

TEA DIALOGUE

A BULLETIN FOR CURIOUS MINDS POWERED BY PHDT

WHERE IDEA STEEP AND CONNECTIONS BREW

3rd Quarter
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Ministry of Plantation and Community Infrastructure



CEYLON CINNAMON FOR A PREMIUM
GLOBAL FUTURE

DUNSINANE ESTATE LEADING THE WAY IN
TEA, TRADITION AND SUSTAINABILITY

YOUR PRECIOUS SOIL AND PLANTING BASICS

HOW MODERN-DAY ARCHITECTURE
SHAPES THE LIVES OF PEOPLE

STRENGTHENING THE PLANTATION
WORKFORCE

BRIDGING THE GAP FOR BETTER
CHILD HEALTH

EMPOWERING PLANTATION COMMUNITIES TO
OVERCOME UNDERNUTRITION



NO 427/14

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UNIVERSITY ENTRANCE PLANTATION STUDENTS



Plantations students Scholarships 2024 - 2025

At PHDT, we believe that children are not merely the leaders of tomorrow they are the most powerful and sustainable investment we can make today. Every child represents potential, resilience, and the possibility of transformation. When a child is given the right opportunities, the benefits extend far beyond individual success; they ripple through families, communities, and generations. With this deeply rooted belief, PHDT continues to champion education as a fundamental pillar of social progress.

Guided by this vision, PHDT proudly extends scholarships to deserving students from the Plantation sector who have successfully gained admission to national universities. These scholarships are not simply financial contributions; they are bridges to opportunity, dignity, and empowerment. For many of these young individuals, university education once seemed like a distant dream. Through PHDT's commitment, that dream becomes attainable, realistic, and transformative. Regional Plantations Company also encourages and supports those students more.

These young scholars carry more than academic ambition. They carry the aspirations of their parents who have worked tirelessly, the unity and resilience of plantation communities, and the collective hope for a brighter and more equitable future. Their achievements are not isolated victories they symbolize the progress of entire communities striving for recognition, inclusion, and growth. Each student represents a story of perseverance, courage, and determination to rise above limitations and redefine possibilities.

PHDT's commitment goes beyond scholarships. It is rooted in a holistic and long term approach to development. Education is viewed not as a single milestone, but as a continuous journey that begins in early childhood and evolves through every stage of life. From the nurturing environment of the Child Development Centres (CDC) to the challenging and inspiring world of university education, PHDT ensures that children receive consistent guidance, mentorship, and support. This continuum of care plays a vital role in shaping confident, capable, and socially responsible individuals.

True development is not limited to academic success alone. PHDT recognizes that sustainable change must address the broader ecosystem in which children grow. Therefore, alongside empowering students, the organization actively works to uplift plantation families by strengthening livelihoods, promoting economic stability, enhancing access to healthcare, and encouraging community participation. When families thrive, children flourish; when communities are empowered, nations progress.

Exposure to innovation, digital literacy, and emerging technologies is another cornerstone of PHDT's vision. In a rapidly evolving global landscape, preparing young minds to think critically, adapt quickly, and engage creatively is essential. PHDT creates pathways for students to explore new knowledge, modern skills, and diverse perspectives, ensuring they are not only educated but also future ready.

The impact of this collective effort is visible in the confidence of students who once doubted their potential, in the pride of parents who witness their children's achievements, and in the strengthening bonds within plantation communities. Each scholarship awarded is a seed planted a seed that grows into leadership, service, and innovation. Over time, these seeds cultivate a generation capable of contributing meaningfully to society and inspiring others to follow similar paths.

PHDT's journey is built on partnership, compassion, and shared responsibility. Government institutions, private sector collaborators, educators, donors, and community leaders all play a crucial role in sustaining this mission. Together, they form a network of support that transforms individual success stories into collective progress.

Ultimately, the success of these students is not only a personal milestone; it is a shared celebration for families, communities, and the nation. Their achievements affirm that with consistent guidance, inclusive opportunities, and unwavering belief, destinies can indeed be changed.

Their success is our shared pride. Their future is our collective responsibility. Through education, empowerment, and enduring commitment, PHDT continues to invest in children investing in hope, investing in progress, and investing in a better tomorrow for all..

TEA DIALOGUE

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Beyond Tradition: Repositioning Ceylon Cinnamon for a Premium Global Future

Anura Ranawaka

Ceylon cinnamon, revered worldwide as the only “true cinnamon”, is one of Sri Lanka’s most distinctive agricultural gifts to global trade. Celebrated for its delicate aroma, mild sweetness, thin quills, and exceptionally low coumarin content, it stands apart from Cassia cinnamon, which dominates global markets by volume rather than quality. For centuries, Ceylon cinnamon has embodied authenticity, craftsmanship, and Sri Lanka’s enduring presence in the world spice economy. Yet, despite its unmatched reputation and biological superiority, the cinnamon industry has long failed to capture the full value of what it produces. Sri Lanka remains the world’s primary supplier of authentic cinnamon, but much of it still leaves the country as a low-value raw commodity. This persistent gap between product excellence and economic returns lies at the heart of the sector’s current turning point.

A Heritage Commodity at a Crossroads

Today, Sri Lanka’s cinnamon industry stands at a decisive crossroads. While global demand increasingly favors traceable, safe, and premium-quality spices, Sri Lanka continues to rely heavily on bulk exports to price-sensitive markets. These markets absorb large volumes but generate limited income growth for farmers, peelers, and processors. At the same time, high-value segments where consumers reward certification, hygiene, branding, and provenance remain underexploited.

This disconnect has tangible consequences. Export earnings remain modest relative to potential, incomes along the value chain are constrained, and younger generations are reluctant to enter a sector perceived as physically demanding, informal, and under-rewarded. Without deliberate transformation,

Sri Lanka risks remaining a low-value supplier despite producing one of the world’s most premium spices.

A Shifting Global Opportunity

Paradoxically, global market dynamics have never been more favorable for Ceylon cinnamon. Consumers in Europe, North America, Japan, and other advanced markets are increasingly conscious of food safety, authenticity, and health impacts. As regulations tighten and awareness grows around compounds such as coumarin, demand is steadily shifting toward cinnamon varieties that meet strict safety thresholds precisely where Ceylon cinnamon holds a natural advantage.

Beyond traditional culinary uses, cinnamon is gaining prominence in nutraceuticals, functional foods, cosmetics, aromatherapy, and natural health products. These fast-growing segments offer far higher margins than bulk spice trade. Yet Sri Lanka captures only a fraction of this value, largely due to limited diversification, weak branding, and gaps in processing and certification capacity. The opportunity is clear: reposition Ceylon cinnamon not as a commodity, but as a premium, differentiated global ingredient.

GI Recognition: A Powerful Tool, not a Guarantee

The granting of European Union Geographical Indication (GI) status to “Ceylon Cinnamon” in 2022 marked a historic milestone. The GI legally recognizes the inseparable link between the cinnamon’s quality and its Sri Lankan origin, protecting the name from misuse and placing it alongside globally revered products such as Champagne and Parma Ham. However, GI status alone does not create value.

It is a platform, not a shortcut. To convert legal recognition into higher incomes and market power, the entire value chain must meet rigorous standards of quality, hygiene, traceability, and certification. Without systemic reform, GI risks becoming a symbolic victory rather than an economic one.

The Institutional Turning Point: Department of Cinnamon Development

Recognizing these long-standing challenges, Sri Lanka has taken a decisive institutional step with the establishment of the Department of Cinnamon Development (DCD). For the first time, a single, dedicated authority is responsible for guiding the entire cinnamon value chain from cultivation and processing to research, certification, branding, and market development.

The DCD represents a fundamental shift away from fragmented, ad hoc interventions toward an integrated, value-chain-driven strategy. Its vision acknowledges a simple reality: continued reliance on raw exports and volume-driven growth will not deliver sustainable benefits. Instead, the future of Ceylon cinnamon lies in value addition, quality leadership, innovation, and credible global positioning.

By aligning research institutions, training centers, extension services, and private-sector stakeholders, the DCD provides the institutional backbone needed to translate Sri Lanka's comparative advantage into competitive strength.

Modernizing Without Losing Identity.

One of the most delicate challenges in cinnamon transformation is modernization without eroding heritage. Cinnamon peeling remains a highly skilled traditional craft, but low wages, poor ergonomics, and informal working conditions have discouraged new entrants. Skill shortages are emerging, threatening both quality and continuity. Addressing this requires structured training, professional recognition, safer working environments,

selective mechanization, and fair income frameworks rather than the abandonment of tradition. Centralized, modern processing facilities can dramatically improve hygiene, consistency, worker safety, and certification compliance, while preserving the artisanal core of the product.

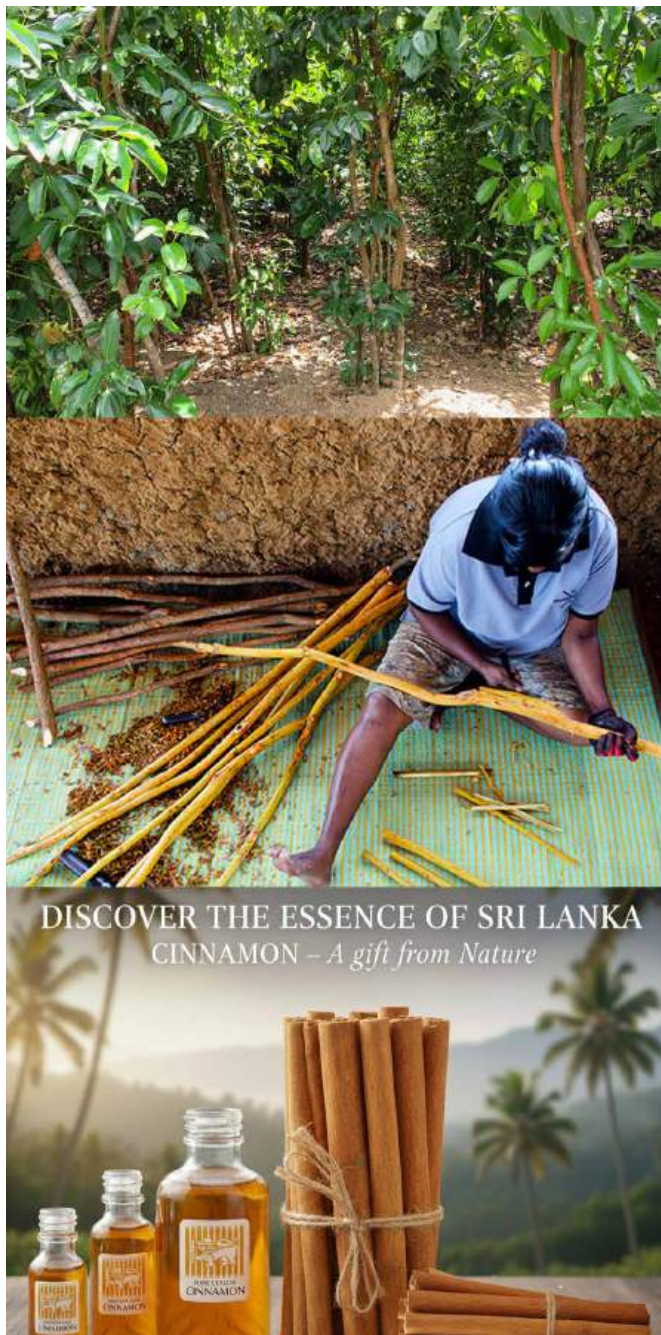
At the same time, cultivation is expanding into non-traditional regions. These new areas require research-based guidance, quality planting material, and strong extension support to ensure that national quality standards and GI integrity are not diluted by regional inconsistencies.

Building a Value-Driven Cinnamon Economy

True transformation depends on moving decisively into value addition. Essential oils, extracts, nutraceuticals, herbal products, cosmetics, and specialty retail formats offer pathways to higher incomes and industrial diversification. Small and medium enterprises are particularly well positioned to drive this shift if supported with technical knowledge, regulatory guidance, laboratory access, and market linkages. Equally critical are strong quality assurance systems. Investment in laboratory capacity, standardized grading, internationally recognized certifications, and digital traceability is no longer optional. In premium markets, trust is currency and trust depends on verifiable evidence of origin, safety, and sustainability.

People at the Center of Transformation

Cinnamon is ultimately a people-driven industry. Smallholders, plantation families, peelers, and rural workers remain its backbone. Inclusive transformation means ensuring that modernization improves livelihoods rather than marginalizing traditional actors. Strong extension services, access to finance, cooperative models, youth skills development, and women-led enterprises are essential to making the cinnamon renaissance socially sustainable.



Partnerships with institutions such as the Plantation Human Development Trust provide valuable platforms to integrate welfare, skills training, and occupational health into the industry's modernization agenda.

A Renaissance Within Reach

If pursued with coherence and commitment, the transformation of Sri Lanka's cinnamom sector can deliver far-reaching benefits. Export earnings can rise through premium pricing and diversified markets. Rural incomes can stabilize and grow. Skilled employment can replace informal labor. Sri Lanka's reputation as the undisputed home of true cinnamom can be firmly re-established, not just in name, but in value.

A New Era for Sri Lanka's Golden Spice

Ceylon cinnamom stands at a rare intersection of heritage and opportunity. The foundations for renewal are now in place: GI recognition, a dedicated institutional leader, and favorable global demand trends. What remains is execution; coordinated, people-centered, and market-driven.

With sustained leadership from the Department of Cinnamom Development and strong collaboration across public and private sectors, Sri Lanka can reclaim its golden spice as one of the country's most valuable and iconic exports. This is more than an economic aspiration. It is an opportunity to honor heritage, reward craftsmanship, and present to the world a product that truly embodies authenticity, quality, and excellence.



Dunsinane Estate Leading the Way in Tea, Tradition and Sustainability

Planters Association Ceylon

Set against the backdrop of Sri Lanka's central hills, Dunsinane Estate has stood tall since its establishment in 1879. Spanning 790 hectares in the Nuwara Eliya District, with nearly 494 hectares under tea cultivation, it remains one of the largest and most historic tea estates in the country.

The estate is currently managed by Aitken Spence Plantations and owned by Elpitiya Plantations PLC, two of the most respected names in Sri Lanka's plantation sector. Dunsinane's location in the culturally rich Pundaluoya Valley, within the Kotmale Division, with surrounding forest reserves and traditional villages tying its operations to the roots of upcountry heritage adds historical depth to its identity.

Over its long history, Dunsinane has consistently shaped the standards of high-grown CTC (Crush, Tear, Curl) teas. A pivotal milestone came in 1989, when the estate transitioned from orthodox production to CTC manufacture. Since then, it has become a benchmark for premium high-grown CTC teas, earning and maintaining the No. 1 ranking in its category from 2016 to date.

Its 1920 factory building, located at 4,600 feet above sea level, remains central to its operations. Today, the estate processes 27,000 kg of green leaf daily and produces approximately 1.3 million kg of made tea annually, upholding exceptional consistency and quality under ISO food safety standards.

Empowering Communities and Advancing Sustainability

Beyond tea, Dunsinane is deeply intertwined with the well-being of its surrounding communities. It provides direct employment to a large number of estate workers across its five divisions, Upper, Middle, Factory, North and Lower and supports many more indirectly through estate-linked services and trade.

The estate actively supports the welfare of plantation families through a wide range of community development initiatives. Educational programs provide schoolbooks, uniforms and even mobile devices to support online learning. Health-focused efforts include medical camps, blood donation drives and nutrition programs aimed at improving quality of life.

Women empowerment is a central focus, with skills training and development programs encouraging economic participation and leadership. Further, children's welfare is prioritized, with regular engagement with the National Child Protection Authority (NCPA).

A standout initiative is the Community Kitchen, designed to tackle nutrition challenges among estate families. Operating on a rotational basis across divisions, it serves freshly prepared meals at subsidized rates, managed by local volunteers and estate staff. It ensures food security and strengthens community ties.

In terms of infrastructure, Dunsinane invests in the maintenance of purified water access and road improvements. The estate's Worker Housing Co-operative Society was recognized with the Best EWHCS Award in the Nuwara Eliya Region and earned star-rated status for excellence in social development two years in a row, including 2024.

The estate's commitment to sustainability is also evident in its certifications and daily practices. It received ISO 22000:2005 food safety certification in 2009 and Rainforest Alliance certification in 2014. Since then, Dunsinane has integrated eco-conscious systems, including energy-efficient factory operations, mechanized fieldwork to improve efficiency and environmentally friendly soil and water management practices. Efforts like foliar nutrient application, improved pruning and machine plucking also contribute to better field productivity and sustainability.



Greener Horizons with Hydro Power

Dunsinane Estate is also playing a leading role in Sri Lanka's renewable energy future through Elpitiya Plantations' ambitious green energy initiatives. In 2006, Elpitiya acquired a 5% stake in the Dunsinane Power Project, a 3 MW mini hydro facility. This marked the beginning of the company's journey into clean energy.

Building on this momentum, Elpitiya commissioned the Sheen Mini Hydro Power Plant in 2008, adding 560 kW of renewable energy. In 2013, the Dunsinane Cottage Mini Hydro Plant brought an additional 900 kW online. By the end of 2013, Elpitiya had reached a total generation capacity of 1.6 MW, a significant contribution to Sri Lanka's decentralized energy grid.

These efforts reflect a broader vision for integrating sustainability into every facet of the business. Dunsinane's legacy is now deeply tied to a forward-thinking model of plantation management that respects people, the environment and future generations.

From producing world-class teas to empowering communities and investing in renewable energy, Dunsinane Estate stands as a model of how tradition and innovation can go hand-in-hand. Its journey continues to inspire the future of ethical and sustainable agriculture in Sri Lanka.



TWO WHEEL LEGENDS

The Motorcycles of Sri Lanka's Assistant Superintendents during the Nationalized Era

The smell of fresh tea leaves lingered in the crisp morning air as the engine roared to life. For an Assistant Superintendent (SD) in the plantations of Sri Lanka, that sound was more than mechanical it was the call of freedom, prestige, and power. These were not ordinary motorcycles. They were icons of an era when life in the estates was tough, adventurous, and immensely rewarding. From the misty hills of Nuwara Eliya to the lush lowlands of Galle, these machines became an inseparable part of a planter's identity. Each model carried its own story, its own mark on the roads and in history.



Niroshana Ilangaratne

The Yamaha RD 350 – From VIP Convoys to Estate Roads

The legend began in 1976, when Colombo hosted the historic Non-Aligned Summit. To escort foreign dignitaries and VIP convoys, the government imported a fleet of white color Yamaha RD 350 sleek, twin-cylinder, two-stroke beasts that looked and sounded like nothing else on the island.

After the summit ended, these bikes found a new home in the misty highlands of Ceylon. For a young SD, the RD 350 was the ultimate dream machine. With ferocious acceleration, aggressive styling, and a deep, throaty exhaust note, it was raw power on two wheels.

Those lucky few estates that got them became the talk of the region. The bikes carried the prestigious 7-Sri registration plates, a symbol of exclusivity. On a quiet Sunday morning, the RD would rip through the winding estate roads, leaving behind a trail of blue smoke and pure envy. For the planters of the 1970s, owning a RD 350 was a mark of success..



The Yamaha Enduro 175 – The Trailblazer of the Open Economy

Then came 1977 and with it, the open economy. For plantations, this meant access to a motorcycle that redefined estate life: the Blue color Yamaha Enduro 175. Unlike its road-focused predecessors, the Enduro was born for the dirt. Hi mounted mudguards, lightweight frame, and revolutionary Mono-Shock rear suspension, it was built to conquer the rugged, muddy terrain of tea estates. The early models came in striking blue and bore late 7-Sri and early 8-Sri numbers.

The front number plate painted on the top of the mudguard, often invisible when the bike was in motion a quirk that became its signature. At the planter's club, an Enduro parked with a coat of mud was more than a motorcycle; it was a badge of honor



The Yamaha AG 175 – The Workhorse with a Guard

As plantations modernized, practicality joined the equation. Enter the Yamaha AG 175a semi-trail, two-stroke workhorse built for agricultural duties. It wasn't as flashy as the Enduro, but its durability and reliability earned it a cult following. The most distinctive feature was its solid handlebar guards, an innovation that still sparks nostalgia among those who rode it. Registered under the 10-Sri series, the AG 175 was the unsung hero of the estates, carrying planters across steep slopes, muddy trails, and remote sections with unwavering dependability. Its bright orange color made it instantly recognizable on the hillsides.

The Honda CD 200 Road Master – The Legend



Under the Medium-Term Investment Project (MTIP) ushered the Honda CD 200 Road Master. Unlike the rugged trail bikes before it, the CD 200 was elegant and refined, built for comfort and class. Available in deep Red and Royal blue, adorned with chrome-plated panels, twin silencers, and a pair of horns and a unique silencer beat, it looked more like a touring machine than a plantation workhorse. Married SDs often had first choice, and weekend rides to the club with their wives on the pillion became a cherished tradition. The CD 200 carried 89-Sri and 90-Sri registrations and quickly became a status symbol. Today, fully restored models fetch over Rs. 1,000,000, a testament to their timeless charm and the golden memories they evoke.

The Honda XL 185 S – The Stylish performer



The Tea Rehabilitation and Diversification Programme (TRAD) of the mid-1980s brought a new star to the estates the Honda XL 185 S.

Bold, stylish, and ahead of its time, the XL 185 S featured a unique Old English White body with a cherry-red frame, a color combination exclusive to plantations. No other bike on the island looked like it. When an SD collected a brand-new XL 185 S from the Board office complete with toolkit, service manual, and owner's handbook it was an event worth celebrating. For many, this was one of the main reasons to join planting and was the most cherished bike of their careers.

The Yamaha SR 185 – The Low-Country Cruiser



While the hill-country planters embraced the rugged Enduros and XLs, the low-country SDs especially in Kalutara favored the Yamaha SR 185.

This maroon-colored beauty had a unique touring design and was remarkably lightweight, making it easy to handle. It came with an electric starter only no kick-starter so keeping the battery charged was essential. When the battery failed, "thallu-start" (push-starting) was the only way out a common sight on estate roads. Registered under the 90-Sri series, the SR 185 wasn't ideal for rough terrain but was a comfortable cruiser for the flat coastal estates.

The Lifestyle beyond the Machines

For planters, these motorcycles were more than mere transportation they were a way of life. After a long week of inspections, muster rolls, and factory duties, weekends meant freedom. Clubs came alive with laughter, music, and the rhythmic thump of engines outside.

There were dances, beach runs, and overnight trips, sometimes ending with a night under the stars sleeping on the very machines that carried them through the hills. Back then, these motorcycles were rare and exclusive. They turned heads wherever they went, symbolizing not just mobility, but status, adventure, independence, speed and prestige.

Why They Matter Today

The plantation motorcycle culture is a forgotten chapter of Sri Lanka's history. These machines were more than tools; they were icons of resilience, style, and freedom in an era of nationalization and economic transition. They carried a generation of planters through a time of change, challenge, and triumph leaving behind a legacy worth remembering. Today, they live on in stories, black-and-white photographs, and the hearts of those who once rode them across the emerald hills.

Your Precious Soil and Planting Basics



Dyan Seneviratne

How did you do this"? An inevitable question when fellow Planters and young PDs get to know that yours truly established the highest ever YPH & Annual Crop of Made Tea, highest NSA in the Region or even in the country with the lowest C.O.P. And such verifiable records were established in significant properties such as Hagala, Madulkelle [1977-79]; Pettiagala, Balangoda [[1979-84]; Hapugastenne [then the biggest and highest producing estate in Sri Lanka, 1985-87; Gartmore, Maskeliya [1987-1991] Diyagama West [1993-1996] largest in the upcountry etc.

My simple, albeit enigmatic response: 'Soil, Tea Bush, People'.

Your LAND is your biggest potential asset. It can be a barren wasteland with sandy sterile soils or a rich humous laden top soil protected by closely knit vibrant tea bushes literally touching each other to ensure complete merger under luxuriant High Shade such as *Grevillea robusta*, *Dadap* or leguminous *Gliricidia sepium* interspaced with SALT hedges with such a magnificent canopy your soil is a vibrant haven for micro-flora beneath the primary crop – TEA that lives in magnificent symbiotic harmony with your Living Soil indeed adynamic medium!

And not a soil with as a sterile medium of mere anchorage!

Your precious soil should never be exposed to direct sunlight, erosive rain and desiccating winds – the killer of top soil! No planter worth his salt will ever have vacant spaces [Pottals] in his tea. Yes, a vibrant, fertile soil will support most commercial crops towards sustainability, period!

Sadly some planters expect high yields by only investing in fertilizer. No doubt inorganic or organic fertilizer is vital but your soil management mechanism must ensure moisture retentive measures at all times especially during dry weather. Solid Fertilizer with macro elements NPK will be wasted if moisture is absent for effective hydrolysis to break up compounds to elements to ensure effective cat-ion, an-ion exchange for optimum absorption.

Effective Lock & Spill type Lateral Drains to trap and prevent rain water's easy downward movement instead moving to effective Leader/Reverse drain and well terraced Ravines with water trapping silt pits make the downward movement of water, not a piece of cake!

All estate roads had excellent surfaces with effective drains, culverts etc. Today most estate roads are like dried up river beds! No wonder during heavy rains the estate field roads and paths morph into gushing streams of water, displacing everything on its destructive path!

At a recent meeting with a high state official he expressed confidence that SL's national Tea Production can be expanded to 400,000 MT from its current dismal 285,000 MT by 2030 by merely expanding the diameter of the plucking table and thereby increasing Plucking Points!

It's not as simple as that I pointed out to the State Official. I told him about the fundamentals such as ensuring a VP Tea bush stand of 5,000 per acre or 13,000 per Ha. And to ensure that each bush is vibrant and productive during its 18 – 45 month productive period in a 4-year PR Cycle. Obviously a war footing on accessing suitable Cultivars as recommended by the TRI. And for that Mother Bushes should be zoned with A Grade Tea Nurseries with perhaps Israeli tech.

Then the PEOPLE are the life blood of any plantation. Ignore them at your peril! Whether you are a SD or PD apart from walking and checking on all boundary stones to prevent illegal encroachments, they must know each and every worker by name. I used to know the names of each child and even names of their pet dogs!

I was shocked that in many upcountry plantations they have done away with MUSTER! That was mandatory for all planters especially the SDs earlier. Today, I am reliably told that SDs and Field Officers have Tablets and Mobile phones to distribute their workers to their different duties!

Plantations should NOT go the way of Banks with no human face, eyes or voice. This voiceless digital AI stuff will usher in the death knell to commercial estates sooner than later! Then the abject folly of permitting Houses, businesses and even hotels by major river banks!

Look at Geliyoa Gampola flattened by the surging Mahaweli river and destroying homes with innocent countless families! When British Ceylon ruled our island they had strict restrictions and rules of never letting anyone build on river banks. They were called River Bank Reservations.

Ditto with Railways, major roads, hill sides, marshes.

- (1) Railway Reservations
- (2) Road Reservations
- (3) Forest Reservations
- (4) Hill Reservations.
- (5) Marsh/Wetland Reservations

In-fact there was a Rule not permitting the use of even weeding scrapers longer than 4 inches on estates above 4,000 MSL as such practices loosened all important top soil and made the ground sterile and hardened, permitting rapid surface run off with no percolation leave alone potential landslides

The summits of hills had to remain as forests and if denuded of trees, planters had to establish deep rooting species to have forests in apex of peaks to establish watersheds to create rain cover clouds that brought life giving rains. Forest also had to be planted in between tea fields, thus minimized flying insect pests.

The British, contrary to popular and erroneous beliefs were extremely vigilant about protecting the forests and top soil. In-fact when hilly slopes were to be planted with tea it was mandatory that we establish deep Lock & Spill Lateral Drains at a gentle gradient of 1 in 120 so that the rain water would gently move to the Leader Drains and stone Terraced Ravines before wending its way to streams.

The upper lip of all drain pits and road side banks had to be planted with a bank holding grass such as Eragrostis, Vettiver etc to preserve soil at the edges and Bamboo on large stream banks.

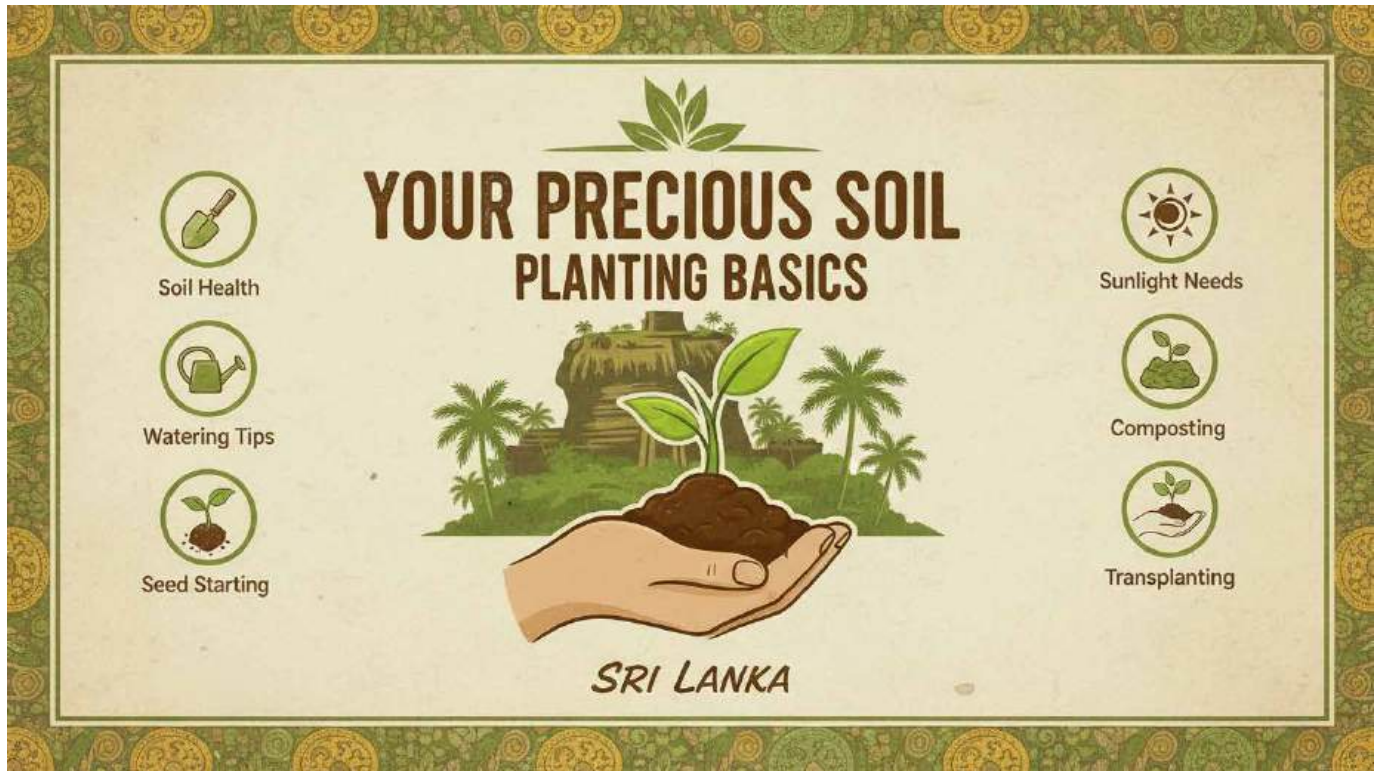
We had to establish all of these and also Shade trees such as Grevillea, Dadaps, and legumes in rows BEFORE the young tea was planted 2 years earlier to minimize erosion and to ensure effective shade canopy before the young tea is planted and never to expose young tea to the harsh rigors of early exposure to excessive sunlight, wind, erosive rains etc.

Even after planting tea a thick thatch or mulch had to be established to preserve the moisture retention of soil and to never have vacant space!

Woe be unto any planter who had brown water streaming down in any tea field during the rains as this would indicate a laxity in erosion prevention measures!

As a result carpets of once magnificent tea resembling a seamless carpet had hardly any landslides even on hilly terrain!!

Oh! for those effective restrictions to keep our upcountry safe from landslides that can lead to disastrous consequences as Sri Lanka now faced!



How Modern-Day Architecture Shapes the Lives of People



Chinthaka Dayaratne

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One of the most significant ways modern architecture impacts people is by improving **well-being and comfort**. Contemporary designers prioritize natural light, ventilation, and open spaces, allowing homes and workplaces to feel healthier and more uplifting. Large windows, green balconies, and thoughtful room layouts reduce stress and connect people to nature, even within busy urban environments.

Today's architecture also reshapes **community and social interaction**. Public buildings, urban parks, and shared spaces are designed to bring people together. Whether it's a community center, a co-working space, or a vibrant city square, modern design encourages collaboration, cultural exchange, and a sense of belonging. These well-planned environments help create stronger, more connected societies.





Technological integration is another key influence. Smart homes, energy-efficient buildings, and eco-friendly materials redefine the way people live. From automated lighting to solar-powered rooftops, modern architecture supports a lifestyle that is both convenient and sustainable. This shift not only enhances comfort but also empowers people to reduce their impact on the planet.

In cities, architecture shapes how people move and experience space. Skyscrapers save land, transportation hubs improve mobility, and mixed-use developments allow individuals to live, work, and relax within the same neighborhood. As a result, daily life becomes more efficient, reducing travel time and giving people more freedom to enjoy meaningful experiences.

Ultimately, modern architecture is a reflection of human aspirations. It adapts to the needs of society offering beauty, function, sustainability, and emotional impact. By blending innovation with everyday living, it shapes not just skylines but the very lives of the people who inhabit them.



“Strengthening the Plantation Workforce: The Importance of Psychological Capital and Empowerment”



D.M.P.T. Dasanayaka

The plantation sector in Sri Lanka is a main contributor to the Sri Lankan economy, employing a large number of workers who often face challenging conditions. The estate management formal and informal controls affect the psychological and work related outcomes of these plantation workers, especially focusing on their stress, problems, mental health and job satisfaction. These factors have a direct impact on employee productivity. This article mainly focuses on discussing the importance of strengthening psychological capital and empowerment for the plantation workforce.

1. The need for a strong plantation workforce

Plantation workers are a key part of agricultural economics. But most of the plantation workers often face limited financial resources, intense physical demands and challenging working environment. These factors can be reduced employees 'motivation, increase the stress level and low productivity. In this situation, welfare committees want to consider strengthening the well-being and psychological readiness of workers is not only a humanitarian priority but also a highly strategic requirement for maintaining consistent and quality plantation outcomes. However, want to achieve A strong workforce ensures greater operational stability, reduced turnover and improved plantation estates performance...

2. Psychological Capital: A key driver of workforce resilience

Psychological capital, a core construct in the field of positive organizational behaviour, has emerged as a critical psychological resource in improving workplace outcomes. (Luthans et al., Psychological Capital: Developing the Human Competitive Edge, 2007) introduced by, psychological capital as a positive psychological state of an individual and consists of four dimensions. They are self-efficacy, hope, optimism, and resilience. These dimensions collectively foster confidence in employees' ability to succeed and adapt in challenging environments.

- **Selfefficacy** helps workers believe in their ability to perform tasks effectively.
- **Hope** provides motivation and pathways to reach work goals even in difficult conditions.
- **Optimism** allows workers to expect positive outcomes and recover from setbacks.
- **Resilience** gives workers the inner strength to overcome hardships and return to normal functioning quickly. By achieving the above dimensions, it is possible to achieve strong human capital through the trust and dedication of hardworking plantation workers.

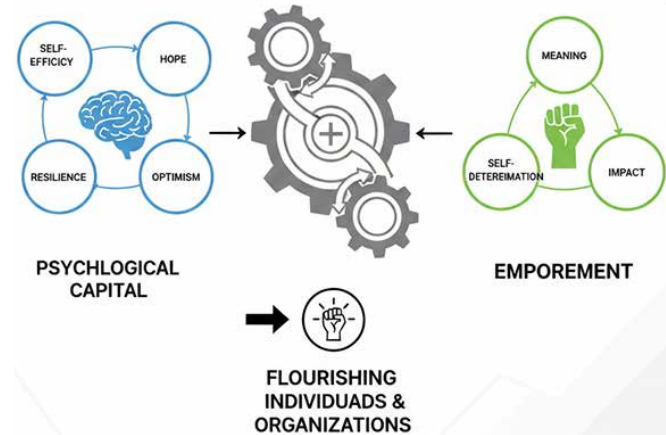
3. Empowerment: Enhancing engagement and productivity

Psychological empowerment plays a fundamental role in reflecting a sense of control and self-determination within one's job here. According to (Spreitzer, Psychological Empowerment in the Workplace: Dimensions, Measurement, and Validation, 1995) psychological empowerments are introduced by four dimensions: meaning, competence, selfdetermination and influence. Motivated employees or empowered employees are dedicated to their work. Psychological empowerment plays a major role in improving employees' ability to manage stress and maintain mental well being in traditionally hierarchical and patriarchal workplaces such as plantations. On the other hand, psychological empowerment allows employees to feel a sense of responsibility and ownership, which increases employee motivation and makes employees work to their fullest potential, ultimately increasing plantation workers' productivity.

4. Synergy between psychological capital and empowerment

Psychological capital and empowerment work together to build a powerful foundation for plantation workforce development. Empowered workers with high psychological capital are more confident, proactive, adaptable, and able to make powerful decisions according to the situation. Empowerment opportunities help strengthen psychological capital by encouraging workers to use their strengths, solve problems creatively, and experience success through participation. This synergy forms a cycle of continuous improvement among plantation workers (increasing workers' capabilities, making them more confident, and more committed over time).

Synergy Between Psychological Capital and Empowerment



5. Benefits for plantation operations

lantation operations benefit significantly from initiatives that enhance employee empowerment and intellectual capital because these initiatives improve productivity, quality of output, and job satisfaction. (Harter, Schmidt, & Hayes, 2002) (Luthans, Youssef, & Avolio, 2007). Empowered and engaged plantation workers show higher motivation and commitment, which is essential in labor-intensive plantation structures.

Moreover, strengthening psychological wellbeing contributes to lower labor turnover and better retention of skilled workers, ensuring operational continuity and reduced recruitment costs. Its main reason is most of the workers are already motivated. (Avey, Reichard, Luthans, & Mhatre, 2011). On the other hand, positive work environments with reduced stress and conflict further promote teamwork, trust, and cooperation, supporting efficient and sustainable plantation operations

6. Practical Strategies to Build Psychological Capital and Empowerment.

Several suggestions and strategies can be made to further improve the psychological capital and empowerment of the workforce working on estates, as follows:

- Conduct regular training programs on problem-solving, resilience, and effective communication.
- Create opportunities for workers to contribute ideas and feedback during planning processes. (Monthly area meetings)
- Offer skill development initiatives such as leadership training, safety workshops, and productivity improvement programs.
- Recognize good performance frequently to enhance motivation and optimism.
- Establish support systems like peer mentoring, plantation management guidance, and team-based collaboration.
- Encourage plantation managers and superintends to adopt leadership styles that promote trust, respect, and open communication.



7. Conclusion....

Psychological capital and empowerment provide a sustainable pathway to improving plantation workforce wellbeing and estates performance. According to that, want to improve the employees' resilient, confident, and motivated workers who contribute positively to plantation development.

This ultimately has the potential to have a positive impact on the Sri Lankan economy. In summary, this article has aimed to provide a comprehensive understanding of psychological capital and empowerment, and their significance in the plantation industry. This is also a good opportunity for researchers to study this research gap as it is still a relatively under-researched area. Finally, Plantation Human Development Trust (PHDT) is vital in strengthening the plantation workforce by enhancing psychological capital and empowerment.

Through welfare support, skill development, and participatory programs, PHDT improves workers' confidence, resilience, and motivation, leading to better well-being, engagement, and overall job performance.

"Boosting psychological capital and empowerment turns workers into confident, proactive, and capable contributors who drive success on the estate."

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Debunking the Myth that Palm Oil Consumes Excessive Water or Causes Desertification in Sri Lanka

Dr. Sampath Niroshan



Misconceptions about oil palm (*Elaeis guineensis*) cultivation are widespread in Sri Lanka, particularly the belief that palm oil requires more water than other commercial crops such as tea, rubber, coconut or cinnamon, and that planting oil palm will eventually turn the landscape into a desert. Scientific research, hydrological assessments, and long-term estate-level observations provide strong evidence against these claims.

1. Water consumption: Oil Palm vs. other major crops

Scientific comparisons show that oil palm does not consume more water than traditional Sri Lankan plantation crops when grown under similar agro-climatic conditions.

1.1 Water use efficiency

Oil palm is globally recognized as one of the most efficient crops in converting water and sunlight into biomass and oil. On a per-unit yield basis, oil palm uses less water to produce 1 kg of oil compared to coconut or other oil-bearing crops.

- Oil Palm: approx. 500–600 L/kg of oil
- Coconut: approx. 2000–2500 L/kg of oil

Thus, oil palm produces 4–5 times more oil per unit of water than coconut.

1.2 Evapotranspiration rates

Evapotranspiration (ET) studies in Southeast Asia and Africa show ET values for oil palm ranging between 3.5–4.5 mm/day, similar to:

- Tea: 4–5 mm/day
- Rubber: 4–6 mm/day
- Coconut: 4–6 mm/day
- Cinnamon: ~3.5–4.5 mm/day

This confirms that oil palm water usage is comparable not excessive.

1.3 Water table effects

Research from Malaysia, Indonesia, Nigeria and Papua New Guinea shows:

- Oil palm does not significantly lower the groundwater table when grown with proper soil conservation.
- Water uptake patterns are similar to coconut and rubber.
- Mature palms contribute to soil moisture retention through organic matter accumulation.

2. Myth of land becoming “Deserted” After Planting Palm Oil

The fear that oil palm plantations “dry the land” or “turn the area into a desert” is scientifically baseless.

2.1 Palm Oil does not create desertification

Desertification refers to land degradation under arid conditions, driven by climate and severe mismanagement—not by any specific crop.

Sri Lanka's wet and intermediate zones where oil palm is grown receive 2,500–4,000 mm rainfall annually, making desertification impossible.

2.2 Evidence from Nakiyadeniya Estate (Sri Lanka's first Oil Palm Plantation)

Nakiyadeniya Estate, established as Sri Lanka's first commercial oil palm plantation, provides a valuable long-term natural experiment. Scientific and on-ground observations show:

- High biodiversity including endemic birds, amphibians, reptiles, butterflies, and understorey flora.
- Presence of natural forest patches maintained alongside plantations.
- Multiple healthy water streams, springs and riparian zones running through the estate.
- No signs of soil degradation or loss of water resources after decades of cultivation.

Nakiyadeniya demonstrates that sustainable management of oil palm coexists with rich ecosystems in the same manner as tea or rubber estates.

3. Global evidence: Malaysia's Example

Malaysia, the world's second-largest palm oil producer, provides robust hydrological and ecological data:

- Regions with extensive oil palm have not experienced rainfall reduction; in many areas, rainfall has increased over decades, partly due to sustained forest cover and plantation vegetation.
- Water catchments within oil palm belts continue to support rivers, wetlands and aquifers.

- Scientific monitoring shows stable or improved surface water levels compared to pre-plantation years. Thus, the argument that oil palm “destroys rainfall patterns” is scientifically disproven.

4. Why these myths persist in Sri Lanka

Several historical misconceptions have contributed to public fear:

1. Confusion between poorly managed deforestation in some countries and the crop itself.
2. Misinformation campaigns due to market competition with alternative vegetable oils.
3. Lack of long-term Sri Lankan research dissemination to the public.
4. Misinterpretation of hydrological changes due to soil erosion in tea/rubber lands, which is incorrectly attributed to palm oil.

5. Conclusion

Scientific evidence from global research and Sri Lanka's own estates clearly shows:

- Oil palm does NOT consume more water than tea, rubber, coconut or cinnamon.
- It is one of the most water-efficient oil crops in the world.
- Oil palm cultivation does not cause desertification, especially in Sri Lanka's rainfall-rich zones.
- Nakiyadeniya Estate stands as proof of successful coexistence of palm oil with biodiversity, water streams and natural forests.
- Internationally, including in Malaysia, rainfall has not decreased, and environmental stability has been maintained where sustainable practices are followed.

Therefore, the belief that oil palm “dries the land” or “consumes excessive water” is a myth, not a scientific fact.

Referance

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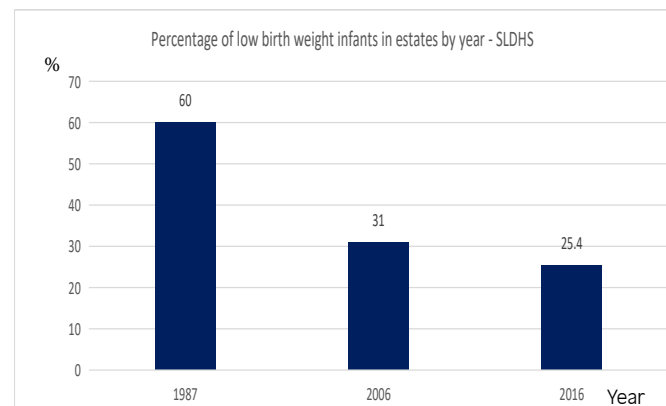
Bridging the Gap for Better Child Health: Empowering Plantation Communities to Overcome Undernutrition

Dr. Paba Palihawadana

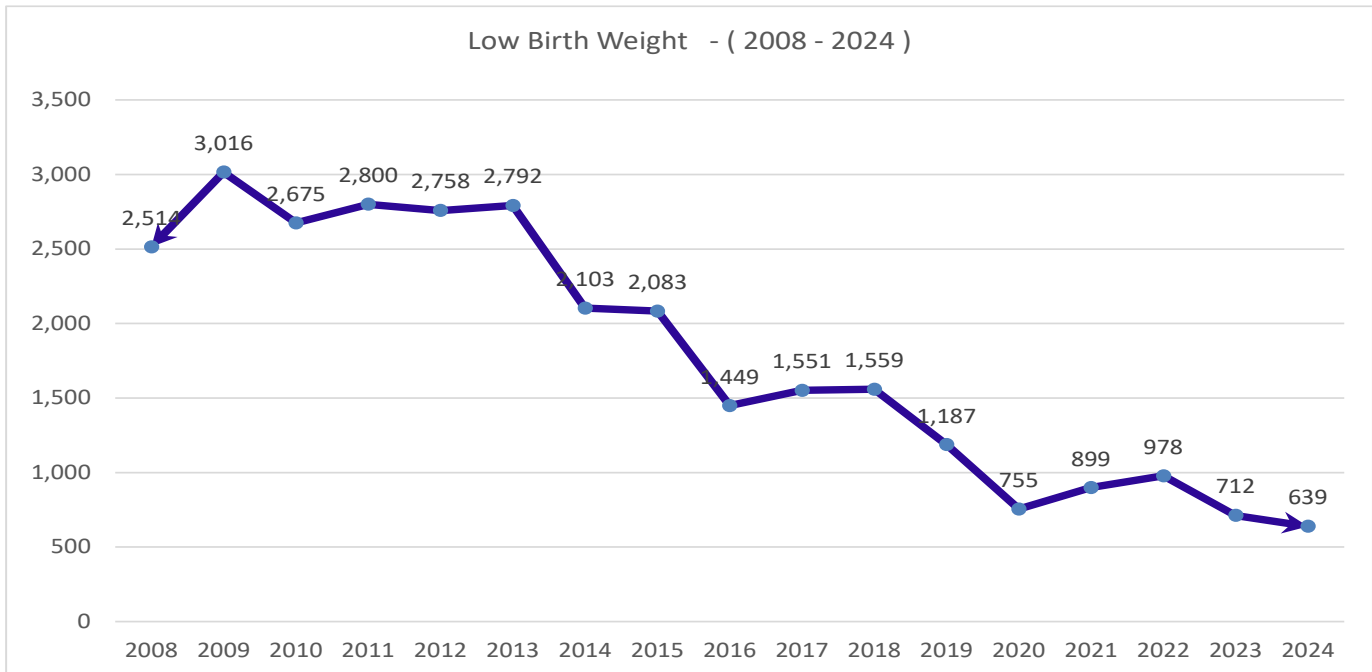


Undernutrition among children under five continues to be one of the most pressing public health challenges in Sri Lanka's plantation sector. For decades, the Plantation Human Development Trust (PHDT), together with the Ministry of Health and key agencies such as the Family Health Bureau (FHB), the Nutrition Division, the Department of Education, and the Director of Urban & Estate Health, has worked to reduce this burden. Since 1987, substantial progress has been achieved. Undernutrition rates declined markedly from 60% to 25% by 2016 (Graph 1), surpassing the national trends observed as reported in the Demographic and Health Survey. This progress is further reinforced by a continued reduction in the proportion of low birthweight children from 2016 through 2024 (Graph 2).

However, the gains were tested by pre economic downturn stress, COVID-19 pandemic and the economic downturn from 2021 to 2024, which caused a resurgence in undernutrition



Graph 01



Graph 2 No of low birth weight infants born in estates by year

Graph 03



Data from Nutrition Month indicate that the prevalence of undernutrition among children under five years is **25.7%**, which is significantly higher than the **national rate of 16% in 2025**. Among the four lines in the graph, estates, children showed the **highest prevalence of undernutrition**. (Graph 3) However, a **downward trend** has been observed when compared to **2024**, indicating some improvement over time.

A Multi-Layered Approach to Improving Child Nutrition

PHDT, with government support, has implemented a comprehensive strategy to address child nutrition in the estates. This includes providing essential meals through and the morning meal programme onsite feeding of Thriposha at CDCs, in partnership with Divisional Secretariat (DS)

Several pilot programmes including Community Health Promotion, Alcohol Reduction, Financial Management, and the Special Nutrition Programme demonstrated encouraging results. However, PHDT was unable to sustain these initiatives due to financial constraints.

Some NGOs have implemented activities partially and then withdrawn without ensuring sustainability. This has had a negative impact on nutrition programmes, as communities have become dependent on regular food distributions instead of being supported to cultivate their own vegetables and develop sustainable livelihoods

Public Health Midwives (PHMs) and Child Development Officers (CDOs) anchor this system by routinely weighing children at designated estate posts and ensuring accurate record-keeping. Improving attendance at CDCs has also been identified as a vital step not only for consistent growth monitoring but for engaging parents, particularly mothers, in learning sessions on preparing nutritious meals, household budgeting, home gardening, identifying minor illnesses, and making timely referrals.

Through these community platforms, mothers have formed informal support groups, sharing experiences and celebrating small victories. Home visits, kitchen inspections, and assessments of water and sanitation facilities help address underlying causes of malnutrition,

while initiatives promoting home gardening enhance families' ability to access affordable, nutrient-rich foods.

Several targeted programmes have focused on motivating mothers to support healthy weight gain in undernourished children. Facilitators monitored progress closely, but field observations revealed that nutrition challenges often stem from factors beyond food availability. Complex family dynamics, maternal health issues, cultural practices, and misinformation all played a role.

Key Underlying Determinants of Nutrition

1. Household Food Security.

- Availability, accessibility, and affordability of nutritious food.
- Stability of food supply throughout the year.
- Dependence on local food production or market purchases.

2. Care and Feeding Practices

- Knowledge and behavior of caregivers regarding infant and young child feeding.
- Breastfeeding practices and complementary feeding.
- Hygiene during food preparation and feeding.

3. Healthy Environment and Access to Health Services

- Availability and quality of maternal and child health services.
- Management of childhood illnesses.
- Access to clean water, sanitation, and hygiene (WASH).

4. Socioeconomic Factors

- Household income and employment opportunities.
- Education level of parents, especially mothers.
- Gender equality and women's empowerment in decision-making.

5. Environmental Conditions

- Safety and cleanliness of living environments.
- Agricultural practices and climate impacts on food production.

6. Community and Social Support Systems

- Social networks that promote shared knowledge and resources.
- Community nutrition programs and local leadership engagement

A strategic Shift from service delivery to community empowerment

Recognizing these challenges, PHDT shifted from a predominantly service oriented approach to one focused on fostering community empowerment and behavior change. Sustainable progress requires more than food distribution, it requires strengthening knowledge, practical skills and motivation across households.

Field visits revealed that the problem extended beyond food availability. Many families faced complex and often hidden challenges, ranging from maternal health to misinformation.

Stories of hope amid challenges

While many findings were troubling, there were also positive stories of change. Some children successfully transitioned from the “red zone” of undernutrition in their growth chart to the “green zone,” often due to the collaborative efforts of CDOs and dedicated caregivers. In some cases, an informal feeding practice, where children ate small amounts from various family members’ plates throughout the day helped increase caloric intake and improve nutritional status

Children without breakfast

In the tranquil one of the estate, a routine visit to a local CDC highlighted a more subtle, yet deeply concerning issue, many preschool children were arriving without having had breakfast. Moved by compassion, PHDT staff began sharing their own breakfast sandwiches with the children. This highlights mothers’ knowledge of breakfast as an important meal for children, as well as the practices of busy mothers, including their concerns about meal preparation and ensuring that children are fed before they leave for work on the estate.

Trust & expectations

In one of the Estate, a case raised important concerns about community trust. A mother, who had been one of the most active volunteers preparing food for CDC children, suddenly withdrew her daughter from the CDC and enrolled her in a preschool farther away. This incident prompted questions about the family’s trust in the system, and unmet expectations. It highlighted that successful nutrition interventions aren’t just about availability but also about trust, transparency, and maintaining a consistent standard of care that families can rely on.

Malnutrition despite food availability

In some households, malnutrition persisted even when food was abundant. Many families grew diverse vegetables in home gardens, yet their children remained undernourished. One mother, for example, avoided feeding her child, eggs due to the mistaken belief that early exposure could trigger allergies a belief that is widely shared in these communities. This discovery emphasized that the root cause of malnutrition is not always a lack of food, but often stems from misinformation and cultural myths that influence feeding practices.

The Role of Maternal Health

Another key issue impacting child nutrition was maternal health. A young mother, with her infant, was struggling with severe anemia. Her fatigue made it difficult for her to prepare nutritious meals, relying instead on simple staples like rice and tea. This case revealed how maternal undernutrition perpetuates a cycle that affects the next generation, highlighting the need for a more comprehensive approach that also supports maternal health.

Knowledge gaps & cultural norms

As PHDT staff conducted more field visits and engaged with caregivers, it became apparent that the providing one meal a day did not achieve its full potential. Many families, although well-intentioned, lacked basic nutritional knowledge. For instance, one grandmother, who was dedicated to feeding her grandson, admitted she didn't know what constituted a "nutritious" meal. In another case, a financially stable father left all food-related decisions to his wife, unaware of the critical role of protein and dietary diversity in his child's development.

These cases revealed deeper, systemic issues, including gaps in knowledge, entrenched gender roles, and cultural beliefs that hinder progress.

Rethinking the Strategy: From Service Delivery to Community Empowerment

To address these challenges, PHDT recognized that it was essential to move beyond a service-focused approach and prioritize community empowerment. True progress in child nutrition requires not only education and support but also behavior change.

Addressing the Full Spectrum of Behavior Change

Effective change required tackling all three components of the **Behavior Change Triangle**, knowledge, skills, and motivation. This approach not only improved nutritional outcomes but also began to shift community mindsets.

Through reflection and community dialogues, identified four critical gaps forming what they termed the "Triangle of Behavior Change":

- 1. Limited Awareness & understanding:** While caregivers knew nutrition was important, many lacked clear guidance on how to achieve it.
- 2. Lack of Practical Skills:** Practices such as meal planning, food hygiene, and the use of affordable, protein-rich local foods like lentils and eggs were not widely practiced.
- 3. Weak Support Systems:** In many areas, consistent family support, peer encouragement, and follow-up from CDCs were lacking.
- 4. Low Motivation:** Persistent myths, cultural resistance, and a lack of visible success stories reduced enthusiasm for change.

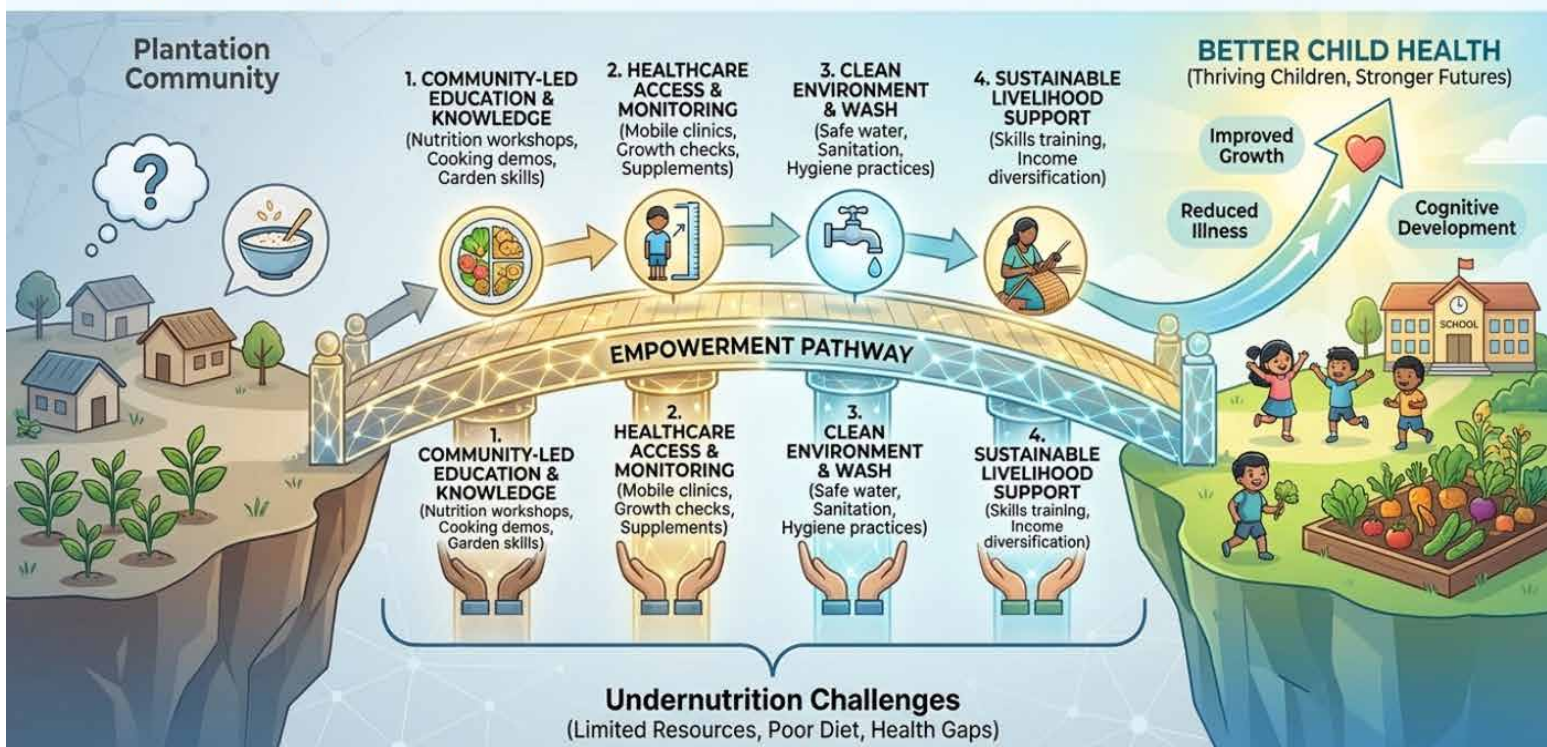
By addressing these gaps, the child nutrition can better support families in overcoming malnutrition and improving child health.

Towards a Nutrition-Literate Community

With these insights, PHDT transformed its nutrition programs into catalysts for long-term community development:

- Targeted awareness sessions are conducted for mothers, fathers, grandparents, and peers.

Bridging the Gap for Better Child Health: Empowering Plantation Communities to Overcome Undernutrition



- Home visits and group discussions would help debunk myths, provide personalized guidance, and demonstrate simple, nutritious meals.
- CDO will lead hands on training covered maternal anemia, responsive feeding, and practical food preparation.
- Successful mothers are celebrated as peer role models, inspiring others and rebuilding trust in CDCs and the broader system.

Looking Ahead: Sustaining the Momentum

While the transformation is ongoing, positive change is already visible. Families increasingly understand that nutrition isn't just about food. It is about informed decisions, shared responsibility, and continuous engagement.

- Fathers are beginning to participate in meal planning.
- Grandmothers are re-evaluating long-held food beliefs.
- Mothers are feeding their children with greater knowledge and confidence.

References

- *Demographic and Health Survey-2016*
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Harmonic Harvests: Exploring Music Therapy as a New Pathway to Boost Plantation Productivity in Sri Lanka



Diluk Priyantha

Introduction

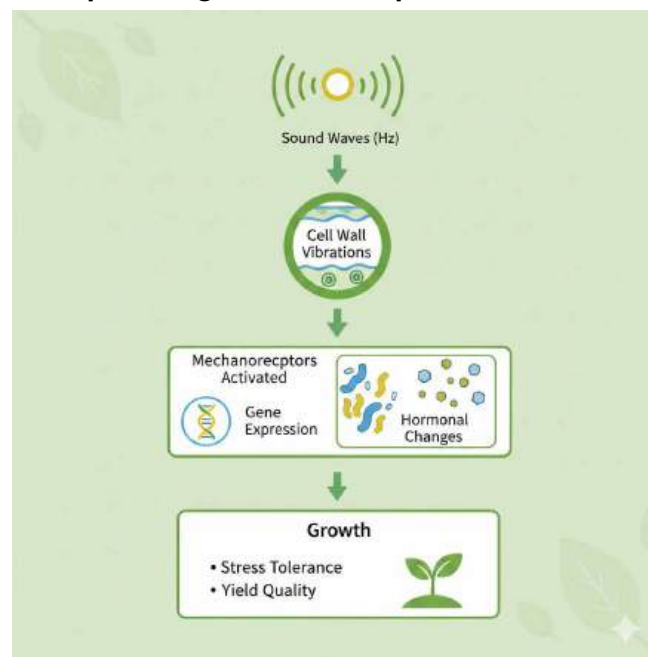
Sri Lanka's plantation economy anchored by tea, rubber, coconut, oil palm, and cinnamon has long been admired for its heritage, craftsmanship, and global reputation. However, modern challenges such as climate stress, labour shortages, soil degradation, and declining yields demand innovative and sustainable interventions. One emerging concept attracting global attention is music therapy for plant growth, the application of controlled sound frequencies, rhythm, and vibration to influence plant development (Gagliano, 2015; Hassanien et al., 2014).

While music therapy in agriculture remains an unconventional science, early international experiments from India, China, South Korea, and Europe suggest that sound waves may positively influence plant physiology, root formation, disease resistance, and harvesting efficiency (Creath & Schwartz, 2004; Jeong et al., 2008; Pagano & Del Prete, 2024). For Sri Lanka, which is seeking low-cost and eco-friendly productivity tools, music-driven agri-stimulation presents a promising frontier worth exploring.

How Plants Respond to Sound: A Scientific Overview

Sound waves are mechanical vibrations, that plants perceive through cell walls and mechanosensitive receptors, (Gagliano et al., 2017).

Conceptual Diagram : Plant Response to sound



Experimental research confirms that acoustic stimulation can alter gene expression, enzyme activity, hormonal balance, and stress signalling pathways, leading to measurable growth responses (Jeong et al., 2008; Gagliano, 2015).

What Is Music Therapy for Plants?

Music therapy in agriculture refers to the use of specific sound frequencies typically between 100 –800 Hz along with rhythmic vibrations and harmonic patterns to stimulate plant biological processes (*Hassanien et al., 2014*). Although plants lack auditory organs, they respond to sonic vibrations via mechanoreceptors, influencing:

- Cell elongation
- Root and shoot growth
- Nutrient uptake
- Photosynthetic activity
- Flowering and fruiting cycles
- Stress tolerance and pest resistance

Global Insights

- India: Early studies by T. C. Singh and subsequent experiments demonstrated that exposure to Indian classical and raga-based music enhanced plant height, biomass, and hormone activity in crops such as banana and mango (*Creath & Schwartz, 2004*).
- China: Trials using classical music and Plant Acoustic Frequency Technology showed significant increases in leaf area, chlorophyll content, and yield across vegetables and field crops (*Hassanien et al., 2014*).
- South Korea: Research revealed that specific sound frequencies activated growth related genes in rice, supporting the use of frequency-based stimulation in smart farming systems (*Jeong et al., 2008*).

International trials report yield improvements ranging from 5–20%, alongside improved leaf quality and reduced pest related stress, although responses vary by crop, frequency, and exposure duration (*Pagano & Del Prete, 2024*).

Why Music Therapy Is Relevant for Sri Lankan Plantations

Sri Lanka’s plantation crops share a common need for consistent, sustainable growth support without excessive chemical reliance. Music therapy offers:

- Low-cost intervention – Minimal energy input using simple speaker systems
- Environmentally friendly – No chemical runoff or soil contamination
- Easy integration – Applicable during specific growth stages without altering agronomic practices
- Worker wellbeing benefits – Soundscapes can positively affect labour morale (*Creath & Schwartz, 2004*)

How Music Therapy Can Enhance Specific Sri Lankan Plantation Sectors.

1. Tea Industry

Tea plants respond strongly to frequency-based stimulation. Studies in China and India show improved chlorophyll synthesis, photosynthetic efficiency, and bud initiation (*Hassanien et al., 2014; Pagano & Del Prete, 2024*).

Recommended Sound Profile for Tea

Based on global experimental findings and an understanding of tea plant physiology, acoustic stimulation should be carefully calibrated to support growth without inducing stress. A frequency range of 100–300 Hz is considered optimal, as it aligns with frequencies shown to enhance chlorophyll activity, photosynthesis, and bud initiation in leafy crops. The sound itself should be gentle in character, such as soft instrumental harmonics, light classical music, or nature-based soundscapes, which provide consistent and non-disruptive vibrations. Application is most effective in the early morning, when stomatal opening and photosynthetic activity are naturally high.

Exposure should be limited to 1–2 hours per day during active flush periods, ensuring stimulation remains beneficial rather than excessive. Loud, irregular, or percussion-heavy sounds should be avoided, as they may create physiological stress responses in tea plants.

Field-Level Implementation

Music therapy can be introduced into tea plantations using relatively simple and cost-effective infrastructure. Solar-powered outdoor speakers can be positioned strategically along tea rows to ensure even sound distribution without reliance on grid electricity. Sound application should be limited to specific growth windows, such as flush periods, rather than continuous exposure throughout the day. Initial adoption is best approached through small pilot plots, comparing treated areas with untreated controls to assess measurable impacts. Key indicators to monitor include shoot density, leaf size and tenderness, disease incidence, and final cup quality, enabling data-driven evaluation of both agronomic and quality benefits.

Additional Advantages

Beyond its potential physiological effects on tea plants, a well-designed sound environment can generate broader plantation-level benefits. Gentle, harmonious soundscapes may improve worker wellbeing and morale, particularly during repetitive tasks such as plucking, contributing indirectly to productivity and care quality. Music therapy also aligns well with organic, regenerative, and climate-smart tea production goals, as it introduces no chemical inputs and requires minimal energy. Furthermore, plantations adopting such innovations may unlock premium branding opportunities, positioning their products as “sound-enhanced” or “harmonically grown” teas for environmentally conscious and wellness-oriented international markets.

2. Rubber Plantation Sector

Sri Lanka’s rubber plantation sector plays a vital role in rural livelihoods and export earnings, yet it faces persistent challenges such as labour shortages, tapping panel dryness (TPD), climate stress, and fluctuating latex yields. In this context, music therapy also referred to as acoustic or sound-based stimulation emerges as a novel, low-cost, and eco-friendly complementary approach that may support rubber tree physiology and improve plantation performance.

Scientific Rationale

Plants and trees perceive sound as mechanical vibrations transmitted through tissues and cell walls. In woody perennials such as rubber (*Hevea brasiliensis*), low-frequency vibrations can influence sap flow dynamics, cellular elasticity, and vascular activity. Research in plant bioacoustics suggests that sound waves in the lower frequency range can enhance internal fluid movement and reduce physiological stress, which is directly relevant to latex flow and post-tapping recovery.

Studies summarized by Hassanien et al. (2014) indicate that low-frequency sound exposure improves physiological processes in woody plants, supporting improved sap movement and stress regulation key factors in sustaining latex yield.

Potential Benefits for Sri Lankan Rubber Plantations

When carefully applied, music therapy has the potential to support several key physiological and productivity-related outcomes in rubber estates. Low-frequency acoustic stimulation may enhance internal sap flow dynamics and cellular elasticity, leading to increased latex yield and longer latex flow duration during tapping. By reducing physiological strain on latex vessels,

sound-based stimulation can also improve post-tapping recovery, allowing trees to maintain productive tapping cycles over longer periods. Furthermore, improved cellular resilience may help reduce the incidence of tapping panel dryness (TPD), a major concern in many plantations. Collectively, these effects can contribute to enhanced overall tree health, particularly under conditions of climate variability, repeated tapping stress, and fluctuating moisture availability.

Recommended Sound Profile for Rubber

Based on global research findings and the physiological characteristics of rubber trees (*Hevea brasiliensis*), the most suitable acoustic stimulation involves low-frequency vibrations in the range of 100–150 Hz. These frequencies can be delivered through deep, steady bass tones or low-frequency harmonic pulses, which provide consistent mechanical stimulation without causing shock or disturbance. The optimal timing for sound exposure is shortly before early-morning tapping rounds, when latex pressure gradients and vascular responsiveness are at their peak. Exposure should be limited to 15–30 minutes per session, sufficient to stimulate physiological responses without risking overexposure. Sudden, excessively loud, or irregular sound patterns should be avoided, as they may disrupt tree physiology or interfere with normal estate operations.

Field-Level Implementation

Music therapy can be integrated into rubber plantations using simple, low-impact systems that do not interfere with routine management. Solar-powered or battery-supported speakers can be installed near tapping zones to ensure reliable and energy-efficient sound delivery. Sound exposure should be applied only just prior to tapping, rather than continuously throughout the day, to maximize effectiveness and minimize disturbance.

Adoption is best initiated through pilot trial blocks, where treated panels are compared with untreated controls under similar conditions. Throughout the trial period, plantations should monitor latex volume per tree, latex flow duration, bark recovery rates, and the incidence of TPD. Data generated from these trials can then inform scaling decisions, optimization of sound protocols, and long-term integration into rubber plantation management systems.

Additional Advantages

Beyond physiological benefits, music therapy may offer broader plantation-level gains. Gentle sound environments can enhance worker comfort and focus during tapping rounds, particularly in early morning hours. The approach aligns well with sustainable and low-input agricultural practices, reducing reliance on chemical stimulants. Furthermore, estates adopting such innovations may position themselves as environmentally progressive producers, supporting premium branding and sustainability narratives in global rubber markets.

3. Coconut Industry

Coconut Plantations at a Crossroads

Coconut is central to Sri Lanka's food security and export economy, yet plantations face growing challenges from drought, salinity, and climate stress. Sustainable, low-input innovations are therefore essential to maintain yield stability and palm health.

Potential Benefits for Coconut Palms

For coconut (*Cocos nucifera*), controlled acoustic stimulation may improve nut setting and reduce premature nut fall, enhance root activity and nutrient uptake, and increase tolerance to drought and salinity. Over time, these effects may contribute to higher copra content, improved oil quality, and healthier frond development (*Pagano & Del Prete, 2024*).

Recommended Sound Application

Global studies suggest coconut palms respond best to gentle, low- to mid-frequency sounds (150–400 Hz) delivered as soft instrumental or nature-based soundscapes. Application during the early morning or late afternoon, for 30–60 minutes during flowering and nut-setting stages, is considered most effective. Loud or irregular sounds should be avoided to prevent stress (Jeong *et al.*, 2008).

Path Forward for Sri Lanka

Although coconut-specific trials are limited, existing scientific evidence supports further investigation. Pilot studies led by the Coconut Research Institute of Sri Lanka, in collaboration with universities, could validate sound protocols under local conditions. If proven effective, music therapy could become a cost-effective, eco-friendly complement to climate-smart coconut cultivation.

4. Oil Palm Sector

Oil Palm Challenges

Sri Lanka's oil palm plantations face climate stress, water scarcity, and fluctuating yields. Innovative, low-cost solutions like music therapy offer potential to support growth and reproductive success sustainably.

Potential Benefits

Acoustic stimulation can help:

- Enhance pollination efficiency
- Support inflorescence and fruit bunch development
- Reduce stress during dry spells, improving metabolic efficiency and resilience (Jeong *et al.*, 2008)

Recommended Sound Application

- Frequency: 150–300 Hz (low to mid-frequency vibrations)
- Sound type: Gentle rhythmic patterns; avoid loud or erratic noise.

- Timing & Duration: Midday, 45–60 minutes exposure.
- Delivery: Solar-powered outdoor speakers, applied during key reproductive stages (Creath & Schwartz, 2004; Pagano & Del Prete, 2024)

Implementation Potential

Pilot trials in Sri Lanka can validate impacts on flowering, fruit bunch set, and yield stability, offering a cost-effective, eco-friendly complement to conventional management practices.

5. Cinnamon Cultivation

Challenges in Cinnamon Cultivation

Sri Lanka's cinnamon (*Cinnamomum verum*) industry faces slow bark regeneration, inconsistent leaf quality, and stress from drought and pests. Sustainable, low-cost interventions are needed to improve yield and essential oil quality.

Benefits of Music Therapy

- Faster bark regeneration after harvesting
- Improved leaf expansion and vigor
- Higher essential oil concentration
- Enhanced stress tolerance under drought or pests

Recommended Sound Application

- Frequency: 200–600 Hz
- Sound type: Soft flute, instrumental, or nature-inspired tones.
- Timing: 30–60 minutes daily during nursery and early plantation stages
- Precaution: Avoid loud or erratic sounds.

Implementation & Potential

Use solar-powered speakers in nurseries and plantation blocks. Pilot trials comparing treated and untreated areas can track bark growth, leaf health, and oil yield. Music therapy offers a low-cost, eco-friendly method that also supports potential premium branding for harmonically grown cinnamon.

Comparative Table: Sound Therapy Applications by Crop

Crop	Frequency Range (Hz)	Key Benefits	Recommended Timing
Tea	100–300	Leaf growth, flavour quality	Morning 1-2 hours daily
Rubber	100–150	Latex yield, recovery	Pre-tapping 15-30 min. before tapping
Coconut	150–400	Nut set, stress tolerance	Morning/Evening 30-60 min. daily
Oil Palm	150–300	Pollination, fruit set	Midday 45-60 min.
Cinnamon	200–600	Oil quality, bark healing	Nursery stage and early plantation stage 30-60 min.



Conclusion

Music therapy, though unconventional, offers a promising low-cost and eco-friendly innovation for Sri Lanka's plantation sectors, supported by a growing body of global scientific evidence (Gagliano, 2015; Pagano & Del Prete, 2024). By combining international experimental knowledge with local scientific validation, Sri Lanka can pioneer a "Harmonic Agriculture Model" that enhances yields, supports worker wellbeing, and strengthens sustainability demonstrating that productivity may sometimes begin not with chemicals or machines, but with rhythm, frequency, and harmony.

PLANTATION HOUSING: END TO HERIDITORY WAY OF THINKING

(Proactive approach in the way forward)



Madawa Gunaratna

In Sri Lanka, the plantation sector has long been the backbone of the country's economy, contributing significantly through tea, rubber, coconut and other crops. Yet, behind the lush estates and vibrant fields lies a persistent and overlooked issue—substandard housing for plantation communities. Time and again, we see that attention to these living conditions only comes in the aftermath of a disaster. Families living in fragile homes are exposed to floods, landslides, cyclones, and other hazards, with devastating consequences. Waiting for tragedy to strike before acting is a reactive approach that costs lives, disrupts livelihoods, and deepens inequality.

The reality is stark. Many plantation houses are decades old, poorly maintained, and constructed with materials unable to withstand natural calamities. Roofs leak, walls crack, and drainage systems fail. During heavy rains or storms, families are forced to seek temporary shelter, often with no access to basic facilities. Children, the elderly, and women are disproportionately affected, facing increased health risks, disruption to education, and vulnerability to accidents. These are not isolated incidents; they are systemic challenges that demand immediate and proactive solutions.

Proactive decision-making in plantation housing involves multiple layers of intervention. First, there must be a comprehensive **assessment of existing housing stock**.

Authorities and estate management should survey homes to identify structural weaknesses, overcrowding, and areas prone to flooding or landslides. This assessment should then inform a prioritized action plan for renovations, upgrades, or reconstruction. Simple improvements, such as reinforced roofing, safe electrical wiring, proper sanitation, and drainage systems, can drastically reduce risks and improve living standards.

Secondly, community involvement is essential. Plantation workers/ non workers and their families should be actively engaged in planning and maintenance initiatives. Training programs on basic home repair, emergency preparedness, and sanitation can empower residents to take responsibility for their living environment while fostering a sense of ownership. Estate management, NGOs, PHDT and any other government bodies should collaborate to provide resources and technical support, ensuring that proactive measures are sustainable and culturally appropriate.

Third, the government and private sector must play a strategic role. Financial investment is critical for large-scale housing upgrades. Public-private partnerships can leverage resources effectively, combining government funding with corporate social responsibility initiatives from tea, rubber, and other plantation companies.

These partnerships should aim not only to rebuild houses but to design resilient and disaster-ready communities, complete with safe roads, proper drainage, proper waste disposal, community centers, and health facilities.



Education and awareness campaigns are another vital proactive measure. Plantation residents must be informed about the risks posed by substandard housing and the benefits of preventive action. Simple knowledge about flood zones, safe construction practices, and early warning systems can save lives. Schools and community centers can serve as hubs for disaster preparedness education, ensuring that children and adults alike are ready to respond effectively in emergencies. Moreover, policy and regulation must evolve. Building codes for plantation housing should be updated and strictly enforced, ensuring that new homes are constructed to withstand climate-related hazards. Incentives, such as low-interest loans or subsidies for home improvements, can motivate residents and estate owners to invest in safer living conditions. Conversely, neglecting these standards must carry consequences to prevent recurring vulnerabilities.

The economic rationale for proactive housing investment is equally compelling. Protecting homes reduces the cost of disaster response, healthcare, and social services. Families living in secure houses are healthier, more productive, and better able to contribute to estate operations.

Plantation companies also benefit from a stable and motivated workforce. Simply put, **proactive housing is not a charity it is smart economic policy.**

Examples from other regions illustrate the power of proactive decision-making. In countries like India and Nepal, government and community-led initiatives have successfully upgraded rural and plantation housing to be more resilient. Early risk assessment, participatory planning, and continuous maintenance have significantly reduced disaster-related losses. Sri Lanka can adopt similar models, tailored to its unique plantation landscape and social context.

The moral imperative is clear. Plantation communities, who contribute so much to the nation, deserve safe, dignified living conditions. Waiting for floods or storms to highlight these vulnerabilities is an injustice. Every year that passes without proactive action puts lives at risk. Every home left unrepaired is a potential tragedy waiting to happen. Authorities, private companies, NGOs, and community leaders must act now, not react later.



In conclusion, the challenge of plantation housing cannot be ignored. Proactive decisions ranging from comprehensive assessments, structural improvements, and community engagement to government regulation, public-private partnerships, and disaster education are essential. By investing in safe and resilient homes today, Sri Lanka can protect lives, strengthen communities, and ensure the long-term productivity and stability of its plantation sector. Let this be a call to action: the time to act is now, before the next disaster forces reactive measures that come too late.

Sri Lanka, An Ideal Setting for Nature, Based Learning

K.R.M. Sakuntala Ranasingha



Sri Lanka is a land where learning naturally unfolds beyond classroom walls. From mist-covered tea hills and ancient irrigation tanks to sandy coastlines and rain-soaked forests, the island offers young children environments rich with opportunities for exploration, play, and meaningful engagement. For young learners, nature is not merely a backdrop it becomes a living classroom that nurtures wellbeing, curiosity, creativity, and care for life.

Across early childhood education, there is growing recognition that children learn best through play, relationships, and active engagement with their surroundings. Nature-Based Learning (NBL) reflects this understanding. It refers to purposeful learning experiences that take place through direct interaction with natural environments and materials (Jordan & Chawla, 2022). Rather than focusing on early formal instruction, NBL supports children's holistic development physical, social, emotional, cognitive, spiritual, and creative through joyful, hands-on experiences rooted in everyday life.

Learning through Nature: A Child-Centred Perspective

The idea that children learn through interaction with their environment is deeply embedded in child-centred educational thought. Jean-Jacques Rousseau emphasized the importance of natural exploration in early learning, while John Dewey highlighted learning through experience and reflection. These ideas continue to influence contemporary early childhood practice, where learning is viewed as active, meaningful, and connected to children's lived experiences. Maria Montessori recognised the child's innate drive to learn through sensory exploration and movement. Her emphasis on natural materials, independence, and freedom within a prepared environment closely aligns with nature-based learning. Gardening, caring for living things, and engaging with the outdoor environment support concentration, responsibility, and respect key dispositions nurtured in early childhood.

Developmental theories further affirm the value of learning in natural contexts. Jean Piaget highlighted the role of exploration in cognitive development, while Lev Vygotsky emphasized learning through guided interaction and social engagement. Outdoor environments naturally encourage collaboration, communication, and shared problem-solving.

Howard Gardner’s concept of naturalist intelligence also reminds us that children have an inherent capacity to notice patterns, relationships, and changes in the natural world capacities that flourish when nature is part of everyday learning.

The Natural Environment as a Learning Space

When thoughtfully used, the natural environment becomes an enabling learning space that supports children’s overall wellbeing and development. Through interaction with soil, water, plants, animals, sunlight, and open space, children engage in learning that is meaningful, integrated, and developmentally appropriate.

- Cognitive development is supported as children observe, question, compare, and investigate natural phenomena laying foundations for inquiry, problem-solving, and early scientific thinking.
- Physical wellbeing is strengthened through movement-rich activities such as running, climbing, balancing, digging, and gardening, which develop coordination, strength, and body awareness.
- Social and emotional development grows as children collaborate, negotiate roles, care for living things, and develop empathy and resilience through shared experiences.
- Creative and spiritual development is nurtured as nature inspires storytelling, art, music, imagination, and a sense of wonder, belonging, and connection to the world.
- In these spaces, learning is not divided into subjects. Experiences flow naturally watching a seed sprout supports understanding, patience, responsibility, and care. Playing with leaves and stones encourages creativity, cooperation, and fine motor development. Nature supports learning dispositions such as curiosity, engagement, perseverance, and respect.

Sri Lanka as a Living Classroom

Sri Lanka’s diverse landscapes provide rich, meaningful contexts for early learning. Along coastal areas, children collecting shells, observing crabs, or listening to ocean waves develop awareness of marine life and environmental balance. Simple beach-cleaning activities foster shared responsibility and care for the environment.

In the central highlands, tea estates, forests, and waterfalls invite children to explore biodiversity while connecting learning to culture and livelihoods. Touching tea leaves, listening to stories of cultivation, and walking through misty landscapes help children understand how people and nature are interconnected. Village gardens, plantations, and home environments offer opportunities for hands-on learning through planting, watering, and observing growth. In dry-zone regions, ancient tanks and water systems introduce ideas of conservation, sustainability, and community wisdom. Wet-zone forests and rain-fed landscapes allow children to experience biodiversity, balance, and interdependence in tangible ways.

These everyday experiences rooted in local environments support children in developing a sense of identity, belonging, and respect for nature.

Integrating Nature-Based Learning in Early Childhood Settings

Nature-based learning does not depend on large natural spaces. Even small outdoor areas, school gardens, and nearby community spaces can support meaningful learning. Research highlights that engaging with natural environments whether through green schoolyards, gardens, or local outdoor spaces enhances children’s wellbeing, curiosity, and engagement (Anderson et al., 2020; Jansson & Mårtensson, 2012). School ground greening projects may also provide benefits for children, schools, and entire communities, particularly when teachers and children are actively involved in planning, constructing, and managing outdoor spaces.

Teachers play a vital role as facilitators observing children's interests, creating inviting environments with local materials, and supporting learning through thoughtful interactions and open-ended questions. Where outdoor access is limited, nature corners with plants, natural objects, and seasonal observations can extend learning indoors.

Culturally meaningful practices such as Shramadana, caring for school gardens, or creating bird-friendly spaces support values of cooperation, responsibility, and care helping children develop a sense of stewardship from an early age.



Nurturing Wellbeing and Care for the Future

Sri Lanka's natural richness offers a strong foundation for early learning that values wellbeing, connection, and sustainability. Through nature-based learning, children develop not only knowledge and skills, but also attitudes and values that support harmonious living with others and the environment.

When children learn with nature planting seeds, observing clouds, listening to birds, or creating art from natural materials they build confidence, curiosity, empathy, and respect for life. In nurturing these early experiences.

Sri Lanka's landscapes quietly shape future generations who are grounded, compassionate, and ready to care for the world they inherit.

Nature has always been one of our greatest teachers. In Sri Lanka, it is present everywhere inviting children to learn, play, and belong.

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The Rise of Eco-Farming Tourism



Ruwan De Silva

Global travelers are increasingly seeking meaningful experiences instead of crowded city tours and luxury resorts. They want authenticity, nature, and responsible travel. Sri Lanka fits this demand perfectly. From tea estates in Nuwara Eliya to paddy fields in Anuradhapura, spice gardens in Matale, and coconut plantations in the southern coast, the country offers a diverse agricultural environment that attracts eco-conscious visitors.

Eco-farming tourism is not only about sightseeing farms. It is about participation planting rice, harvesting vegetables, learning organic composting, tasting traditional village meals, and understanding how local communities coexist with nature.

Village Life and Cultural Immersion

Sri Lankan villages hold centuries of wisdom and tradition. Eco-tourism allows visitors to experience:

- **Traditional Paddy Cultivation** Observing or joining farmers in rice planting and harvesting.
- **Tea and Spice Gardens** Learning how cinnamon, cardamom, pepper, and tea are grown and processed.
- **Coconut and Rubber Plantations** Understanding the economic backbone of rural areas.
- **Village Homestays** Living with local families, sharing meals, and participating in daily routines.
- **Handicrafts and Folk Arts** Pottery, weaving, wood carving, and traditional dance performances.

These experiences create cultural appreciation while preserving local identity. Tourists become learners rather than mere observers.

Sustainability and Environmental Protection

A key pillar of eco-farming tourism is **environmental sustainability**. Villages that adopt eco-tourism often improve their ecological practices:

Organic Farming

Farmers reduce chemical fertilizers and pesticides, using natural compost and bio-fertilizers instead. This protects soil health and produces healthier food.

Water Conservation

Ancient irrigation systems such as tanks (wewas) and canals are revived and maintained, ensuring efficient water use for agriculture.

Renewable Energy

Solar panels, biogas systems, and wind energy are increasingly used in eco-villages to reduce carbon footprints.

Waste Management

Plastic reduction campaigns, recycling programs, and composting initiatives keep villages clean and environmentally friendly. Through these methods, eco-farming tourism becomes a living classroom demonstrating how agriculture and nature can thrive together.

Economic Empowerment of Rural Communities

Eco-farming tourism brings direct financial benefits to villages:

- **Employment Opportunities** Guides, homestay hosts, craft sellers, transport providers, and food vendors gain new income sources.

- **Support for Local Farmers** – Tourists purchase fresh produce, spices, and handmade goods directly from producers.
- **Women and Youth Involvement** – Rural women start small businesses such as food preparation, weaving, and eco-lodges. Youth find meaningful jobs without migrating to cities.
- **Community Development** – Income from tourism often funds village infrastructure like roads, schools, and clean water systems.

This economic cycle strengthens villages and reduces poverty while keeping cultural traditions alive.

Technology and Innovation in Eco-Villages

Modern technology also plays a role in enhancing eco-farming tourism:

- **Digital Booking Platforms** allow travelers to reserve farm stays easily.
- **Smart Agriculture Tools**, such as drip irrigation sensors and crop monitoring apps improve productivity.
- **Social Media Promotion** helps small villages reach global audiences.
- **Government and NGO Support** provide training programs on hospitality, sustainability, and language skills.

By blending tradition with innovation, Sri Lankan villages become competitive yet authentic destinations.

Environmental and Social Benefits

Eco-farming tourism encourages:

- **Biodiversity Conservation** Protecting forests, wetlands, and wildlife habitats.
- **Soil and Land Protection** Preventing erosion through tree planting and sustainable farming.
- **Healthier Lifestyles** Promoting organic food and outdoor activities.



Challenges to Overcome

Despite its promise, eco-farming tourism faces challenges:

- Limited infrastructure in remote villages.
- Need for professional training in hospitality and foreign languages.
- Balancing tourism growth with environmental protection.
- Access to funding and marketing resources.

Addressing these challenges requires collaboration between government, private investors, community leaders, and environmental organizations.

Eco-Farming Tourism in Sri Lanka: Present-Day Examples of Sustainable Village Development

Sri Lanka is increasingly becoming a strong example of how eco-farming tourism can support both environmental protection and rural economic growth. Across the country, several villages and regions are already practicing sustainable tourism combined with agriculture, culture, and community participation. These present-day examples show how green tourism is not just an idea, but a working model for village development.

Ella, located in the Badulla District, is widely known for its scenic mountains, tea plantations, and eco-friendly guesthouses. Many small farm owners now open their lands to visitors who want to experience:

- Tea plucking and processing demonstrations
- Organic vegetable gardens
- Nature trails and waterfall visits
- Homestay accommodations with local food

These activities generate income for local families while encouraging low impact tourism that protects the surrounding forests and water sources.



The Future of Eco-Farming Tourism in Sri Lanka

Sri Lanka has the potential to become a global leader in eco-farming tourism. By integrating sustainable agriculture, cultural heritage, and responsible travel, the nation can create a model that benefits both people and the planet. Village based tourism not only attracts international visitors but also builds pride among local communities.

Eco-farming tourism is more than an industry it is a movement toward harmony between nature, economy, and culture. When travelers walk through green paddy fields, share meals with farmers, and learn ancient cultivation methods, they carry home not just memories, but awareness and respect for sustainable living.

In this way, Sri Lanka's villages are not merely destinations; they are living examples of how sustainable development can grow from the roots of the land itself.

Reference Sri Lanka Tourism Development Authority

SMART PHDT: A Centralized Digital Platform for Transforming Plantation Community Services



**Smart PHDT is a centralized digital platform developed for the
Plantation Human Development Trust (PHDT)
to streamline and modernize,
Healthcare service delivery and project management operations across
plantation communities in Sri Lanka .**



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