TEA DIALOGUE

A BULLETIN FOR CURIOUS MINDS POWERED BY PHDT

WHERE IDEA STEEP AND CONNECTIONS BREW

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Ministry of Plantation and Community Infrastructure

P H D T

SOCIAL CHANGE IN THE SRI LANKAN PLANTATION SECTOR

BUSINESS PSYCHOLOGY "BRIDGING THE GAP"

TRENDS IN VITAL STATISRICS IN THE PLANTATIONS

HOW E-LEARNING IS CHANGING YOUNG LIVES

COCONUT YIELD DROP IN SRI LANKA

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TEA DIALOGUE

Planting the Seeds of Dialogue

Welcome to the inaugural edition of Tea Dialogue, a quarterly magazine born from a deep-rooted commitment to Sri Lanka's plantation industry, an industry that has shaped our nation's heritage, economy, and global identity.

In an era of rapid change and growing challenges, Tea Dialogue emerges as a collaborative platform where every voice in the plantation sector can be heard from farmers to the tea exporters, producers, factory owners, trade unions to government officials, students to sustainability advocates. Our purpose is simple yet powerful: to enable constructive, respectful conversation that leads to collective progress, without harmful criticism or divisive narratives.

The plantation industry in Sri Lanka stands at a crossroad. With increasing global scrutiny on labour rights, climate resilience, and ethical production, we must adapt together. Tea Dialogue is designed to be more than just a magazine. It is a meeting ground for shared learning, innovation, and reform. Through case studies, expert analysis, Q&As with industry leaders, and spotlight stories from the field, we aim to present a balanced, inclusive, and solutions-focused lens on the sector.

At the heart of this initiative lies a deep respect for the men and women whose hands cultivate our most iconic export: tea. The livelihoods, dignity, and well-being of plantation communities must be central to every policy, every business decision, and every conversation about the industry's future. That's why Tea Dialogue will also dedicate space to discussions on labour welfare, education, environmental practices, and community development.

We recognize the importance of cross-sector collaboration. Government officials, trade partners, researchers, students, brokers, and media professionals all have an essential role to play. Only by listening to one another we can build a more resilient, equitable, and competitive industry.

This is our first step towards a bold vision: a tea industry in Sri Lanka that is sustainable, inclusive, and globally respected not just for the quality of its product, but for the values it upholds.
We invite you to be part of this journey. Read, reflect, contribute and most importantly, dialogue.
Let the conversation begin.

Lal Perera
Director General

Plantation Human Development Trust

TEA DIALOGUE

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"Social Change in the Sri Lankan Plantation Sector: Beyond Business, Toward Community Empowerment"

L.R. Perera

Social change doesn't happen overnight. It requires collective effort, vision, and persistence. Whether through advocacy, policy reforms, or grassroots initiatives, every push toward justice makes a difference. Progress may seem slow, but every step forward brings society closer to a more inclusive and equitable world.

For decades, industries like tea plantations have thrived, contributing to Sri Lanka's economy and global market position. While discussions around sustainability, business growth, and market expansion continue, an essential aspect is the well being of the community responsible for harvesting the crop.

The workforce behind Sri Lanka's tea industry, primarily from economically disadvantaged backgrounds, plays a crucial role in maintaining the industry's success. Their aspirations, struggles, and evolving needs must be recognized as integral to progress by all the stake holders not only the government and the producers. Without addressing their working conditions, living standards, and social mobility, the concept of sustainable industry development remains incomplete. Moving beyond profit-driven perspectives **toward a holistic approach** is necessary to support these communities. Social change doesn't happen overnight. It requires collective effort, vision, and persistence perseverance. Whether through advocacy, policy reforms, or grassroots initiatives, every push toward justice makes a difference. Progress may seem slow, but every step forward brings society closer to a more inclusive and equitable world The transformation of mobile phones over the last decade is a prime example of how technology has reshaped society,influencing people's needs and expectations regardless of their economic status.

Social Responsibility

Social workers and employers need to **accept and embrace** these changes to ensure fairness:

- **Understanding Digital Divide**: People without access to modern technology may struggle to compete in today's world. Policies should support equitable digital access.
- **Empathy in Employment:** Employers should consider how mobile technology has reshaped job requirements and provide training or resources to employees who lack access.
- **Social Inclusion Efforts:** Social workers must advocate for policies that ensure technology reaches underserved communities, empowering them to participate fully in society.

It's not just about policy changes or business decisions; **the workforce must also actively engage** in progress, acknowledge the advancements made over the years, and work toward further improvements. A positive outlook on the opportunities available in the tea industry can help individuals build stable careers, enhance their skills, and achieve personal growth. By avoiding misinformation and focusing on sustainability, workers can ensure long-term prosperity for themselves and the industry as a whole by looking at the changes made over the years. Social change in this sector is not just a moral imperative; it is an economic necessity.

From **Pulle Madu** to Hybrid Preschool: A Century of Community Transformation. Since the establishment of Sri Lanka's plantation economy in **1867** with the first systematic coffee and later tea cultivation, the sector has undergone profound transformations not just economically, but socially. What began as a colonial labor system has gradually evolved into a modern industry where **worker welfare and community development** are becoming central pillars. This report traces the remarkable journey of **early childhood development** initiatives within plantation communities from the rudimentary pulle madu of the late 19th century to today's technology-integrated preschools. It highlights how **social change, when embraced collectively by workers, employers, and policymakers, can break cycles of poverty and create lasting progress.**

In a society where social change and community service are the cornerstones of progress, it is essential to recognize that every individual, especially those whose labour sustains our economic backbone, deserves equal rights. Plantation workers, as full citizens, are entitled to access free education and healthcare, ensuring that dignity is not a privilege but a fundamental right. In this vision, children, who embody our shared future, receive the nurturing and support necessary to grow into capable, innovative adults.

The story begins over a century ago with the humble "pulle madu" a modest shed created to care for children until their mothers returned from work. This early initiative was born out of necessity and compassion: a retired member of the community assumed the responsibility of safeguarding the little ones, ensuring that even in challenging circumstances, every child was given a measure of care and protection. This grassroots effort, deeply rooted in community bonds, laid the foundation for what would later evolve into a robust system of early childhood care. Over the years,

this simple yet powerful idea has undergone a remarkable transformation in the industry. The pulle madu evolved into Creche and then an Early Childhood Development Centre, a facility that not only honors its historical roots but also embraces the contemporary need for comprehensive child development Today,
the centre is undergoing another metamorphosis: the journey toward a **hybrid preschool model** that intertwines traditional values with modern educational practices. By incorporating both direct teacher engagement and innovative digital tools, the hybrid preschool meets international standards, ensuring that our educational approaches remain as dynamic and forward-thinking as the students it serves. There were 4 phases of transition during the period.

Hard Truth

The Birth of the Pulle Madu took place in late 1800s with the commercializing of the Tea industry in then Ceylon. Ceylon Plantation workers, primarily South Indian Tamil labourers brought under the kangany system, faced extreme hardship long hours, low wages, and no childcare which is now on one is willing to talk about during the colonial era long hours working. Women comprised over 60% of the workforce but had no support for their children and that is the time this communities on their own developed the pulle madu -children's shed a makeshift shelter where elderly women watched workers' children with cane and no educational back ground. No-formal education, just basic supervision to the security of the children until the parents return after work and to prevent accidents. There was no labour laws like now. This information should enlighten you the situation of the colonial **Pulle Madu** system.

- 14-hour workdays (4:30 AM to 6:30 PM) with no breaks
- Women forced to return to fields 3 days after childbirth

Infant mortality rates of 40% (Colonial Medical Reports, 1897)

Post-Independence Reforms (1948–1980) – Creches Take Shape

Key Developments:

- 1948–1960s: After independence, the government introduced minimal labour protections, but childcare remained neglected.
- 1970s: Trade unions began advocating for worker rights and welfare, leading to the first estate-managed creches.
- Basic shelters with minimal supervision
- No structured learning, but improved safety & care.

During the British colonial administration meticulously, recorded tea yields and profits but deliberately obscured the human cost. Emerging research reveals staggering mortality rates that would qualify as crimes against humanity by modern standards.

- Infant mortality rate in 1880 from the **General Population** (1880s): 180 deaths per 1,000 live births. Estate Labourers (1880-1920): 400-600 deaths per 1,000 live births as per Plantation Hospital Records and the causes has been due to:

- Malnutrition (mothers averaging <1,500 calories/day)
- Neonatal tetanus from rusty blade umbilical cuts.
- Diarrhea from contaminated water.
- Respiratory tract infections
- In Badulla district, 7 of 10 babies died before learning to walk.

Reference: Dr. S. Ponnambalam, Colonial Medicine and Its Victims (1973)

This evolution is more than just a physical or technological transition it is a reaffirmation of our commitment to social justice and human dignity. The transformation of a humble childhood refuge into a state-of-the-art preschool reflects a broader societal shift. It represents the realization that when communities coalesce around the principles of equity, respect, and innovation, no member is left behind. Free, high-quality education and healthcare are not mere policy goals; they are daily affirmations of the worth of every citizen, particularly those who have historically been marginalized. As we look to the future, the journey of this facility stands as an inspiring testament to what can be achieved when tradition meets innovation.

In embracing this transformative journey, we commit to a future where every child receives the care and opportunities they deserve. This vision calls for sustained engagement and collaborative effort to create environments that empower future generations to thrive, both locally and on a global stage.

to be Continued...

“Bridging the Gap: How Business and Industrial - Organizational Psychology Can Transform Worker Lives in Sri Lankan Plantations and Enhance Organizational Performance”

D. P. J. Amila Patabandhi

Industrial-Organizational Psychology (I/O Psychology) is a specialized branch of psychology that applies psychological theories and principles to workplace settings. It focuses on improving employee performance, well-being, and organizational effectiveness through areas such as:

- **Employee motivation, job satisfaction,and mental health** (critical in labor-intensive sectors like plantations).
- **Leadership, teamwork, and organizational culture** (relevant for PHDT’s community development initiatives).
- **Workplace training, human resource development, and occupational stress management** (key for plantation workers in Sri Lanka) Employee motivation, job satisfaction, and mental health (critical in labor-intensive sectors like plantations).
- **Business and Organizational Psychology,** while overlapping with I/O Psychology, places additional emphasis on strategic decision-making, consumer behavior, and organizational change management. In the Sri Lankan context, this field can help:
- **Enhance workforce productivity** through behavioral insights.
- **Design better welfare programs** by understanding worker needs.
- **Improve leadership strategies** for sustainable community development.

Given Sri Lanka’s plantation sector’s socio-economic challenges, applying these psychological disciplines can empower organizations to foster a healthier, more motivated, and productive workforce.Recent research conducted in Sri Lanka by a number of researchers shows that low job satisfaction brought on by unfavorable working conditions and social marginalization is a significant contributor to worker turnover, particularly among young people in the plantation industry (Akalanka and Mayoshi, 2025). Additionally, inadequate living circumstances, and a lack of educational possibilities all contribute to plantation workers’ psychological suffering(Thikarathna, 2023). It is clear from the backdrop of Sri Lanka’s agriculture sector that high stress levels have a detrimental effect on wellbeing and performance, underscoring the necessity of encouraging work environments (Guruge and Ban, 2021). According to research,
land inheritance norms and sociocultural variables influence Sri Lankan youth’s psychological attitude towards agriculture, making them less inclined to select agricultural profession (Samaraweera, Dharmadasa, Kumara and Bandara, 2022).

It is evident that the psychological attachment of employees to plantation organizations is also greatly influenced by good management methods, training, and interpersonal connections (Fernando, Wijesinghe and Abeynayake, 2021). In light of this, Business and Industrial-Organizational (I/O) Psychologists in Sri Lanka can significantly improve the psychological and organizational difficulties that Sri Lankan agricultural and plantation workers encounter. They will adapt the specific methods and techniques to the Sri Lankan context based on the most recent research findings and industry best practices worldwide. Business and I/O Psychologists can systematically assess the physical and psychosocial work environment, identifying sources of dissatisfaction such as poor living conditions, lack of recognition, and social marginalization. With this they can help redesign jobs to increase autonomy, variety, and meaningfulness,which are linked to higher satisfaction and wellbeing. With the help of them the organizations can implement fair and transparent reward systems that can boost morale and reduce attrition, especially among youth (Sehgal, 2023; Schumacher, 2024; Pachut, 2025).

Business and I/O psychologists can help identify and train leaders who can create supportive, inclusive, and motivating environments. For example, they can help organization to establishing mentorship and buddy systems that aid new or younger workers in adapting and feeling supported. Employee resilience and adaptability can be raised by promoting a culture of lifelong learning and upskilling as well as training in problem-solving, positive mindset, attitude management and coping strategies that can help workers manage challenges more effectively.

Accordingly, Business and I/O psychologists can create and assess focused training programs to boost confidence and job performance by improving relevant soft skills. Although deeply rooted, Sri Lanka's agriculture and plantation industries face overcomeable obstacles. The sector can shift from a cycle of dissatisfaction to one of empowerment,productivity, and dignity by leveraging the skills of Sri Lankan Business and I/O Psychologists. These experts provide a framework for human-centric development well suited for Sri Lankans, through methodical interventions, such as revising jobs, encouraging inclusive leadership, enhancing resilience, and tying rewards to employee well-being. At this juncture, the question is not if change is necessary, but rather how soon it can be accomplished. The moment to take action is now; the tools are available.

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SUSTAINABILITY AT WATAWALA

Team Watawala

HCV and Riparian Zone Management The High Conservation Values (HCV) concept serves as a planning instrument that assists plantation sector in achieving a thoughtful equilibrium among environmental preservation, social equity, and economic progress. Riparian zones play a crucial role in reducing soil erosion and acting as natural filters for pollutants, while also providing habitats and corridors for wildlife. The Protected Areas (PA) around Watawala Plantations are the Biosphere Forest Reserve Kanneliya-Dediyagala-Nakiyadeniya Complex (KDN), the Pattaramoraketiya, Nerugalkanda and Malambure Forest Reserves. Different type of vegetation structures and natural values present in each type of HCVs, and they are responsible for provide clean air, water purification, pollination and soil conservation.

- Reservation areas are protected with boundary demarcation.
- Illegal activities are monitored and report to the local authorities.
- Reguler monitoring of HCV areas to check illegal activities such as tree felling, encroachments and hunting.
- Water catchment areas are conserved without clearing for new planting.
- Steep areas are monitoed for soil erosion and avoid new planting on steep areas.
- Establish buffers along rivers, streams, and rills.
- Plant native trees along buffer zone to enhance vegetaion cover Help retain soil structure and water along the edges of these waterways by planting native species such as Kumbuk and Bamboo.

Enhancing biodiversity throh jugh these buffer zones is a practical and effective approach to maintaining healthy riparian ecosystems. The riparian zones act as wildlife corridors for local fauna movements among forest patches and agricultural lands· Buffer zones are demarcated with red strips and application of weedicides and fertilizer is prohibited beyond that limit.

GHG Emission Reduction

We have implemented GHG accounting strategies to assess the net greenhouse gas emissions from our agricultural operations. This allows us to identify significant sources of GHG emissions and take targeted actions to reduce them.
Achieved ISO 14064-1 Certificate for all management units. We have already taken several initiatives to minimize our carbon footprint, ncluding: Adopting a Circular Economy: By reusing waste and optimizing resource use, we reduce emissions and promote sustainability.

Waste Reuse: We implement strategies to repurpose agricultural waste, turning potential pollutants into valuable resources.

- Energy Reuse: Our energy reuse strategies focus on maximizing efficiency and reducing reliance on non-renewable energy sources.
- Through these efforts, we are committed to creating a more sustainable and environmentally friendly agricultural system. Creating GHG Sinks through Forest Conservation: We have conserved forest vegetation within our plantations to create greenhouse gas (GHG) sinks, effectively minimizing our net GHG emissions.

Researches

Research on environmental impacts is initiated by establishing bio indicators to compare species richness and diversity within ecosystems. Baseline data on species diversity drives measures for the enrichment and conservation of natural assets. The latest research assessed species diversity in oil palm cultivation and non-oil palm areas to determine diversity and establish baseline data for further impact assessments using bio indicators.Additionally, a Greenhouse Gas (GHG) emission assessment was conducted to obtain activity-wise emission data,

- Identify emission shares from each source,
- Set reduction targets aligned with sustainability goals.
- Evaluations of sustainable energy utilization and feasibility studies on current sustainable energy trends are also performed to adopt better practices for the future.
- **Occupational Health & Safety** ·Numerous programs have been implemented throughout operations to create a safe working environment for employees.

The top priority is the health and safety of all personnel.

- Annual medical campaigns held to medical screening of employees and direct them for treatments or consolations.
- Hazard identification and Risk assessment for throughout the context·
- Ensure workforce safety with personnel protective equipment.
- Safe chemical handling by incorporating pre-mixing of weedicides and application by dedicated chemical spraying teams·
- Ensure first aid knowledge through Annual First workshops. ·
- Enhance firefighting competency through fire drills and trainings
- Ensure fire safety through fire alarm and fire extinguishers.

- Regulars safety inspections to check with occupational health and safety standards.
- Consistent safety improvements and operational controls.
- Ensure safe working environment through work permits.
- Record lost time incidents and recordable incidents and accident investigation.
- Waste Management and Zero burning in waste disposal.
- Open burning of agricultural waste is a major contributor to greenhouse gasemissions, exacerbating climate changeand air pollution. At WATA, we are dedicated to combating these issues by adopting zero burning practices.

- Incorporate agriculture residues back into thecultivation fields to enhance soil organic matter and fertility.
- Palm fruit fiber and nut shells are using as fuel for biomass boiler to enhance energy conservation with steam generation.
- E -waste recycling with authorized service provider
- Hazardous solid waste is disposed for incineration without reaching the environment as per the national regulations.
- Safe storage of chemicals and emptycontainers with national guidelines.
- Our zero burning initiative is part of a broader approach to sustainable agriculture, which includes practices such as crop rotation,
- cover cropping, and reduced tillage. These methods not only mitigate emissions but also strengthen the resilience and sustainability of agricultural systems. Join us in o ur commitment to a greener, healthier planet.

Deal fairly and transparently with smallholders and other local businesses

Our mission is to empower smallholders by sharing expert knowledge on oil palm best practices, fostering business growth and sustainability.

- Fair prices are paid through mutual agreements, ensuring transparent transactions.
- Stakeholder engagement is prioritized through consultations, incorporating their suggestions to enhance our ethical business practices.
- Equal opportunities are provided to local service providers to meet rising demands and requirements.

Raining and awareness provide for productivity improvement of small holders. Prioritize local suppliers for sub contracts offering.

Contribute to local sustainable development

- Supporting the community through cooperative societies and various empowerment programs enhances livelihoods and boosts income generation.
- Water sources within the plantations are preserved and utilized by the surrounding community, ensuring the security and vailability of drinking water without disturbances.
- Vegetation around water sources is aintained, and high conservation value forests are protected.
- An environmental stewardship culture is promoted throughout the organization to safeguard the lives of rare, threatened, and endemic species.
- Nutrient availability for the community is enhanced through the development of aquaculture tanks within the plantation. Natural resources are secured for future generations.

Training

We ensure all our employees are competent enough to perform their task with minimizing the impact on health and safety and the environment. We provide continuous awareness programs to keep employees well trained, individual training need evaluations taken to measure the people development areas and their effectiveness on the awareness provided.

- First Aid Training
- Fire Training
- Occupational Health and Safety Training
- Safety induction for new recruitments and visitors
- Invasive species training
- Waste Management training
- Women empowerment trainings
- Working instructions and Company policies
- HCV and Buffer zone awareness.

COCONUT YIELD DROP IN SRI LANKA FROM MARCH 2024

Dr. Sampath Niroshan

History of Coconut Cultivation in Sri Lanka

A perennial tree crop that thrives in the warm, humid climate of the tropics is the coconut. Historical records show that the coconut palm (Cocos nucifera L.) as been in Sri Lanka for more than two millennia. Coconut was grown at Mess scale, Sri Lanka, during the period of rule of King Kithsirimewan. On the other hand, commercial coconut cultivation started in the mid-1800s. Currently, Sri Lanka ranks fourth globally in terms of coconut production, while Indonesia, the Philippines and India took first, second and third place in that order.

Coconut Planting Districts in Sri Lanka

The "Coconut Triangle" which consists of the districts of Kurunegala, Gampaha, and Puttlam is the most significant location for coconut production, accounting for 65% of Sri Lanka's total area under coconut cultivation. 75% of the land planted with coconut lands are owned by small holders, who owen less than 8.0 hectares. The estate sector, on the other hand, occupies 25% of the land and accounts for 40% of the nation's production.

Biology of the Coconut Palm

There are two primary categories for the 44-month process of developing coconut inflorescence to a mature nut: 1)

Non Visual Cycle (32 months) and 2) Visual Cycle (12 months) (four months of setting, button nut shedding, and immature nut falls(8 months of kernel development to mature nut). The first three to four months are thought to be the most sensitive time to moisture. Inflorescences of a single coconut will have 25 to 45 spikelet. The spikelet is topped by ale flowers. Each spikelet has two or three female flowers and 150 to 200 male flowers. Female flowers range from 15 to 50 in a normal. As many as 50 to 70 percent of female flowers are typically aborted and fall off due to natural pollination, which is caused by the wind or insects (mostly bees). Moreover, the remaining blossoms turn into fruits. The palm will have twelve bunches at any given moment, each at a different stage of development. Within a year, 12 coconut fronds will fall.

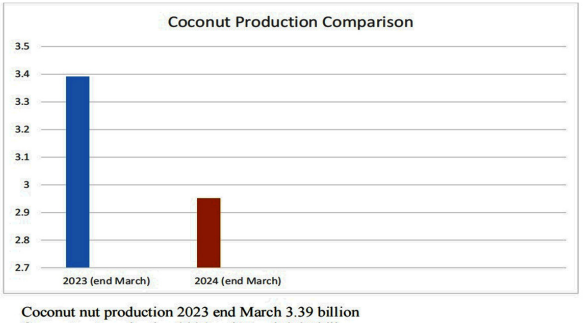
Reasons for the Coconut Yield Drop in Past Few Months in Sri Lanka

The country's excessive rainfall was a major contributing factor, which negatively impacted coconut plantation pollination. As previously stated, insects and the wind are responsible for 75% of coconut pollination.When it rains extensively, pollen from coconut palms is carried away, reducing pollination. Additionally, there is less insect activity during the rainy season, which also results in reduced bunch development.

Insects exclusively gather pollen from coconut flowers, which have no nectar, to feed their drone pupae. Pollen is not collected by insects during the rainy season.

How to Increase Coconut Yield

1. Setting up the right distance.
2. Pick appropriate mother palms from which to gather seedlings.
3. Where water is required, provide it.
4. Clear Out Additional Shade in Coconut Land.
5. Maintain the correct gap with intercrops.
6. Applying the Right Fertilizer Blends.
7. Keep the rhizosphere properly mulched.
8. Enhance soil microorganisms.
9. Using bio liquid fertilizer instead of conventional inorganic fertilizer will be advantageous.



Coconut nut production 2023 end March 3.39 billion
Coconut nut production 2024 end March 2.95 billon
Production drop was recorded as 17.8% and during April 2024 to December 2024 the drop was increased up to 28%.

"Areas to be Discussed and find out proper solutions to improve the Coconut Productivity of the county "

1. Planting Distance –Recommendations are set on as 24 x 24 or 26 x 26 planting distance are suitable for coconut planting as new varieties are introduced in recent pass it is time to do new experiments and decide on the planting Distance
2. Size of the planting Hole – Recommended planting hole Sizes are set on as 3ft x 3ft x 3ft and 4ft x 4ft x 4ft. in some countries they use small size of planting holes where the growth is faster and the root system developes well.

1. Replacement of nutrition levels are recommended many years back and now the soil conditions are changed a lot therefor New Experiments has to be carried out and decide on the various mixtures and correct dosage of fertilizers has to be introduced.
2. Modern irrigation systems has to be introduced after carrying out proper field trials.

Finally

Coconut cultivation in Sri Lanka significantly contributes to economic growth, employment, and food security. Addressing current challenges through strategic initiatives can further enhance its impact on society.

"TRENDS IN VITAL STATISTICS IN THE PLANTATIONS"

Dr. Sarath Amunugama

Vital statistics, also known as vital events, are significant life events representing key demographic changes within a population that influence its size, structure, and dynamics. These events are tracked and recorded through a civil registration system which the government use to gather and analyze demographic information. This information helps us understand population trends, monitor the outcomes of public health interventions, and take informed policy decisions.

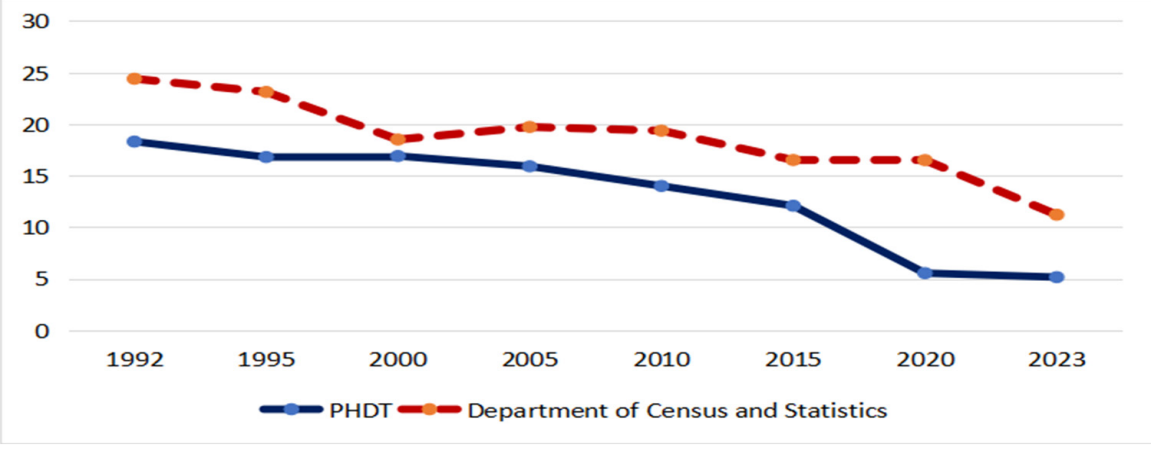
The World Health Organization (WHO) defines health as "a state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity". This definition, adopted in 1948, emphasizes that health is a holistic concept encompassing more than just the absence of illness. It recognizes that health is influenced by a variety of factors, including individual characteristics, environment, and social determinants. Vital events often serve as indicators of disease and infirmity within a community, rather than measures of positive health or well-being. However, most of the literature treats these events as a reflection of trends in the overall health status of communities. Most vital events data are published at the National or District level, and disaggregated data for the plantation sector are not available. The Monthly Social and Welfare Return (MSWR) collected by the Plantation Human Development Trust (PHDT) is the only source of plantation specific vital statistics covering people living within the Regional Plantation Companies (RPCs).

The objective of this article is to compare vital statistics collected through MSWR for the plantation community with National level data gathered from the Department of Census and Statistics which is the official publication of the Registrar General. Data from Family Health Bureau of Ministry of Health is used to supplement the data from the Department of Census and Statistics.

Crude Birth Rate

The crude birth rate in plantation communities has decreased over the years, mirroring the decline in national rates as indicated by the Department of Census and Statistics. This decline mirrors broader national trends which may be attributed to improvements of socio-economic conditions, higher levels of education, improved access to healthcare including family planning services and an increasing number of working women who prefer to delay conception and have fewer children.

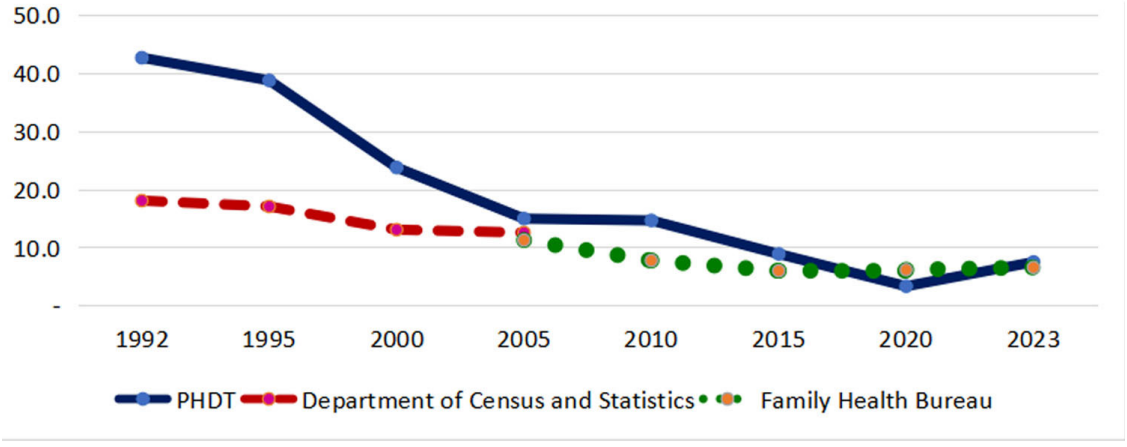
Graph 1 - Crude Birth Rate (per 1000 Population)



Still Births

Although still birth rates in plantation communities were higher in the early 1990s, they gradually declined and matched the national figures by the early 2020s. This trend reflects improvements in the socio-economic status of plantation families and better access to healthcare services. It also indicates progress in maternal and child health services in the plantations over the period.

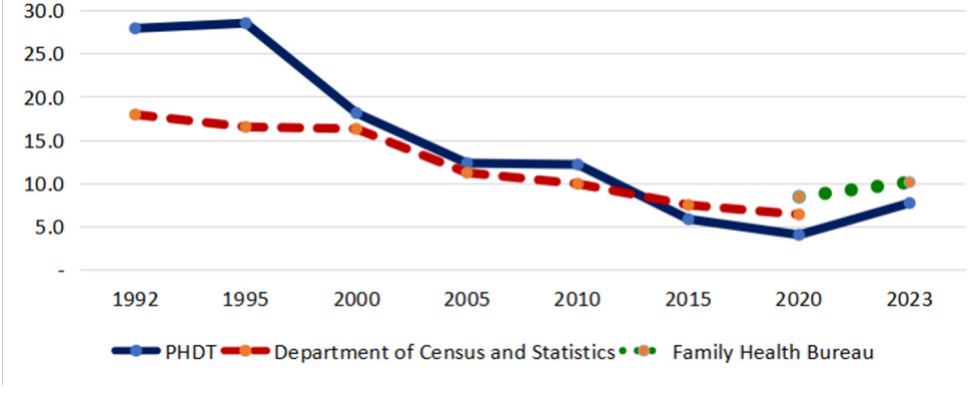
Graph 2 - Rate of Still Births (Still Birth Rate - per 1000 deliveries)



Infant Deaths

Infant mortality also shows a similar trend. At present the infant mortality rate in plantation communities is much lower than the national figure, reflecting improvements in socio-economic status and better access to healthcare services. However, further analysis of the underlying causes is needed if we are to reduce them further. Continued monitoring and targeted public health interventions could help to sustain and improve these outcomes.

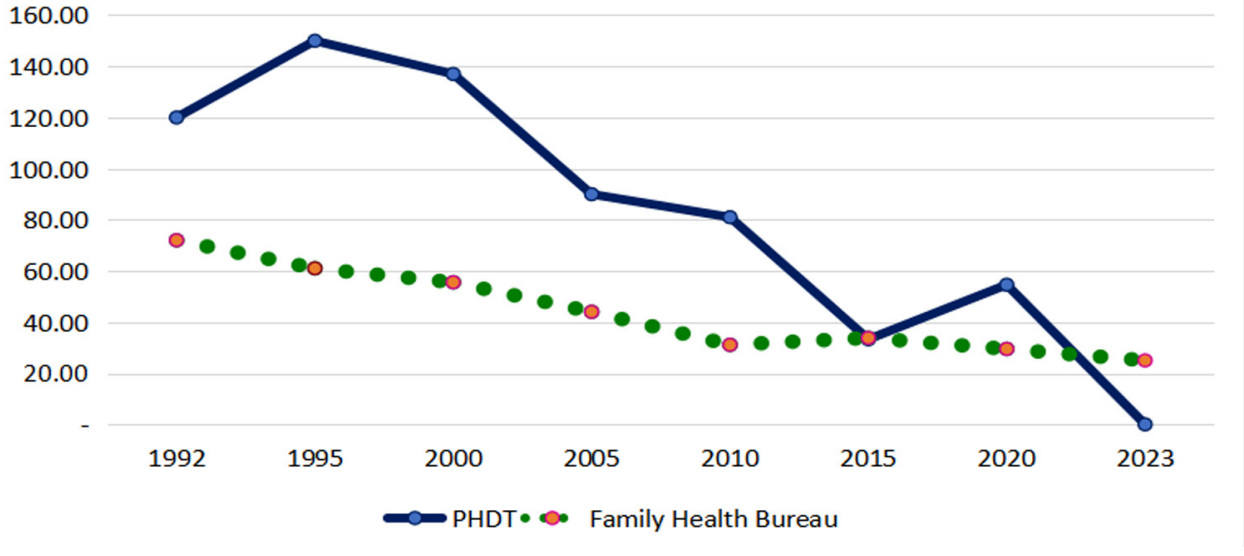
Graph 3 - Infant Deaths - (Infant Mortality Rate per 1000 Live Births)



Maternal Deaths

Maternal mortality has also declined gradually and is now below the national ratio. This trend again reflects improvements in socio-economic status and better access to healthcare services for plantation families. However, because the number of live births in the plantation population is small, even a single maternal death can cause the maternal mortality ratio to rise sharply. For example, with zero maternal deaths recorded in 2023 and 2024, one death would significantly increase the ratio. Therefore, continuous vigilance and preventive measures remain important to keep maternal mortality low.

Graph 4 - Maternal Mortality Ratio (Maternal Mortality Ratio per 100,000 Live Births)



Way Forward

The low rates of these vital events indicate improvements in the living standards of plantation communities. They reflect better socio-economic conditions, higher literacy rates, and improved access to healthcare services. This suggests that plantation communities have made significant progress in health outcomes and living standards. Regional Plantation Companies have contributed immensely to the declining rates of vital events by improving basic infrastructure, improving welfare facilities, encouraging household cash,

management and reducing unacceptable microfinancing through Estate Cooperative System and facilitating expansion of maternal and childcare services within the estates.

However, further improvements in health and wellbeing will require addressing various social and economic challenges. Determinant of wellbeing of communities such as the health of the caregiver (especially among mothers), domestic violence, and substance abuse (alcohol, tobacco, and other drugs), disruption of family harmony and stability, household financial management and access to unacceptable and unethical microfinance need to be addressed. These determinants should be addressed through community empowerment initiatives. Efforts should also need to be focused on improving living standards, expanding access to education (especially early childhood learning) and enhancing food security.

All RPCs need to play a vital role in this endeavor by improving health and welfare facilities as well as playing an active role in empowering plantation communities to improve health and wellbeing of the plantation community.

Reliability and accuracy of data collected through the MSWR also need to be maintained. Appointment a designated person such as Welfare Officers for each and every estate also a step forward for the improvement of the data. Development of a new digital flatform also will contribute to the collection of accurate, reliable and timely data.

Reimagining Sri Lanka's Plantation Industry: The Power of Digitalization and AI

Shanaka Rajapaksha

Sri Lanka's plantation sector, long known for its historic contribution to the national economy through tea,rubber, and coconut, now stands at the crossroads of transformation. In an era marked by climate change, labor shortages, and fluctuating global demand, the sector must evolve. And the answer lies in technology particularly **digitalization and artificial intelligence (AI).**Across the globe, agriculture is being reshaped by smart technologies, and Sri Lanka's plantations can benefit tremendously from this wave of innovation. From the field to the factory, digital tools are unlocking new efficiencies, increasing transparency, and improving worker welfare. It's not just about automation it's about building a smarter, more resilient, and inclusive plantation economy.

The Case for Digitalization

Digital transformation starts with data. By deploying sensors, drones, GPS tools, and mobile applications, plantation companies can gather real-time insights into soil quality, crop health, weather conditions, and more. This approach, often referred to as Precision Agriculture, enables estate managers to optimize input usage applying the right amount of water, fertilizer, or pesticides only where needed. The results are clear: higher yields, lower costs, and reduced environmental impact. In labor management, digital check-rolls, biometric attendance systems, and mobile wage apps are improving accountability and payroll accuracy. Worker grievances can be tracked digitally,housing conditions monitored, and health services delivered more efficiently.

These interventions not only improve productivity but also foster dignity and fairness in plantation communities. Enterprise Resource Planning (ERP) systems, once rare in agriculture, are now vital in integrating estate-level operations from fieldwork to factory logistics, procurement, sales, and finance. When coupled with VPNs and cloud-based infrastructure, these systems ensure seamless, centralized decision-making.

AI: Driving the Next Phase of Transformation

While digitalization builds the foundation, AI takes plantation management to the next level. AI can forecast harvest yields using weather, soil, and historical data. It can detect early signs of disease through image recognition on mobile devices,allowing field workers to act swiftly. Smart irrigation systems powered by AI adjust watering schedules based on microclimate data, conserving water and energy.AI also opens up financial access for smallholders and workers. Digital profiles built on work history, harvest data, and transaction records enable banks to offer microloans and insurance products with reduced risk. Additionally, AI chatbots in Sinhala or Tamil can provide advisory services, agricultural tips, or even training anytime, anywhere. When integrated with blockchain or QR-code systems, AI can enhance product traceability from estate to export. This transparency appeals to international markets and supports compliance with global sustainability certifications such as Rainforest Alliance or Fairtrade.

Livable Wage for Deserving Competence: A New Paradigm for Sri Lanka's Plantation Sector

Lalin I De Silva

The history of plantations in Sri Lanka predates the structured implementation of Human Resources Management (HRM) principles. This has led to a stagnation of progressive workforce policies in the plantation sector, exacerbating the crisis of a static, never-evolving job structure at the estate level. The core issue stems from the industry's continued entrenchment in the commodity market rather than transitioning into a product market save for a few exceptions. This has provided fertile ground for trade unions to maintain an archaic system that perpetuates labor dependency rather than advocating for a modern, competency-driven business model. Trade unions, instead of embracing transformation, have traditionally relied on collective bargaining mechanisms, often with the backing of international organizations like the International Labour Organization (ILO). While collective bargaining has been seen as a tool for securing higher wages, it has inadvertently preserved outdated employment structures.

Value chain management experts have long proposed competency-based remuneration models to address labor attrition, yet these callshave largely gone unheeded. Consequently, the plantation sector is now grappling with an acute shortage of skilled labor,

Further eroding its contribution to the national GDP, which once stood at 4% but is now on a downward spiral. Faced with labor crises, politicians have resorted to using their influence to mandate wage hikes, not as a means of strategic sectoral reform but merely as a damage-control measure. However increasing wages without a structured, scientific approach does little to ensure sustainable sectoral growth. The fundamental question that remains unanswered is: how does one define and measure the ideal level of competence required for a liveable wage in the plantation sector? The answer lies in embedding HRM principles into the very fabric of plantation management. A sustainable solution involves the following integrated approach:

1. Developing a New Business Model (Strategy):

The plantation sector must transition from a commodity-based approach to a product-oriented one. This shift would add value to the supply chain,

open new market opportunities, and create demand for a more skilled workforce that justifies better remuneration.

2. Digital Transformation (Technology):

The introduction of smart agriculture, automation, and data analytics can help modernize estate operations. Digital tools can facilitate workforce planning, performance tracking, and precision farming techniques, all of which will redefine job roles and expectations.

3. Structural Reforms (Execution Frameworks):

The industry must realign its organizational structures to support modern business objectives. This includes redefining job roles, eliminating redundant positions, and introducing competencybased career pathways.

4. Professional Development (Human Capital Evolution)

The focus should shift from merely training technicians to cultivating professionals at all levels. This entails structured upskilling programs, leadership development, and competency assessments to drive industry-wide transformation.

Key HRM interventions such as job evaluation, job costing, job rotation, and salary benchmarking must be systematically applied to create a competitive and attractive workforce environment.

This will not only address the challenge of high labor costs but also mitigate external political interference in wage determinations.

Rather than blaming political interventions for the sector's decline, stakeholders must proactively manage growth through **Value Chain Management (VCM)** principles. A robust VCM approach ensures that each component of the plantation industry from raw material sourcing to final product delivery operates efficiently and profitably, thereby justifying a competency-based remuneration framework.

The future of Sri Lanka's plantation sector depends on its ability to adapt, innovate, and integrate HRM strategies that align with global best practices. A shift towards a competencybased livable wage model will not only improve labor retention but also restore the sector's economic viability, making it a sustainable and attractive career option for future generations.

Micro - Watershed Conservation in Sri Lanka Plantations

Jehan Canaga Retna

For nearly 40 years, the Rainforest Alliance has worked to restore the balance between people and nature by supporting farmers, communities, and companies to protect vital ecosystems and build a more sustainable future. In Sri Lanka's plantation sector, our partnership with the Plantation Human Development Trust (PHDT) is helping to do just that. This is targeted action to conserve microwatersheds and strengthen climate resilience in some of the island's most ecologically and economically important landscapes.

Water is life. In the tea plantations of Sri Lanka's central highlands, water begins its journey in the form of delicate micro-watersheds. These springs, which emerge when rainwater penetrates steep slopes and meets the right geological conditions, are often the headwaters of rivers that supply coastal towns. Though they occupy only a small area, these watersheds are immensely valuable sources of freshwater for rural communities and downstream cities alike.

Micro-watershed zones are now being fenced to prevent contamination and inappropriate use. Native plant species are being planted around these springs, creating natural buffer zones that enhance biodiversity and stabilize fragile slopes to reduce erosion and protect water quality during heavy rains.

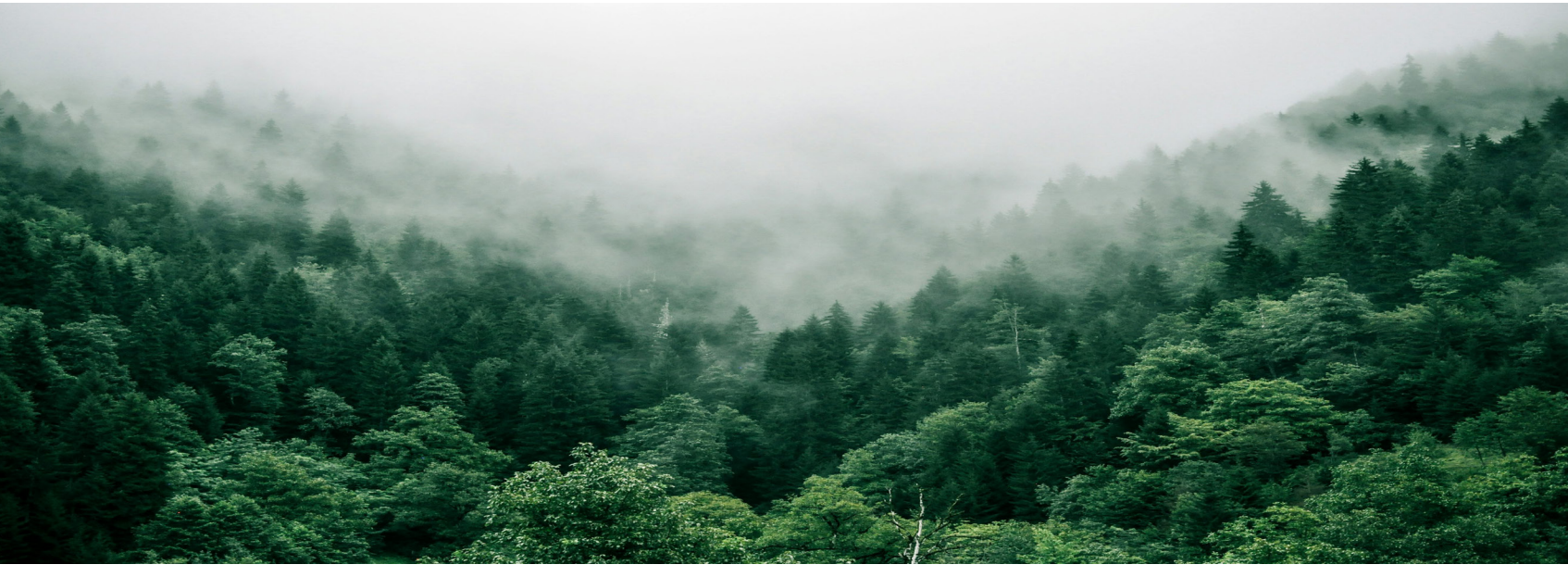
Awareness programs are held for communities that live locally along with plantation company staff and management to create understanding.Collaboration with all the stakeholders is critical in building resilient partnerships. When tackling complex challenges like climate change, land degradation, and water scarcity, collaboration makes all the difference.

The Rainforest Alliance was founded on this belief and our global experience shows that bold partnerships can accelerate lasting impact. In Sri Lanka, we are proud to work alongside the PHDT to harness the collective strength of companies, communities, government institutions, and civil society. These alliances not only drive progress in the field but also empower local stakeholders to lead sustainable transformation from the ground up. By forging strong partnerships with institutions like the PHDT, Rainforest Alliance helps bring together companies, communities, government bodies, and local and international organizations to drive sustainability where it matters most. In Sri Lanka's plantation landscapes these alliances amplify the impact of those working to safeguard natural resources and build a more resilient future. Placebased knowledge is vital to designing effective, lasting solutions.

By listening to and learning from those who live and work in these ecosystems every day, we ensure that our shared efforts are both practical and grounded in local realities.

The PHDT plays a key role in this effort. As a unique tripartite organization representing the government, plantation companies, and trade unions the PHDT is possibly the only institution of its kind globally that is dedicated to improving the wellbeing of plantation communities. Their deep-rooted presence and trusted relationships across the plantation sector make them a powerful partner in driving meaningful change on the ground.

By combining the Rainforest Alliance's global expertise with PHDT's unique position in the plantation sector, we are helping to build a future where ecosystems thrive, communities prosper, and plantations regenerate.



Pull Quote

"Though small, Sri Lanka's micro - watersheds are lifelines for entire regions. Protecting them requires the power of partnership."

Jehan CanagaRetna (Country Representative for Sri Lanka - Rainforest Alliance)

Unlocking the Future of Sri Lanka's Tea Sector through Regenerative Agriculture

Nitin Rao
Head of Planning and Innovation Solidaridad Asia

As global agriculture faces mounting pressure to adapt to climate change, consumer expectations, and stricter sustainability regulations, Sri Lanka's iconic tea industry finds itself at a critical juncture. While the country's lush estates and smallholder networks have long supplied some of the world's finest teas, the sector must now pivot towards future-facing practices that ensure long-term resilience, competitiveness, and environmental stewardship. One such pathway is regenerative agriculture – a system of farming that not only sustains but actively restores ecosystems.

Regenerative agriculture: A step beyond sustainability

Unlike conventional sustainable agriculture that seeks to do "less harm," regenerative agriculture aims to actively improve the health of soils, biodiversity, water systems, and carbon cycles.

This approach is especially relevant to Sri Lanka's tea landscapes, which are vulnerable to soil erosion, declining productivity, and climate volatility. Regenagri, a globally recognised regenerative agriculture certification, offers tea estates and smallholder networks a structured, stepwise framework to adopt regenerative practices. These include enhancing soil organic matter, integrating agroforestry, minimising chemical inputs, and promoting biodiversity all validated through science-based indicators and third-party verification. Crucially, these practices don't just restore the land they also lead to increased productivity, improved soil fertility, and greater input efficiency, making the transition economically viable for growers.

Sri Lanka has already made history in this space. Halgolla Estate became the world's first tea estate to achieve regenagri certification, marking a significant global milestone. This was followed by Lumbini Tea Factory, which obtained the world's first group certification a testament to Sri Lanka's early leadership in regenerative tea production.

Market access and supply chain readiness

Tea companies that achieve regenagri certification are better positioned to meet the expectations of international buyers who are increasingly demanding proof of sustainability.Certified producers gain preferential access to premium markets and are more aligned with emerging international trade regulations particularly those of the European Union, It offers a practical, phased pathway to regeneration not just in theory, but in measurable, market-validated outcomes.

such as the Corporate Sustainability Due Diligence Directive (CSDDD) and the EU Deforestation Regulation (EUDR). These regulations mandate transparency, environmental compliance, and social responsibility within supply chains and regenagri provides assurance on all fronts.

Moreover, regenagri's inclusive approach ensures that smallholders the backbone of Sri Lanka's tea sector are not left behind. Through training and integration into certified value chains, small-scale growers can participate in premium markets while improving on-farm productivity, soil fertility, and income stability.

Beyond certification: Monetising sustainability through carbon insetting

A compelling innovation under the regenagri framework is its carbon insetting programme, which enables certified farms to generate measurable carbon reductions within their own supply chains turning sustainability improvements into economic value.

Impact insetting involves investing in nature-based solutions like reforestation, agroforestry, and improved land management practices within the tea-producing landscape.

These actions generate verified environmental outcomes including reduced greenhouse gas (GHG) emissions, improved soil carbon sequestration, and enhanced ecosystem resilience. Regenagri-certified organizations can quantify and claim these outcomes through carbon insetting units, verified via third-party audits.

These units can be retained or traded within the supply chain, supporting Scope 3 emission reductions and adding financial value to climate-smart practices. Each transaction is supported by transparent impact documentation, ensuring accountability and credibility.

Building a future-ready tea sector

As Sri Lanka charts its course in a competitive and climate-sensitive global market, regenerative agriculture presents a unique opportunity to reposition its tea sector as a leader in environmental responsibility, farmer inclusion, and value creation. The path ahead is not without challenges from changing mindsets to building capacity among field staff and growers. However, these challenges are surmountable.

Solidaridad Asia, the Nucleus Foundation, and their partners are actively driving this transformation. Together, they are laying the groundwork through field demonstrations, technical training,

awareness campaigns, and engagement with both policy-makers and industry leaders. Field extension officers are being equipped with the skills and tools needed to support the transition, while growing numbers of farmers and smallholders are progressing toward certification readiness.

In moving forward, it is critical that we differentiate regenerative agriculture from the missteps of the past. Sri Lanka's previous overnight organic transition policy, though well-intentioned, lacked a phased, evidence-based approach and caused severe disruption to both yields and livelihoods. Regenagri, in contrast, is grounded in science, economics, and inclusivity.

The time to invest in regeneration is now

only to protect Sri Lanka's natural heritage but to secure the future of its most treasured export. Through regenerative agriculture, the tea sector can do more than survive; it can lead.

RUBBER GROWERS TO BE VIGILANT OVER THE EFFECTIVE MANAGEMENT OF THE CIRCULAR LEAF SPOT DISEASE IN RUBBER PLANTATIONS

Dr. (Mrs.) T.H.P. Sarojini Fernando

The rubber is a vital industry to the economy of Sri Lanka contributing about 0.6% of the total GDP. It also generates nearly US$ 1 Billion to the country from a cultivated extent of 100,000 hectares. While the sector's share of the GDP is relatively small, it is a significant contributor to export earnings and employs many people directly and indirectly. About
64% of the total extent is cultivated by approximately 115,000 small holders with more than 500,000 dependents. Moreover, the environmental effects are immense being an agroforestry crop. The natural rubber latex is one of the most versatile industrial raw materials and could start numerous industries both small scale and large scale.

It is a source of timber as well as fuel in the country. This industry is the third export income generator and being a crop considered for carbon sequestration potentials. Even though there is a great opportunity for the development of this industry, due to many agronomic, socio economic and environmental issues, the annual productivity of our rubber plantations remain low, at around 1000 kg / ha per annum which also has a direct impact on the livelihood and poverty level of the rural rubber growing communities of Sri Lanka.

With the financial crisis, capacity of rubber growers for replanting rubber on their own has become very low. Further, the availability of good quality planting materials for replanting, poor adoption of good agronomic management practices like fertilization in both immature and mature plant maintenance and poor tapping practices has reduced the productivity while fluctuation of rubber prices has discouraged further investment on the crop by farmers resulting an overall reduction in rubber production. The rubber sector in Sri Lanka has a strong potential for development, which would have positive socio-economic impacts, especially in direct and indirect job generation.

Report of the New Leaf Fall Disease

Circular Leaf Spot disease was first reported from Malaysia in the year 2017 and then from Indonesia. Later, the disease was reported from Thailand, China, India, Sri Lanka, Cameroon, Vietnam Myanmar, and Philippines. With the report of the new leaf fall disease condition, all the rubber growing countries took immediate actions to educate the Extension Staff and the growers regarding the disease,

in order to isolate the disease and to limit further spread of it. Disease detection surveys were undertaken and chemical controlling programmes were also implemented to delimit the spread of the disease to new areas. Several discussions and workshops were conducted to implement the appropriate actions jointly by all the sister Rubber Research Institutions and International Rubber Research & Development Board. (IRRDB) and the Association for Natural Rubber Producing Countries (ANRPC) supported the events.

Identification of the Disease

The disease starts with a pin point or pin head sized lesion (Fig. 1). Later they become larger forming characteristic circular lesions (Fig. 2). Under conducive weather conditions, the small circular lesions may coalesce to form larger necrotic areas. With time a blight condition showing yellowish leaves are observed at the lower canopies of the plants leading to a leaf fall condition (Fig 3). Growers should be vigilant to identify the natural wintering process from this new leaf fall disease. Moreover, Powdery mildew and Phytophthora abnormal leaf fall should also be distinguished from each other. However, it should be understood that this new leaf fall disease is showing a unique circular leaf spots.

Causative Agents of the New Disease

For the formulation of an effective disease controlling protocol, the first step will be the correct diagnosis, know the causative pathogens and their life cycle characters. In Sri Lanka, two pathogen groups are playing a role.

Colletotrichum species and Pestalotioides group (three genus – Pestalotiopsis spp. Neopestalotiopsis spp. and Pseudopestalotiopsis spp.). The newly reported Colletotrichum species are: **C.**.*siamense*, **C.***fructicola*, **C.***tropicale*,**C.***gigasporum*. The pathogenicity studies have shown that Colletotrichum species were the most pathogenic group and Pestalotioides was more abundant but majority of the isolates were non-pathogenic or very mild in their pathogenesis.

Mixed infection conditions are very rarely reported from rubber plantations and this is the first occasion of a synergistic action made by several fungal organisms on rubber plants. Colletotrichum leaf disease had been reported from Sri Lanka since 1903 but the present causative agents are new to all the rubber growing countries.

Factors affecting the severity of disease

To reveal the factors affecting, a detailed survey has been carried out. Weather factors such as rainfall and its distribution has influenced the disease severity level badly. The clone also influenced and also the wintering pattern. The early wintering clones like RRIC 100 somewhat escaped the disease while the late wintering clones like RRIC 121 succumbed to the disease. Among the existing clones RRIC 121 has been categorized as a severely affected clone. In Sri Lanka, RRIC 121 alone represents more than 73% of the cultivations. This is one of the reasons for the high incidence of the disease in the country. Hence growers should diverse their clones reducing the crop risk. Current tapping systems have not been correctly followed by many growers. It has been reported that there is a high incidence of Tapping Panel Dryness in our rubber plantations due to the adoption of tapping irregularities.

Such irregularities give extra pressure on the plants and naturally they succumb to the diseases easily. Most of the plantations are up kept very poorly and the overall sanitation of them is not in a good condition. Abandoned plantations are also seen and these plants easily catch the disease, spreading the inocula to the surrounding areas. The growers should always contact the Rubber Research Institute and Rubber Development Department for advices in improving the overall conditions of their plantations and that will definitely help to reduce the severity level of the disease.

Since the Year 2019.....

In Sri Lanka, the disease was first reported from Palawatta area, Kalutara district during the later part of 2019. The disease spread to approx. 200 ha by the end of the year 2019. As disease delimiting operations, pesticides were applied. It helped to restrict the spread of the disease to a certain extent. By the end of 2021, the disease had spread to over 20,000 ha where around 10,000 ha were in severe condition. The yield drops in rubber cultivations that has been reported was due to various reasons andthe disease condition is one of these many factors. However, it should be understood that if no proper action is made to manage the disease incidence, and also the other causative reasons, the natural rubber production of the country will be further affected. Moreover, this pathogen is showing alternative hosts such as tea, cinnamon, papaya, guava, coconut and oil palm.

Screening of Hevea Clones Against the Disease

Based on the observations made so far, the pathogen seems to be entering into the plant at the time of refoliation. Tender leaves are highly susceptible to the pathogens. And some of the fungi are found as endophytes, showing a growth inside the plant without harming, And some of the fungi are found as endophytes, showing a growth inside the plant without harming. Since these fungi are regarded as opportunistic, whenever the cultivations become poorly maintained, they have the capacity to be pathogenic. In the natural field conditions, the symptoms are appearing after about two - three months of incubation period. The wet weather is highly favourable for the incidence and the severity of the disease. This disease has been reported from almost all the rubber clones in different severity levels. Identification of a disease resistant rubber clone will be the most reliable and long term solution to combat the disease. An intensive clonal screening programme has been launched by the Plant Pathology & Microbiology Department. The research conducted for the last two years revealed that clones like RRIC 100, CEN 4 and RRISL 2006 tolerate the disease. Further research should be made; more observations should be collected before making firm conclusions.

Management of the Leaf Fall Disease

By now, the RRISL has introduced a chemical cocktail which is effective in controlling the disease to a significant level.

During the year 2024 this cocktail was shown to be effective and in the year the consistency is being checked to confirm the observation. However, a national level plan is necessary to combat the disease. This plan includes an integrated disease management package with agronomic practices, biological controlling methods and chemical controlling using the cocktail. The programme has been designed to be implemented at the national level. All the stakeholders are not expected to implement every recommendation but every grower can implement at least several of the recommendations. This programme will be effectively implemented during the year 2026.

Prevention of the Disease....

Prevention will be the most effective method to manage any disease. In rubber plantations, there is an annual natural leaf fall which is referred as wintering. During the wintering, all the leaves including infected and healthy will be shed by the plant as a physiological phenomenon. To prevent the buildup of a high inoculum potential, exposed to the new flush appearing during the refoliation can be reduced to a significant level. During the past, most of the plantations have not been properly fertilized due to various reasons. Proper fertilization will affect the vigour of the plants and will provide the resilience to tolerate the disease. RRISL is conducting trials to modify the fertilizer levels and till then, the growers are requested to adhere to the current recommendations Other good agricultural practices like weeding, management of the cover crops etc. too should be followed. It has been observed that in all the cultivations there are weak plants that will never reach the tappable level. Being the runts, these plants easily catch the disease, propagate them spreading to the surrounding trees. It has been proven that these weak plants have a direct relationship to early disease incidences and also to the severity level of a plantation. These weak plants should be removed to lower the natural inoculum potential. Moreover, this operation will improve ventilation and lower the density of the plantations. Furthermore, there are abandoned or neglected cultivations in close vicinities of well maintained rubber plantations which again facilitate the propagation of the pathogen. This disease starts at the tender leaf stages and grows internally for about two three months, the symptoms are shown somewhere around May - June.

Then during the monsoons most of the disease susceptible cultivations show 10 – 20% leaf fall Consequently, the leaf fall proceeds till the month of November showing the disease peak during Sep –Nov. Except in some disease vulnerable sites, the leaf fall would be around 40 -60%. Previous researches have shown that up to 25 - 30% defoliation, there will be no effect to the yield. Compared to the year 2022, during the years 2023 -2024 showed a low disease severity level.

Chemical Controlling of the Disease using the Cocktail

This operation will lower the disease severity, avoid any die-back conditions and reduce the leaf fall level. Until firm recommendations will be made for the cocktail, interim recommendations have been made to control the disease.Two systemic fungicides namely carbendazim - (10 g per liter) and hexaconazole - (10 ml per liter) are recommended for chemical controlling. Application of fungicides should be done in the disease

Fungicides should be applied before the appearance of the symptoms on the leaves. All the immature plantations can be protected as their height or the canopy is easily reachable for chemical applications.

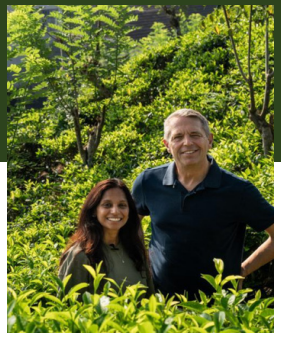
The mist blower carried by four men taking the mist to more than 50 ft height is more appropriate for the mature rubber plantations. The single man carrying machine is capable in reaching a height around 40 –50 ft. Chemical controlling alone will not be sufficient to manage the disease. Over all agronomic practices that has been recommended by the Rubber Research Institute such as weeding, fertilizer application, correct tapping system are helpful in the disease management. All stakeholders are requested to get the support of the Rubber Development Department or the Rubber Research institute to identify the disease and to make proper steps in the disease management.

Fig 1

Fig 2

Fig 3

Labour Crisis or Lack of Management Innovation?



Roshana Gammampila

As new-comers to the industry, we are grateful to Lal Perera for giving us the opportunity to make this contribution. The following is based on what we have learnt so far and is rooted in our commitment to the Sri Lankan tea industry and its people.

Learning Across Industries:
From Yacht Beds to Flat Beds to Tea Beds

Early in my career I heard Hamish Taylor—former CEO of Eurostar and Sainsbury's Bank—describe borrowing ideas outside his sector: luxury-yacht beds inspired British Airways' flat-bed seats; Disneyland queuing theory reshaped airport lines. Ever since, I have looked beyond my own industry for tried-and-tested solutions.

According to the Tea Exporters Association, tea generated 60–70% of Sri Lanka's merchandise-export earnings in the early 1970s. By contrast, the Sri Lanka Export Development Board (EDB), Export Performance Report, January 2025 places tea at 12 % of merchandise exports. for 2024—roughly US $1.44 billion out of US $12.7 billion. When Mike and I bought Devagiri in 2023, we received much well we received much well meaning caution on "labour challenges" that drive up cost, and which have contributed to the decline of the industry. Now 2 years into running Devagiri we have a different perspective. The same Export Development Board report shows that garment exports remain dominant and continue to grow, albeit at a much slower rate. And beyond this, we see newer agri-based industries growing rapidly. Coconut based products- 33% YoY growth on average, peaking at 70% in certain subcategories; Spices and Concentrates- 50% YoY growth; and Food and Beverage- 42% YoY growth. These sectors rarely complain of the "labour problems" that the tea industry faces and, in tea circles, the usual explanation for the difference is "unionisation." While this might be a factor, we believe the crucial difference is that newer industries launched. with modern people-management playbooks that sidestep colonial-era structures. Britain departed in 1948, but many estate processes, metrics and though improving shop-floor behaviours are rooted in the 1920s. In the West, the first half of the 21st century saw F. W. Taylor's.

Maslow's Hierarchy of Needs trigger waves of industrial redesign. And by the second half of the century, management theory was an established field globally, and Toyota trailblazed with TPS and its lean philosophy. New Sri Lankan export sectors internalised this evolution; tea, largely, has not.

Five Levers to Close the Gap At Devagiri,

we have committed ourselves to closing this gap. We are very early on in our journey and cannot claim to have achieved success. But, we are seeing green shoots.

1. Map and Remove Inefficiency

Conduct a work-study: Assuming a high performing workforce, what is the optimum head-count per task for quality and output? Actively pick out situations in which there is over-staffing. Inherited colonial routines mean that not everyone gets their hands dirty. For example, the driver "mahathaya" who stands back while another worker loads a lorry. In modern plants, the driver helps load, trimming headcount.

2. Define a Target Operating Model (TOM)

Translate this work-study into a future-state diagram roles, workflows and quality gates and cost it. Then begin the task of developing the high performing workforce that you need to make it a reality. Before gradually evolving team structures as per your TOM.

3. Build Lean, High-Performing Teams

The drag

- Chronic overtime. Many workers rely onChronic overtime. Many workers rely on extra shifts and cash jobs to offset low basic pay, leaving them physically drained and less productive per hour.
- Thin accountability. There is little commitment to quality of personal output and attendance is governed by the requirements of personal lives, with no ownership of the gap when they are away.

The fix

- Replace the daily-wage mindset with clear roles, shared purpose, outcome-based targets and multi-skilling.
- Pay enough so that overtime is a choice, not anecessity, and lock in standard daily shift hours.
- Expand job scopes. Cross-train so that a single person can cover multiple tasks unlocking more value per head and reducing total head-count. Implicit in this is the elimination of those inherited shop-floor hierarchies that prevent, for example, someone on a leaf urning shift from completing some sifting in between turns.
- Develop shared purpose by educating people on why they perform their tasks and how this contributes to the end product, the global supply chain and business performance.
- Implement clear and achievable output and quality targets, train people to self-manage against these, and rigorously hold them accountable.
- Celebrate success. By publicly calling out and rewarding good performance, build a culture in which your people begin self-governing accordingly.

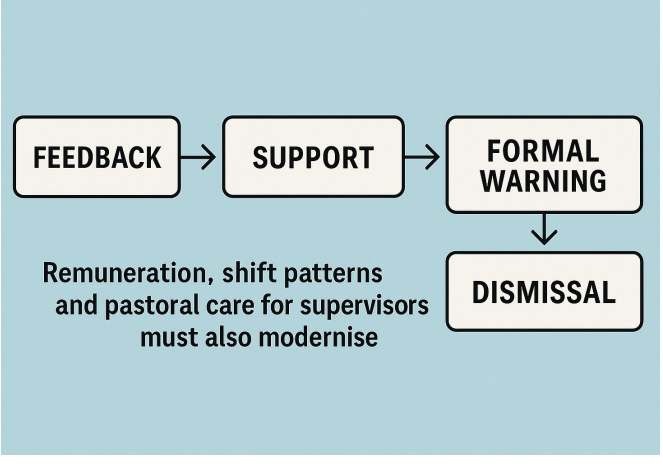
Treat people as skilled operators,not "labour," and the cost curve bends in your favour.

4. Empower Managers to "Play the Orchestra"

In the film Steve Jobs (2015), the main character uses the following phrase to describe his role at Apple, "Musicians play their instruments; I play the orchestra". Supervisors must orchestrate not dominate production.Make pastoral care and team motivation a core part of their role. And train them to:

- Give timely feedback, coach, and rotate staff
- Manage rotas and ensure cover, so absence never affects output

Manage performance professionally via clear stages: feedback → support → formal warning → dismissal (no need for shouting) Remuneration, shift patterns and pastoral care for supervisors must also modernise; you can't demand 21st-century leadership from 20th-century contracts.



5. Share the Strategy, Set Executive KPIs—and Enforce Them

Make sure that strategy and purpose are understood at all levels. So that the entire organization is working towards a shared outcome, rather than on fragmented tasks. With points 3-4 in place, leadership can insist on rigorous standards. Publicly reward over-performance; act fast on under-performance. Consistency embeds culture faster than any slogan.

The ROI of Respect

Global benchmarks show that every 1-point rise in Gallup's Employee-Engagement Index correlates with a 4% gain in productivity (Gallup Meta-Analysis, 2023). Toyota famously harvested a 15 % throughput jump and a 25 % defect reduction within two years of introducing team-based kaizen cells.We have come to believe that Sri Lanka's tea sector has no shortage of hands- we just need modern management techniques to unlock their potential.

Since 2023, Roshana has run The Devagiri Estate with her partner Mike Bailey. Prior to this, they lived in London where Mike was a Senior Partner on the Leadership Team of PwC for many years. And Roshana was VP Product and acting COO at Toyota Connected Europe.

“Maternal and child undernutrition and infant and young child feeding practices in the plantation sector in Sri Lanka: findings from the Sri Lanka Child Growth Cohort” (SLCGC)

Prof.Upul Senarath

Introduction

The first 2 years of a child’s life are particularly important, as optimal nutrition during this period lowers morbidity and mortality, reduces the risk of chronic disease and fosters better development. Yet, undernutrition remains a challenging and unresolved public health problem during the early childhood in Sri Lanka. In the plantation sector (estates) although a decline in the rates of under nutrition has been observed over the past decades, further reduction is possible with appropriate interventionsIn this regard, practice of appropriate infant and young child feeding (IYCF) is an important public health intervention, which improves child survival, growth and development. This article describes the extent of maternal and child undernutrition, and patterns of feeding of young children in the plantation sector in Sri Lanka.

Study Setting and Participants:

The Sri Lanka Child Growth Cohort recruited, children born during 2022-23, whose age was 12-24 months at the time of study . Preterm babies (born less than 37 weeks of gestation) were excluded. A total of 636 mother baby pairs were assessed in the plantation (estate) sector. Trained enumerators adhering to the standard protocols, measured heights and weights of children and their mothers and fathers. Further information was obtained by interviewing mothers, and from the health records. Underweight, wasting and stunting were defined according to WHO growth standards.

Results

Family and Child Characteristics:

Most of the mothers belonged to the 20-29 year age group and majority of the fathers belonged to the 30-39 year age category. The male: female distribution in the sample was almost equal. of the total deliveries, 68.1% were vaginal deliverers.

Nutritional Status Nutritional Status of Mother

During the booking visit for antenatal care, 21.9% pregnant mothers were found to be thin, and 17.5% overweight or obese. Almost 83% of those who were thin, had not gained adequate weight gain in contrast to 33.3% in the obese category.

Table 1 – Nutritional Status of Mother

Nutritional status of mother	No.	%
Pre pregnancy BMI in Kg/m2 (N=549)		
<18.5 (thin)	120	21.9
18.5-24.9 (normal)	333	60.7
25.0-29.9 (overweight)	75	13.7
30 & higher (obese)	21	3.8

Anaemia of the Pregnat Mothers

The prevalence of anaemia was 25.3% in this sample.

Table 2 – Prevalence of Anaemia

Prevalence of anaemia No. %	No.	%
Anaemia in pregnancy (N=620)		
Yes	157	25.3
No	463	74.7

Weight Gain DuringPregnancy:

Weight gain during pregnancy was inadequate in a greater proportion (>70%) especially in the underweight and normal BMI category mothers.

Table 3 - Weight Gain During Pregnancy

Weight gain during pregnancy	No.	%
Adequacy of weight gain according to BMI category (N=549)		
Less than 18.5	Inadequate	82.6
	Adequate	13.9
	Excess	3.5
18.5-24.9	Inadequate	70.9
	Adequate	25.6
	Excess	3.5
25.0-29.9	Inadequate	56.0
	Adequate	34.7
	Excess	9.3
>30 and higher	Inadequate	33.3
	Adequate	50.0
	Excess	16.7

Birth Weight:

The mean birth weight was 2771 g. The low birth weight percentage in this sample of term babies was 20.8%.

Table 4 - Birth Weight

Birth weight	No.	%
Birth weight (N=636)		
Less than 2500g	132	20.8
2500g or 3499g	484	76.1
3500g or above	20	3.1

Nutritional Status of the Child:

Nearly 24% of the children were underweight with 2.5% being severely underweight. Those with stunting was higher (28.5%). The proportion with SAM and MAM were 1.4% and 10.9% respectively, with those with wasting being 12.3%. On further analysis it was seen that prevalence of stunting was higher amon boys, those born with a low birth weight, born at lower gestational age, having persistent growth faltering during 4 to 5 months and not having minimum dietary diversity.

Table 5 - Nutritional Status of Children

Nutritional status of children	No.	%
Birth weight (N=636)		
Severe underweight	16	2.5
Moderate underweight	138	21.7
Total Underweight	154	24.2
Normal	482	75.8
Overweight	0	0
Length for age of child (N=634)		
Severe stunting	26	4.1
Moderate stunting	155	24.4
Total Stunting	181	28.5
Normal	453	71.5
Weight for Length of Child (N=634)		
Severe Acute Malnutrition (SAM)	9	1.4
Moderate Acute Malnutrition (MAM)	69	10.9
Total Wasting	78	12.3
Normal	553	87.2
Overweight	3	0.5

Feeding Practices:

Almost all children had early initiation of breastfeeding, while the exclusive breastfeeding rate at 4th, and 6th month was 82.1% and 56.8% respectively although continuation of breastfeeding during 12-23 months was 90.7%. Further it was observed that at the age of 4 months those receiving water, powdered milk, fresh milk, fruit juice was 21.5%, 7.8%, 0.4%, 4.7%. Consumption of sweets at the ages of 4, 6 and 8 months were 0.5%, 8.5% and 18.1% while for biscuits it was 2.5%, 25.3% and 44.5% respectively, showing early introduction of confectionaries and sweets.

Table 6 - Feeding Practices

Breast feeding practices (N=636)	No.	%
Ever breastfed	634	99.7
Early Initiation of Breastfeeding	632	99.7
Exclusively breastfed for the first 2 days	551	86.6
Exclusively breastfed during 4th month	522	82.1
Exclusively breastfed during 6th month	361	56.8
Mix milk feeding rate during 4th month	27	4.2
Mix milk feeding rate during 6th month	48	7.5
Continued breastfeeding 12-23 months	506	90.7

Obtaining the minimum diversity (defined as receiving at least 5 food items out of the 8 food groups) was 43.1%, 79.8% and 98.7% at the age of 6, 8 and 12 months. Intake of foods of animal origin such as egg, meat, fish and fruits were low.

Table 7 - Minimum Dietary Diversity

Minimum dietary diversity in different months (N=636)	No.	%
At 6 months	274	43.1
At 7 months	418	65.7
At 8 months	505	79.4
At 9 months	552	86.8
At 12 months	623	98.7

Conclusion and Recommendations:

Malnutrition in pregnant mothers and young children is a significant health problem in the plantation sector. Results indicate that undernutrition persists throughout the lifecycle, with potential impairment in growth, development and performance during childhood. Feeding practices may be further improved by diversifying diet by encouraging consumption of animal source of food and fruit. Early introduction of confectionaries and sweets should be discouraged.

Acknowledgement

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How Change Management Can Be Applied to Plantation Sector

D.M. Dhanushka Daswatte

C H A N G E MANAGEMENT

Change management is a structured approach used to transition individuals, teams, and organizations from a current state to a desired future state. Its goal is to help manage the people side of change to achieve business outcomes successfully and minimize resistance or disruption. There are two main contexts for change management:

1. **Organizational Change Management** This focuses on helping employees understand, commit to, and adopt organizational changes such as restructuring, adopting new technologies, or shifting company culture.

2. **IT/Systems Change Management** In this context, it refers to managing changes to systems, infrastructure, or software in a way that minimizes risks and maintains service continuity.

Key Components of Change Management:

- Planning – Identifying what needs to change and developing a strategy.
- Communication – Informing stakeholders about the change and its impact.
- Training & Support – Providing resources so employees can adapt.

Monitoring & Evaluation – Assessing progress and adjusting as needed.

1. Lewin's Change Management Model (1947)

A foundational theory with three stages:

- Unfreeze – Preparing the organization for change.
- Change (Transition) – Implementing the change.
- Refreeze – Solidifying the new state as the standard.

2. Kotter's 8-Step Change Model (1996)

Developed by John Kotter, this model outlines a more detailed process:

1. Create a sense of urgency.
2. Build a guiding coalition.
3. Form a strategic vision and initiatives.
4. Enlist a volunteer army.
5. Enable action by removing barriers.
6. Generate short-term wins.
7. Sustain acceleration.
8. Institute change.

Strength: Comprehensive and step-by-step.
Weakness: Can be rigid or too linear for some organizations.

3. ADKAR Model

Focuses on individual change with five key building blocks:

- Awareness of the need for change
- Desire to support and participate in the change
- Knowledge on how to change
- Ability to implement required skills and behaviours
- Reinforcement to sustain the change

Strength: Emphasizes individual adoption.
Weakness: Less focused on broader organizational strategy.

4. McKinsey 7-S Framework

Focuses on seven interdependent elements:

- Strategy/ Structure/ Systems/ Shared/ Values/ Style/ Staff/ Skills.

Strength: Holistic view of organizational alignment.
Weakness: Can be complex to implement without clear priorities.

5. Bridges' Transition Model

Focuses on the psychological transition during change:

- Ending, Losing, and Letting Go
- The Neutral Zone
- The New Beginning

Strength: Prioritizes emotional response to change.
Weakness: Lacks concrete action steps.

How change management can be applied to plantation sector

The tea plantation sector to help organizations adapt to evolving challenges like climate change, labour issues, sustainability demands, andmodernization. Here's how change management principles can be applied in this context:

1. Assessing the Need for Change

- Drivers: Climate variability, declining yields, aging workforce, market competition, or regulatory shifts.

Assessment: Conduct environmental scans, SWOT, analyses, and stakeholder consultations to identify areas needing transformation.

2. Planning and Strategy Development

- Vision & Goals: Define what the plantation wants to achieve e.g., improve sustainability, adopt mechanization, or enhance labor welfare.
- Roadmap: Develop a clear change strategy with short-term wins and long-term transformation steps.

3. Stakeholder Engagement

- Workers & Labor Unions: Engage early and transparently with workers who may be affected by automation or workflow changes.
- Local Communities: Involve surrounding communities in sustainability or reforestation efforts.
- Buyers & Certification Bodies: Align with market expectations like Rainforest Alliance or Fair Trade.

4. Capacity Building and Training

- Upskilling: Train workers on new equipment, sustainable farming methods, or data collection tools.
- Leadership Development: Equip plantation managers with change leadership skills.

5. Implementation and Execution

- Pilots: Start with pilot projects e.g., solar drying, automated plucking machines in specific sections before scaling.
- Feedback Loops: Establish monitoring systems to gather feedback and make adjustments.

6. Communication

- Transparent Messaging: Regularly update workers and stakeholders through meetings, newsletters, or posters in local languages.
- Two-Way Channels: Encourage feedback and address concerns to reduce resistance.

7. Sustaining the Change

- Incentives: Recognize and reward teams that embrace new practices.
- Embed in Culture: Make change part of organizational norms through policies, rituals, and leadership behaviour. Example Applications:
- Digital Transformation: Using satellite imaging for crop health monitoring.
- Sustainability Shift: Moving to organic fertilizers or intercropping to improve soil health.
- Labor Practices: Introducing flexible work hours or improving living conditions to retain skilled workers.

8. Community Empowerment

- Benefit: Empowered local workforce and improved livelihoods.

- How Change Management Helps: Encourages inclusive decision-making, education, and capacity-building for long-term development.

9. Workforce Development

- Benefit: Skill development, job security, and improved worker morale.
- How Change Management Helps: Aligns workers with new roles and expectations through reskilling and communication plans.

10. Social and Cultural Stability

- Benefit: Reduces conflict, increases trust between management and workers.
- How Change Management Helps: Transparent communication and participatory approaches ease social tension during major changes (e.g., ownership shifts, new policies).

Conclusion

Change Management is not just a project task it's a strategic capability. Organizations that manage change effectively can adapt faster, minimize disruption, and build a culture of agility and resilience. In today's environment, mastering change is not optional it's essential.

References

1. "Leading Change" by John P. Kotter
A foundational book introducing Kotter's 8-Step Change Model.

Focuses on leadership's role in successful organizational change.

2. "Switch: How to Change Things When Change Is Hard" by Chip Heath & Dan Heath
Practical insights on how to change behaviour in individuals and organizations.

3. "Managing Transitions" by William Bridges Focuses on the psychological and human side of change, differentiating between change and transition.

4."Change by Damon Centola"
Explores how ideas and behaviours spread, with a network science approach.

“Evaluation of Intercropping Systems in Immature Oil Palm (Elaeis guineensis) Plantations in Sri Lanka”

Saman Dissanayake

Oil palm (Elaeis guineensis) is globally recognized as the most productive source of edible oil, widely cultivated in tropical regions due to its high oil yield and economic viability. In Sri Lanka, Oil palm cultivation has been established primarily in the wet zone, covering over 10,000 hectares. These plantations are typically managed as perennial monocultures; however, during the early stages of growth, particularly within the first 3 to 5 years, there is significant underutilized space between the young palms. This phase presents a valuable opportunity to enhance land productivity through intercropping.

Study Objective

This study aims to assess the feasibility and productivity of selected intercrops during the immature phase of oil palm plantations. The primary goal is to identify and recommend suitable intercropping systems that can optimize land use, improve farmer income, and maintain soil health without adversely affecting the growth of oil palms. The field experiment is being conducted at the Thalgaswella Estate, Located in the WL2a agroecological zone of the Galle District in Sri Lanka. The experimental design follows a Randomized Complete Block Design (RCBD) with four treatments, including a control (no intercrop), and three replicates per treatment.

Selected Intercrops

Three economically important crops were selected for intercropping based on their compatibility with oil Palm and market demand:

- **Banana (Musa spp.)**
- **Ginger (Zingiber officinale)**
- **Turmeric (Curcuma longa)**

Data Collection and Parameters Measured

To evaluate the performance of the intercropping systems, the following parameters were measured:

Intercrops:

- **Plant height**
- **Length and width of the D-leaf (diagnostic leaf)**
- **Yield per hectare**

Oil Palm:

- Girth of the trunk
- Length and number of leaflets on the 17th frond
- Chlorophyll content (measured using SPAD meter)

Soil:

- Annual assessment of chemical properties (e.g. pH, organic matter, nutrient content)

Measurements were taken at two-month intervals to monitor growth dynamics and interactions between the oil palm and intercrops.

Data Analysis

All collected data were statistically analyzed using **SAS software** to determine the significance of differences among treatments and to evaluate the impact of intercropping on both the oil palm and the intercrops.

Results and Findings

The study revealed promising results for all three intercrops:

- **Banana:** Yield of 7.61 metric tons per hectare (Mt/ha)
- **Turmeric:** Yield of 4.92 Mt/ha
- **Ginger:** Yield of 4.53 Mt/ha When compared to their respective monoculture yields, the intercrop yields represented:

- **Banana:** 16.9% of monoculture yield
- **Turmeric:** 24.6%
- **Ginger**: 30.2%

These results indicate that while the yields are lower than in monoculture systems, the intercrops still provide substantial additional income and land use efficiency during the immature phase of oil palm.

Conclusion and Implications

The findings suggest that intercropping with Banana, Ginger, and Turmeric is a viable strategy to enhance land productivity in immature oil palm plantations in Sri Lanka's wet zone. These systems can contribute to improved farmer livelihoods, better resource utilization, and potentially **more sustainable plantation management.** The study's outcome can inform agricultural policy and extension services aiming to promote integrated farming systems in the region. This research explores how different **intercropping models** influence household income, employment opportunities, food availability, and overall socio-economic well-being among plantation workers.

Securing the Future of Sri Lanka's Rubber Sector Through Innovation and Investment

Diluk Priyantha

The rubber plant holds a remarkable position in global economies, offering indispensable comfort across every stage of human life, from cradle to grave. Its versatile products serve essential roles in countless everyday goods, ensuring economic vitality worldwide. Latex derived from the rubber plant continues to play a transformative role in the global economy, driving innovation and industry across continents. Among the world's leading producers, Sri Lanka stands proud with its reputation for high-quality natural rubber, earning global recognition for both excellence and sustainability.

From Roots to Rubber: Sri Lanka's Evolution as a Global Leader in the Rubber Industry

Sri Lanka's journey to becoming a trailblazer in Asia's rubber industry began in 1876, with the historic planting of rubber trees at the Henarathgoda Botanical Garden in Gampaha.This milestone laid the groundwork for a thriving sector that would later gain momentum in the 1950s with the increase of rubber production for the global tire trade. The industry witnessed a remarkable expansion in thelate 1970s, spurred by the country's shift toward free trade economic policies and the establishment of investment promotion zones, which attracted international interest and investment. Over the pastthree decades, Sri Lanka's private sector has madesignificant strides on the global stage, carving out a strong presence in the market for valueadded. rubber products that showcase innovation, quality, and international competitiveness. Rubber and rubber-based products contribute approximately 8% to Sri Lanka's total annual export revenue, underscoring the industry's vital role in the national economy. Key export destinations include the United States, Germany, Italy, Belgium, and the United Kingdom markets that value Sri Lanka's reputation for high-quality rubber goods. Notably, Sri Lanka remains the world's leading exporter of latex crepe and sole crepe rubbers. Remarkably, over 88% of domestically produced rubber is utilized by local manufacturers, reflecting a robust and self-sustaining industrial ecosystem.

Current Situation & Supporting Growth: Institutions and Workforce Behind Sri Lanka's Rubber Industry

In Sri Lanka, rubber cultivation, processing, and the marketing of raw rubber products are driven by a broad spectrum of contributors. From smallholder farmers (Covering nearly 64% of the total extent and approximately 110,000 farmers) working on limited acreage to large private estates and well-established Regional plantation companies the industry operates at multiple scales and paces.This dynamic blend of participants highlights the sector's versatility and its crucial role in supporting both local livelihoods and the national economy.

The Rubber Research Institute of Sri Lanka plays a vital role in sustaining and advancing the sector by offering continuous guidance, technical expertise, and resources to rubber growers across the country while the Rubber Development Department steadfastly bolster rubber growers with unwavering support and expertise.

Balancing Local Demand and Global Markets: The Rubber Price Challenge

Approximately 88% of the rubber produced in SriLanka is consumed by the domestic rubber-based manufacturing industry, with only around 12% entering the export market as raw rubber. This strong local demand highlights the importance of the industry in supporting Sri Lanka's value-added rubber products. However, the sector has faced significant price volatility. As figure 01 shows, in early 2011, rubber prices reached a peak, offering promising returns for growers. But from mid-2011 onward prices began a steady decline, reaching their lowest point by 2015 to 2019. Although some recovery has been observed since then, rubber prices have remained unpredictable, presenting ongoing challenges for producers.

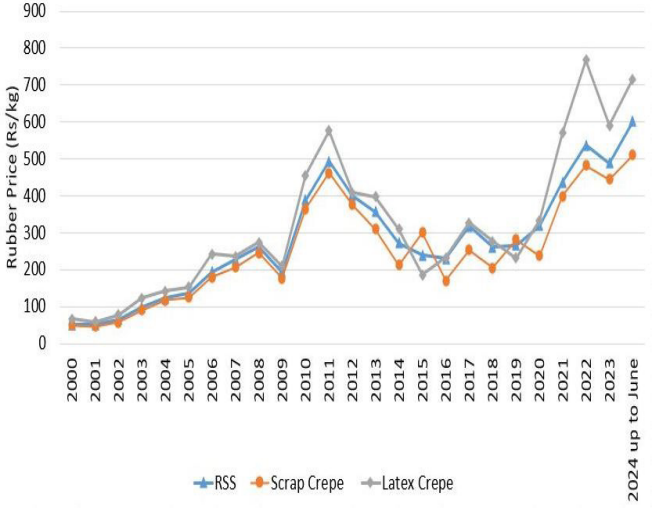

Figure 01: *Price changes observed in yearly averages of auction prices for RSS, Scrap Crepe and Latex Crepe from 2000 to 2023*

Source: *Rubber Research Institute of Sri Lanka website (http://www.rrisl.gov.lk/statistics_e.php)*

Alarmingly, as figure 02 shows, rubber production has suffered a steep downturn falling from 152 Mn kilograms in 2012 to a mere 64 Mn kilograms by 2023, marking a dramatic decline of nearly 58%.

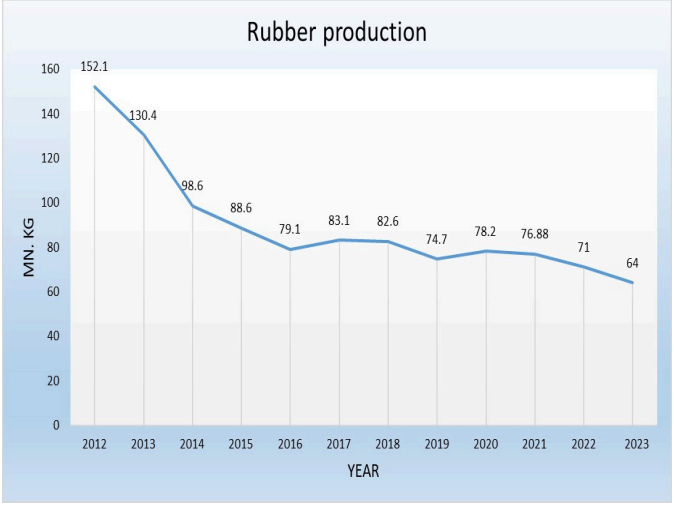

Figure 02: Rubber production from 2012 to 2023
Source: Rubber Research Institute of Sri Lanka website: (http://www.rrisl.gov.lk/statistics

Figure 03: reveals a steady rise in production costs over time, where as RSS prices remain unpredictable.

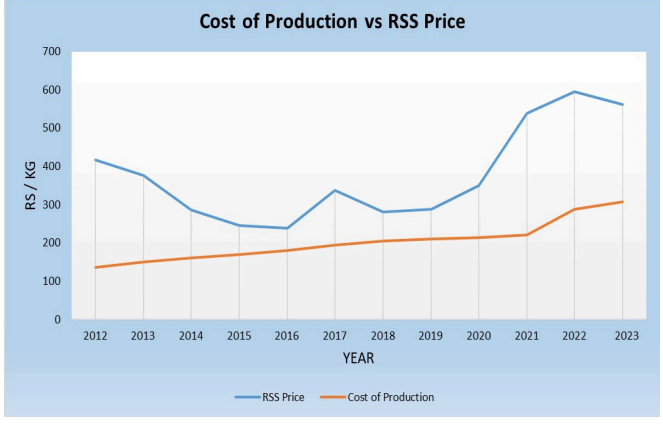

Figure 03: *Cost of production vs RSS Price from 2012 to 2023*
Source: *Rubber Research Institute of Sri Lanka website: (http://www.rrisl.gov.lk/statistics_e.php)*

According to Figure 04, replanting and new planting have experienced a substantial drop in recent years.

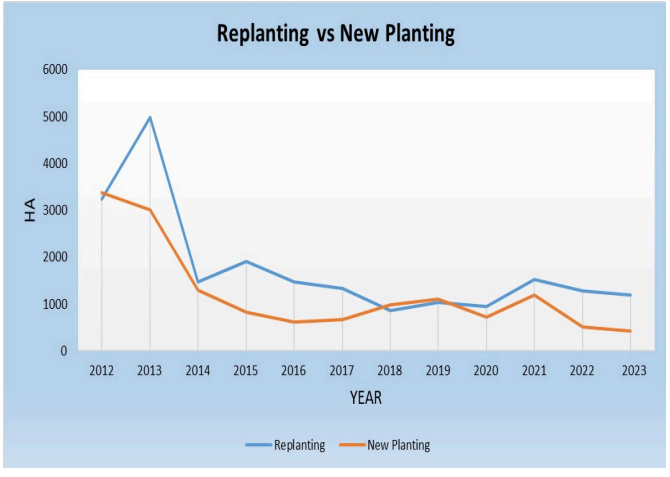

Figure 04: *Replanting vs New Planting from 2012 to 2023*
Source: *Rubber Research Institute of Sri Lanka website: (http://www.rrisl.gov.lk/statistics_e.php)*

If this downward trend continues unchecked, sri Lanka's rubber industry faces a severe risk of a collapse within the next 10 to 15 years.

The Key Factors Contributing to this Crisis Include:

1. Faced with unstable rubber prices and rising production costs, small-scale rubber growers are increasingly abandoning rubber cultivation in favor of more profitable alternative crops such as Tea & Cinnamon, as the returns no longer justify the effort.

2. Adverse weather conditions, particularly the rise in prolonged and unpredictable rainfall, have further disrupted rubber tapping cycles and reduced overall productivity, compounding the challenges faced by cultivators.

3. A growing shortage of skilled tappers driven by inadequate wages and low social recognition has discouraged new entrants, threatening workforce sustainability.

4. Rubber cultivation is increasingly affected by diseases such as leaf fall disease, for which no permanent cure has yet been found, posing a serious threat to productivity.

A strategic plan has been proposed to build resilience and address the fluctuations in the industry with a iew to enhance its sustainability.

Strong Foundations, Resilient Futures: Uplifting Growers, Strengthening the Rubber Industry

At the heart of this initiative lies a powerful commitment to uplift local rubber growers through the introduction of a **Minimum Guaranteed Price and the establishment of a Rubber Development Trust Fund (RDTF),** the industry aims to ensure financial stability, inspire confidence, and fuel continued cultivation across generations while ensuring its long-term sustainability. By safeguarding the livelihoods of growers/tappers and strengthening the foundation of the supply chain, the program aims to create more resilient, competitive, and future-ready rubber sector in Sri Lanka.

Proposed Methodology: Toward a More Structured Rubber Trading System

The local rubber market in Sri Lanka predominantly deals in smoked sheet rubber (RSS), crepe rubber, and scrap rubber, which is also processed as raw latex. In addition to auction-based sales, some factories bypass traditional routes by purchasing raw latex directly and fulfilling orders for both finished and semi-finished rubber products. Notably, these transactions often occur outside the main rubber auction informally. To ensure greater price stability, transparency, and industry sustainability, this fragmented trading model needs a significant overhaul. The proposed solution is to establish a centralized purchasing and sales center for rubber, operating under government regulation and oversight. Such a center would streamline the market, create uniform pricing mechanisms, and reduce disparities in quality and pricing.

Importantly, this transition should not displace existing stakeholders. The services of registered and authorized rubber traders who already possess valuable market experience and networks should be retained and integrated into the new system to ensure continuity and trust within the supply chain.

Strategic Expansion and Revenue Generation for Sri Lanka's Rubber Industry

To fully harness the economic potential of Sri Lanka's rubber sector, a forward-looking strategy must be adopted one that emphasizes industrial growth, foreign investment, value addition, and structured revenue management.

1. Establishment of a Rubber Development Trust Fund

A RDTF should be established to finance the research, infrastructure, and farmer support initiatives. To support the RDTF, profits from rubber sales through the Centralized Rubber Purchasing and Sales Center should be distributed in a 60:40 ratio — with 60% allocated to the RDTF and 40% transferred to the government treasury establishing a dual-benefit mechanism that fosters both sectoral growth and national development.

2. Price Review Mechanism

To ensure fair compensation for producers and maintain competitiveness, rubber prices should be formally reviewed twice a year, in January and July, based on market trends, production costs, and global demand.

3. Import Tax Policy for Market Protection

To protect local rubber industries and encourage domestic production, the government should impose a special tax on the import of rubber-based products, whether as raw materials or finished goods. This measure will help level the playing field for local manufacturers while discouraging excessive imports that undermine national production capacity.

4. Encouraging Industrial Growth Through Foreign Investment

The government should actively invite large-scale foreign investors to participate in the local rubber sector, with a focus on setting up value-added industries that utilize at least 25% of the country's rubber production. These investments can significantly boost employment, technology transfer, and export revenue. Simultaneously, the government may consider establishing its own large-scale factories where necessary, especially to meet growing domestic and international demand.

5. Tapping into High-Demand Markets

There is a strong global and regional demand for products such as tires, tubes, and automobile spare parts. Prioritizing the development of these downstream industries can enhance Sri Lanka's competitiveness in international markets and reduce reliance on raw rubber exports.

A Sustainable Financing Model: Economic and Social Benefits of the Rubber Development Trust Fund

This model ensures:

- Stable, guaranteed pricing for rubber growers, shielding them from volatile market conditions.
- Improved wages for tappers and rubber industry workers, enhancing rural livelihoods.
- Job creation across the rubber value chain, helping to address national unemployment.
- The emergence of a skilled and respected workforce within the rubber sector, fostering pride and long-term commitment.

The RDTF is envisioned as a national asset, modeled similarly to Sri Lanka's Employees Trust Fund (ETF). Like the ETF, the RDTF would serve as a financial backbone ensuring continued investment in the sector, while maintaining transparency, accountability, and structured disbursements.

Strategic Utilization of the Rubber Development Trust Fund

The proposed RDTF is envisioned not only as a financial engine for Sri Lanka's rubber sector but also as a social development instrument. Managed with transparency and foresight, the RDTF can uplift rubber growers, strengthen national infrastructure, and contribute to broader social progress. The following are key areas where the fund should be strategically directed:

1. Operational Support for the Rubber Trade Infrastructure

- Provide capital for the operational and maintenance costs of the new centralized rubber purchasing and sales center.
- Cover salaries, rent, transport, storage, communication and sales-related expenses, ensuring efficient and sustainable operation.

2. Economic Security and Welfare for Rubber Growers.

- Introduce a pension / provident fund scheme to recognize and support long-term rubber cultivators and tappers.
- Introduce a monthly university allowance (e.g., Rs.10,000) for students from rubber-growing/ tapping families, empowering them to pursue higher education free from financial constraints.

- Provide free essential medical equipment (e.g., stethoscopes, thermometers, glucometers) for medical students from rubber-growing/tapping families.

3. Capacity Building and Institutional Strengthening.

- Allocate approximately Rs. 5 million annually to support training programs and research initiatives at the Rubber Development Department and the Rubber Research Institute.
- Invest in modern factories equipped with advanced machinery and technologies for value-added rubber product manufacturing.

4. Equipment, Inputs, and Cultivation Support

- Disburse financial assistance for essential equipment and supplies such as rubber discs, smokehouses, chemicals, fertilizers, rain guards, and machinery.
- Provide financial incentives for new rubber cultivation in dry zones, encouraging environmental benefits such as cimate cooling and reforestation.

5. Strategic Investment and Fund Growth

Safeguard the long-term sustainability of the RDTF through secure bank investments of unutilized funds, allowing for growth and future resource expansion.

6. Social Responsibility and Community Development

- Allocate funding for the development of a hospital and elderly care unit facilities within the same premises to serve clergy of all faiths, fostering interfaith harmony and dignified elderly care.
- Ensure the sustainable operation of these facilities through continued financial support from the RDTF.
- Support national sports initiatives, especially the promotion of volleyball, and offer financial aid to underprivileged athletes participating in international events.

7. Governance and Transparency

To ensure the Fund's long-term credibility and impact, all financial allocations must be managed under strict governance guidelines, including:

- Annual audits
- Public reporting of disbursements and beneficiaries
- Oversight by a dedicated Rubber Development Trust Fund Board under the Ministry of Plantation Industries consisting of key industry experts.

Revenue Goals and Initial Capital Requirements

To successfully launch and sustain the proposed rubber sector development initiative, an estimated initial working capital of Rs. 5,000 Mn will be required. This capital will fund the operational expenses of the centralized purchasing and sales center, support programs under the RDTF, and ensure timely payments to rubber growers and other stakeholders.

This financial foundation should be provided either through direct government budget allocations or arranged via concessional loans from state / private banks, with the confidence that the revenue model based on per-kilo contributions from rubber sales and structured government fees will ensure repayment and long-term financial sustainability. The project may be financed through international-level support by engaging partner countries, financial institutions, or development agencies with whom the government maintains strong ties.

The combination of a stable guaranteed price for rubber, structured fee collection, and efficient fundutilization will help transform Sri Lanka's rubber industry into a high-performing, socially inclusive, and self-financing sector.

A National Strategy for the Sustainable Modernization of the Rubber Industry

The establishment of the proposed Centralized Rubber Purchasing and Sales Center, alongside the creation of the RDTF, marks a transformative step toward revitalizing Sri Lanka's rubber industry. These initiatives not only promise fair pricing and market stability for rubber growers but also lay the groundwork for long-term sectoral growth. By reinvesting proceeds into research, infrastructure, and community development, and by ensuring transparent and efficient fund management, Sri Lanka can position its rubber industry as a globally competitive, sustainable economic pillar. With strategic vision and collaborative commitment, this integrated approach will secure enduring value for all stakeholders from smallholder farmers to the national economy.

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