHDT's approach has been its emphasis on stakeholder cooperation, participation and community-driven development.

The Estate Worker Housing Cooperative Societies (EWHCSs) have evolved into platforms for wider development, including credit services, welfare initiatives and nutrition programmes.

"People should not simply be recipients of development. They should be participants in it."

When communities are given the opportunity to participate, take responsibility and contribute to decisions, development becomes more meaningful – and more sustainable.

A JOURNEY THAT CONTINUES

The plantation community continues to evolve. The aspirations of young people are changing. Families face new economic and social realities. Our responsibility is therefore not simply to preserve what has already been achieved. It is to continuously ask ourselves:

- What more can we do?
- How can we create better opportunities for the children of plantation families?
- How can we strengthen the health and well-being of communities?
- How can we improve housing and living conditions while creating greater participation and ownership?
- How can we ensure that the progress we make today creates a stronger foundation for generations to come?

These are questions that should remain at the heart of our work.

THE MEANING BEHIND OUR WORK

The deeper measure of our success is found in the lives behind the numbers.

- The family that can live with greater dignity.
- The child who sees education as a pathway to a better future.
- The mother who has access to better health and nutrition.
- The worker who feels valued and respected.
- The community that has a voice in its own development.

"The real measure of our work is not found only in numbers, but in the lives behind those numbers."

THE JOURNEY CONTINUES.

From welfare to human development.
From assistance to empowerment.
From working for communities to working with them.

We are not only building infrastructure. We are helping build communities. We are not only providing services. We are creating opportunities. And we are not simply working for people. We are working with them.

Not simply building houses, but building better lives.



PHDT

Plantation Human Development Trust

Plantation Sector Digitalization

Empowering People • Enhancing Productivity • Building a Sustainable Future

Harnessing digital technology and innovation to transform the plantation sector, improve livelihoods, ensure transparency, and create a smarter, more sustainable tomorrow for our communities.



SMART PLANTATIONS

IoT, sensors & data analytics for better farm management and higher yields.



DIGITAL EDUCATION

E-learning and AI-powered training to build skills and empower people.



MARKET ACCESS

Digital platforms connecting growers to markets and new opportunities.



TRANSPARENCY & TRACEABILITY

QR traceability and digital records for trust, quality and accountability.



EMPOWERED COMMUNITIES

Technology for inclusion, better services and stronger communities.



SUSTAINABLE FUTURE

Digital solutions for environmental care and a greener tomorrow.



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