
Study on the value addition to tea, with special reference to the small tea growers of the North Eastern Region



EXECUTIVE SUMMARY

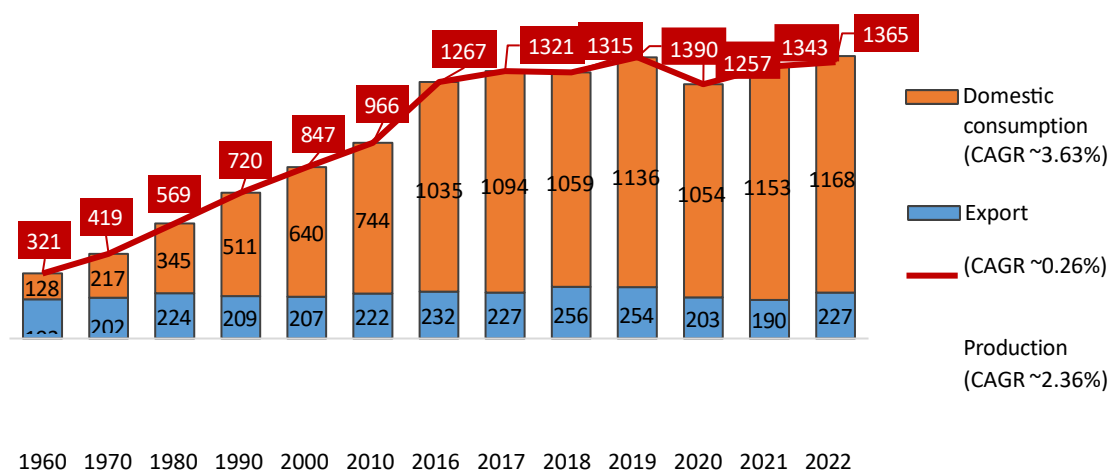
TITLE OF THE STUDY

Study on the Value Addition to Tea, with Special Reference to the Small Tea Growers of the Northeastern Region

OVERVIEW OF THE INDIAN TEA INDUSTRY

The Indian tea industry, integral to the nation's economy, stands as the world's second-largest producer with an annual output of ~1365 Mn Kg, spanning a remarkable 200-year legacy since its discovery in 1823. A key economic driver, it supports 1.5 Mn directly and over 5 Mn indirectly, particularly in regions with limited alternative income sources. Major tea-producing states, including Assam, West Bengal, Tamil Nadu, and Kerala, contribute ~97% of the total production. Globally, the Indian Tea Industry accounts for ~21% of tea production and holds the top position in black tea production, while ranking as the second-largest global consumer, contributing nearly ~20% to global consumption. However, in terms of exports, India holds the fourth position, trailing behind Kenya, China and Sri Lanka, despite annually exporting around 200-220 Mn Kg and earning significant foreign exchange for the country. The industry has witnessed an evolution over two centuries from an export-centric focus in the 1960s wherein almost 60% of the tea produced within the country was getting exported, to a more domestic market focus with ~16% tea produced exported only in 2022.

Figure 1: Domestic Consumption vs Production in India¹



TRENDS IN CONSUMPTION PATTERNS

This shift has been driven by growth in per capita consumption (PCC) of tea in India which currently is at 840gms. However, despite the growth PCC levels of tea in India remains lower than that in many other major tea-drinking nations. Given the low PCC levels in India, there is headroom for growth in the domestic consumption levels, which could bring semblance to the supply-demand equilibrium in the tea industry, and more importantly can also drive better price realisation that would benefit the stakeholders associated with the tea value chain. India is predominantly a CTC consuming nation, however various supply and demand factors are impacting domestic consumption, necessitating focus on value-added and specialty teas:

- **Shift From Loose to Packet Tea:** There is a notable shift from loose to packet tea, with around 75% of the market comprising packet tea. Accelerated post-pandemic, this shift is driven by perceived quality, safety benefits, health considerations, ease of ordering, and the rise of e-commerce.
- **Increasing Customer Preference for Premiumisation:** With rising disposable income, there is increasing shift in households to higher income category. This shift is expected to drive demand for mass-premium and premium tea varieties going forward.

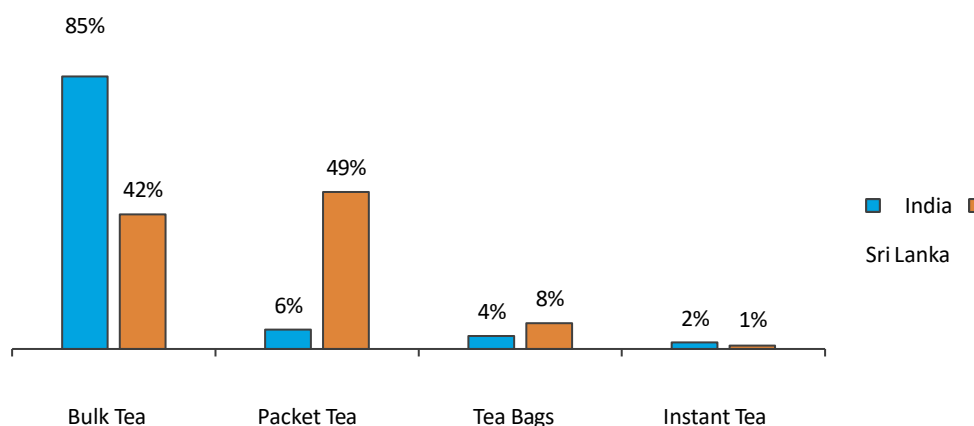
- **Preference for New Tea Varieties Fostering Innovation:** Global trends, such as sustainability, wellness teas, and diverse tea formats, are influencing the Indian market. There is a growing market for specialty teas, infusions, and flavoured teas, presenting opportunities for product diversification and innovation.
- **Emergence Of Tea As “Wellness Superfood”:** The pandemic has propelled tea consumption, positioning it as a wellness and lifestyle beverage. Immunity-boosting teas with Ayurvedic ingredients have gained traction.

TRENDS IN TEA EXPORTS

Over the decades, the dynamics of tea exports from India have also undergone significant changes, with a notable shift from comprising 60% of total production in the 1960s to a mere ~16% in 2022, largely attributed to growing competition from other tea-producing nations and increased domestic consumption. Key trends influencing this transformation are outlined below:

- **Limited Focus on Quality and Value Addition:** The Indian tea industry, while rich in heritage, has witnessed limited emphasis on quality upgradation and value addition, resulting in a high percentage of bulk tea exports without substantial value addition. In contrast, countries like Sri Lanka export nearly 60% of tea in value-added forms, including packet tea and tea bags.

Figure 2: Format of tea exports from India vs. Sri Lanka²

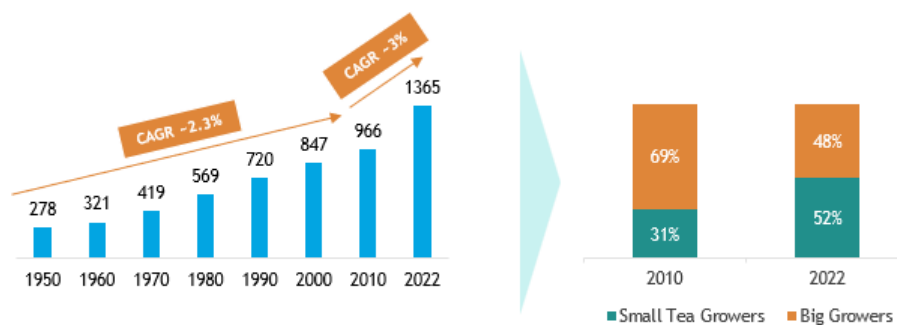


- **Muted Foreign Exchange Earnings:** Tea exports from India have shown limited growth, and coupled with a focus on bulk exports, this has led to muted price realization. A comparative analysis reveals that, despite countries like China and Sri Lanka exporting higher volumes of tea than India, their average export price realization is higher than India as well (China – USD 5.55/Kg, Sri Lanka – USD 5.04/ Kg, India – USD 3.57/Kg)
- **Concentration of Exports:** Decadal trend analysis shows that India's tea exports are largely concentrated in five or six importing markets which contribute to 50-60% of total exports from India.
- **Decline in Export Competitiveness:** Multiple factors contribute to India's overall low tea exports, affecting industry competitiveness and product quality. Rising production costs, outdated infrastructure, inadequate quality testing labs, and high logistics costs and lead time pose significant challenges.

TRENDS IN PRODUCTION PATTERNS AND EMERGENCE OF STGS

Additionally, the trajectory of tea production in India reflects a dynamic evolution over the last two centuries, from the British introduction in the 19th century to the contemporary rise of STGs. Initially dominated by large tea estates, the last decade has witnessed a substantial shift, with STGs contributing over 52% to the country's total tea production. This transformation is underscored by a significant increase in tea yield, from 1,195 Kg/Ha in the 1960s to ~2,202 Kg/Ha in 2021-22, driven by modern agricultural practices and new plantings.

Figure 3: Growth in Tea Production in India³



A pivotal factor in the overall surge in production and productivity of STGs is the extensive new planting efforts initiated by a large number of STGs since the mid-1990s. The Tea Board of India, operating under the Ministry of Commerce and Industries, Government of India, serves as the central authority for tea development, research and development, export promotion, and regulatory activities in the tea sector. Through its planned schemes, the Tea Board has played a crucial role in not only motivating growers to consistently engage in developmental activities but also in supporting research institutions to develop high-yielding, productive, and disease-resistant planting materials capable of withstanding varying weather conditions. Recognizing the socio-economic impact of STGs, the TBI has initiated measures such as Smart Cards, subsidies, promotion of FPOs, and training programs. The emergence of STGs in different tea producing regions can be attributed to various reasons which include:

- Central government initiative through TBI (financial assistance) in allowing new plantations in traditional as well as non-traditional areas including various parts of Northeast India.
- Proactive push by respective State governments in creating livelihood opportunity for rural people and improving farm income.
- Lucrative return from tea cultivation compared to other agricultural crops.
- Tea Harvesting possible throughout 8-9 months of the year (almost throughout the year in South India) eliminating need for multi cropping as in other agricultural crops.

Currently, there are around ~2.3 lakh of STGs in the country having a production of over ~710 Mn Kg of tea and a combined area of around ~ 2 lakh hectares under tea cultivation.⁴ These STGs are spread across the country; mostly they are co-located with the organized segment in the four major states (Assam, West Bengal, Tamil Nadu, Kerala) and also scattered across other states such as Karnataka, Himachal Pradesh, Bihar, Tripura, Sikkim, Nagaland, Manipur, Arunachal Pradesh, Meghalaya and Mizoram.

This shift has led to the proliferation of BLFs, independent tea leaf processing units closely linked to STGs. With approximately 593 Mn Kg of installed capacity across 767 BLFs, these entities have become vital contributors to the tea processing landscape.

1.1 SCOPE OF THE STUDY

In this evolving landscape of the Indian tea industry, STGs have emerged as key contributors, producing more than half of the total tea production in the country. Despite the STGs forming the lion share of production, their overall realization has continued to remain low and in fact declined as green leaf prices have grown at a tepid pace. Select STGs have explored value-addition to improve their realization, however, they have faced multiple challenges. Further, across the regions there are diverse practices adopted by growers for making speciality and hand-made tea, which are largely untapped from a commercial perspective.

Against this backdrop, it becomes imperative to delve deeper into the value addition practices among STGs to understand and conduct a comprehensive study to identify and address the challenge of limited value addition but also to empower growers in various regions, offering them a roadmap for sustainable growth and recognizing the intrinsic value of their distinctive tea products. In line with same, to conduct a comprehensive analysis of the current state of tea production by STGs in the North-Eastern Region, the Executive Committee of North-Eastern Development Finance Corporation Ltd. (NEDFi) has commissioned this study and BDO India LLP has been selected through a competitive process to assist in conducting the above study.

1.2 OVERVIEW OF THE TEA INDUSTRY IN NORTHEASTERN REGION

The Northeastern states of India, particularly Assam, play a pivotal role in the nation's tea industry, with high concentration of STGs in the region. Assam alone comprises around 92% of the total STGs in the northeastern region. Hence, understanding the landscape of the tea industry in this region is crucial given its economic and cultural significance.

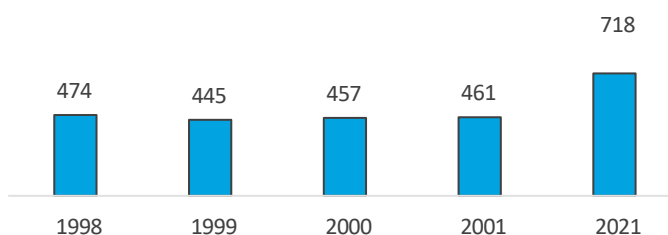
The roots of the tea industry in Northeastern India trace back to the 19th century when the British East India Company intervened, transitioning tea cultivation from a local to a commercial venture. Despite initial challenges, the cultivation of indigenous tea plants by individuals like Charles Alexander Bruce led to the establishment of the first English tea garden in 1837 in Chabua, Upper Assam. Over time, the industry evolved into a major commercial enterprise.

Presently, India stands as a global powerhouse in the tea industry, contributing approximately 21% to the world's tea production. The northeastern region significantly contributes to India's total tea production, accounting for nearly 53%, with Assam being the major contributor at approximately 51%. The region's hilly terrain, fertile soil, and favourable climatic conditions support expansive tea gardens known for producing high-quality tea.

TEA PRODUCTION IN NORTH-EASTERN REGION (NER)

Tea production in the Northeast has steadily increased over the past three decades, reaching around 718 Mn Kg in 2021. Factors such as favourable climatic conditions, advancements in agricultural practices, and sustainable initiatives have fuelled this growth. Assam dominates the tea production landscape in the region, accounting for nearly 96.6% of the northeastern states' total tea production.

Figure 4: Trends in Tea Production in NER⁵

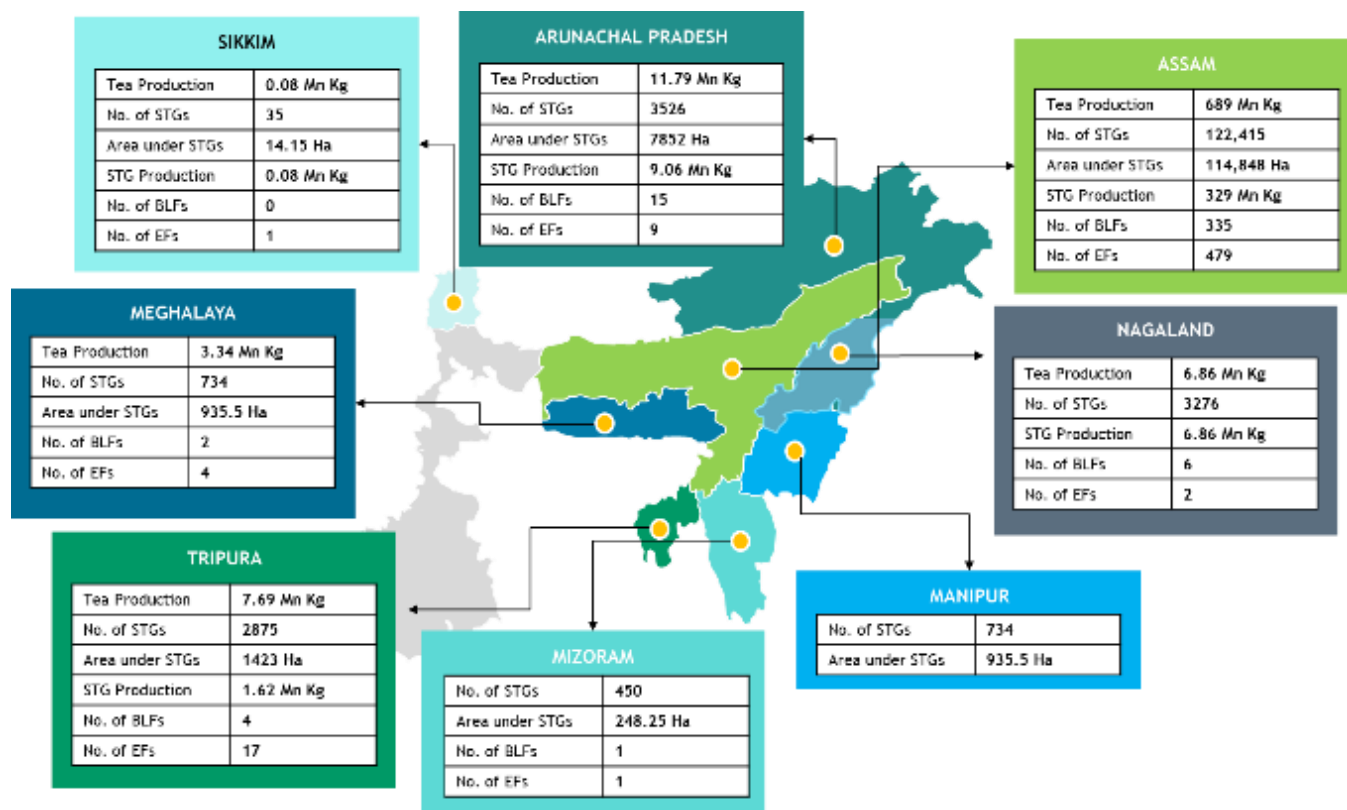


Currently, the Northeast region plays a pivotal role in India's standing as the world's second-largest tea producer, contributing a substantial 53% to the nation's overall tea output. Notably, Assam leads this contribution, producing approximately 689 Mn Kg, making up around 51% of India's total tea production.

In Northeast India, the tea industry is a major employer, providing permanent employment for ~9 lakh people, with women constituting nearly 51%⁶ of the total workforce. With tea grown in some of the most remote regions of the North-Eastern states, it provides employment to people residing in such areas and support to the local economy of such areas. Assam alone employs around 7-8 lakh individuals⁷ in the tea sector, managing approximately 3.5 lakh hectares⁸ of land.

PRESENCE OF STGS IN NER

In the northeastern region, Assam comprises ~92% of the total STGs in the region, and a considerable portion of the small growers scattered across the other states including Arunachal Pradesh (~2.6%), Tripura (~2.2%), Nagaland (~1.7%), Meghalaya (~0.5%), Manipur (~0.3%), Mizoram (~0.3%) and Sikkim (~0.02%). An overview of the tea industry in different states of NER has been highlighted in the map below in terms of the total tea production, presence of STGs and the presence of BLFs and EFs.

Figure 5: Overview of NER⁹

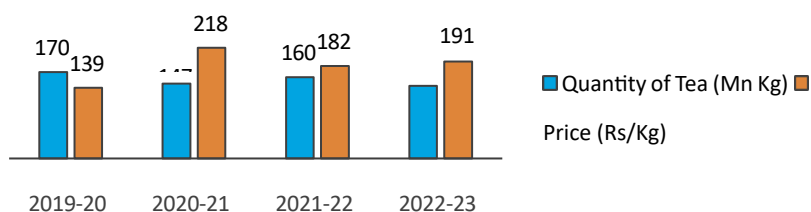
INFRASTRUCTURE FOR TEA INDUSTRY IN NER

Auction Centres

India has 8 registered auction centres for tea in the country viz., Kolkata, Siliguri, Guwahati, Jorhat (Mjunction), Coonoor, Cochin, Coimbatore and Tea Serve where auctions are presently being conducted through electronic platform. However, in the Northeastern region of India, the tea industry relies on two auction centres, one situated in Guwahati and the other in Jorhat. Guwahati Tea Auction Centre (GTAC), established in 1970, is a prominent hub known for its exceptional volume of CTC tea auctions. On an average ~24% of tea auctioned in India is transacted on the GTAC. In 2022-23, ~143 Mn Kg was sold at an average auction price of Rs. 191 per Kg.

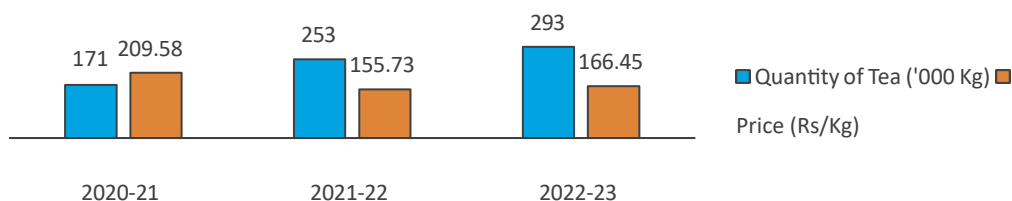
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Figure 6: Volume and Price at Guwahati Auction



Jorhat's newer auction centre, managed by Mjunction services, is gaining traction, with sales witnessing a consistent increase, reaching 293,000 Kg in 2022-23.

Figure 7: Volume and Prices of Tea at Mjunction



Research and Development Centres

Key institutions in the NER towards for research and development as well as for training and development can largely be classified into 3 categories:

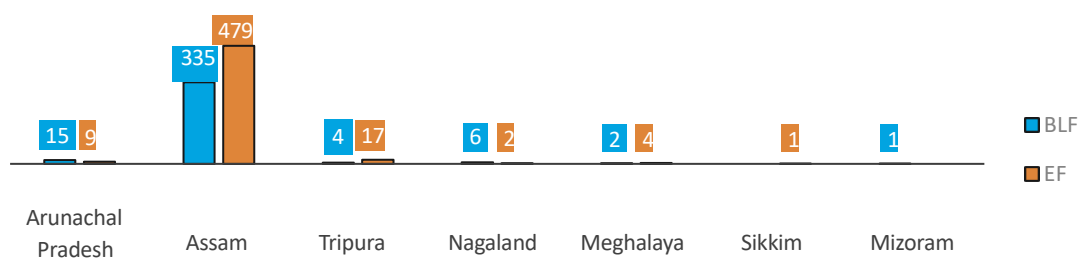
- **Institutes under Govt:**– These include the Tocklai Tea Research Association, the ICAR run KVKs (though they do not have full-fledged facilities for R&D on tea) and the Assam University (Silchar) among others. Among these, the Tocklai Tea Research Association, located in Jorhat, is globally renowned for its contributions to tea research. It carries out and promotes research on tea with the principal objective of improving overall productivity and quality. The ten advisory branches of TRA look after 1100 large tea estates and more than 2,00,000 small tea growers and plays a pivotal role in developing innovative methods to enhance tea productivity and quality.
- **Institutes under the States:**– At the state level, the Assam Agricultural University boasts a unique distinction of being the first institute to establish a department dedicated to Tea Husbandry & Technology in 1968. The department's mandate includes producing technically qualified personnel for the tea industry, conducting basic and applied research, and fostering academic excellence. Another key institute at the state level is the Dibrugarh University, which also has a dedicated post graduate program in Tea Technology and Plantation Management.
- **Institutes Privately Held:** Assam Downtown University with focus on agriculture and research has a dedicated R&D wing. The R&D wing among others, also focuses actively in tea where it has been working on multiple projects in collaboration with the tea industry stakeholders

Tea and Soil Testing Centres

Tea testing services play a crucial role in upholding tea quality. Despite 22 tea testing labs nationwide, there is only one in the Northeastern states, located in Assam. This highlights a significant gap in quality testing infrastructure for the region, underscoring the necessity for establishing a dedicated testing laboratory. There are 15 accredited soil testing centres located across 10 tea producing districts in India. In NER specifically, there are 3 approved soil testing labs in Assam and 1 in Tripura.

Green Leaf Processing Factories (BLFs and EFs)

BLFs are pivotal in the tea industry, particularly for STGs. TBI defines BLF as a “tea factory which sources more than fifty-one percent of its tea leaf requirement from small tea growers during any calendar year for the purpose of manufacture of tea.” There are 767 BLFs throughout the country, with a combined capacity of ~593 Mn Kg. Out of the total, 335 (43.6%) BLFs are present in Assam, the major tea-producing state in the region.

Figure 8: Number of BLFs and EFs across Northeast States (2022)¹¹

GOVERNMENT SUPPORT FOR THE TEA SECTOR IN NER

The Tea Board of India has implemented various initiatives under the Tea Development and Promotion 2021-2026 umbrella scheme to support the industry. This comprehensive scheme focuses on elevating Indian tea production, improving quality, and enhancing global competitiveness, with a specific emphasis on supporting STGs and promoting value addition. The implemented schemes comprise multiple components designed to address these objectives effectively covering plantation development, quality improvement, market promotion, welfare and specific support for Northeastern states. Links for details of the scheme have been outlined in the annexure and summary has been provided in policy section as well.

The Central Government's dedicated focus on the tea sector in the Northeastern region of India has been instrumental in fostering its growth and sustainability. These efforts have been complemented by various state government schemes in the northeastern region which are evaluated in the analysis of schemes section. All the states do not have schemes specific to tea, Assam has the most comprehensive tea scheme in the region. List of schemes applicable to tea in the region have been tabulated below:

State	Scheme
Assam	<ul style="list-style-type: none"> Assam Tea Industries Special Incentives Scheme Export and Logistics Policy Assam Tea Employees Provident Fund Organization Assam Chah Bagichar Dhan Puraskar Mela Scheme Cess Utilization Policy
Arunachal Pradesh	<ul style="list-style-type: none"> Chief Minister Shasakt Kisan Yojna Atma Nirbhar Plantation Yojana Arunachal Pradesh State Industrial and Investment Policy 2022
Tripura	<ul style="list-style-type: none"> Mukhyamantri Chaa Srami Kalyan Prakalpa Scheme Tripura Industrial Investment Promotion Incentive Scheme 'One District One Product' Scheme
Meghalaya	<ul style="list-style-type: none"> Meghalaya State Organic and Natural Farming Policy 2023 Tea Development Scheme Meghalaya Industrial and Investment Policy
Manipur	<ul style="list-style-type: none"> Manipur Industrial and Investment Promotion Policy, 2022
Mizoram	<ul style="list-style-type: none"> Mizoram Industrial and Investment Policy

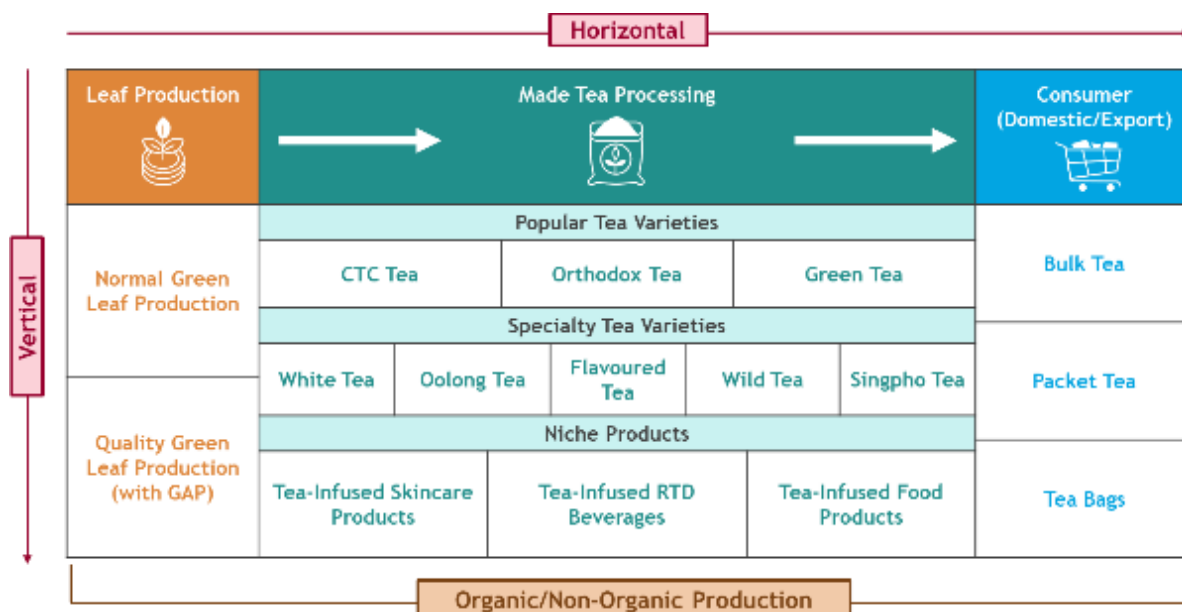
The synergy between central and state-level interventions has not only strengthened the economic backbone of these states but has also underscored vital role of the tea industry in advancing socio-economic development in the region. However, despite these policies, STGs in the region have largely been focused on tea cultivation with limited value addition by them. In the next section, we shall discuss various value addition opportunities by STGs in the region and challenges faced towards it.

1.3 VALUE ADDITION IN TEA INDUSTRY

Traditionally, India has had low levels of value addition when compared to countries globally. Despite its high agriculture production base and policy impetus by the Government across areas, India continues to experience low food processing levels, especially in the secondary and tertiary segment. Presently, it processes less than 10 percent of its agricultural output and apart from cereals, processing levels are much lower across categories compared to countries globally. In line with limited value addition in agriculture and allied areas in India, in tea industry as well there is low value addition and especially among STGs which impact their overall sustainability. Recognizing the paramount significance of the tea industry across various northeastern states in India, it is crucial to underscore that despite its prominence, a significant proportion of STGs in the region rarely engage in value addition practices. The concept of value addition encompasses changes in physical state, production methods, or handling processes, expanding the customer base and revenue for agricultural products. Therefore, the imperative for embracing value addition in tea production becomes even more pronounced, given the potential economic benefits it offers to STGs. The shift towards value-added products in tea, both domestically and internationally, presents opportunities for increased profitability.

Traditionally focused on bulk tea production, the tea industry is undergoing a noticeable transformation, with a growing emphasis on diversification and the inclusion of value-added offerings throughout cultivation, processing, and marketing stages. The tea industry's value addition process involves a dual perspective: **Horizontal Value Addition and Vertical Value Addition** as detailed below:

Figure 9: Value Addition in Tea



Horizontal Value Addition

Firstly, we can consider value addition for STGs in terms of movement up the tea value chain with the STGs shifting from focus on tea cultivation to made tea manufacturing and retailing to end consumer in both the domestic and export markets. An illustrative tea value chain has been shown below. With the STGs primarily focusing on cultivation their realization is capped to green leaf prices, but with shift to made tea production and packeting higher realization is possible.

Vertical Value Addition

Secondly, value addition can be explored from the perspective of level of processing being conducted by the STGs to add value as they move up the value chain. In such a case key value-added products that may be produced by growers through addition of distinctive characteristics and flavors have been discussed below:

1. Green Leaf Value Addition: Focus here is on differentiating the overall quality and characteristics of the final tea product through adherence to Good Agricultural Practices (GAP) is crucial. This involves careful management of factors such as pruning and plucking techniques, the judicious application of fertilizers and pesticides, and the use of skilled labour and mechanization.

2. Made Tea Production: Focus here is on value adding on green leaf by processing it into made tea variants by the STGs themselves, instead of selling to BLFs and Estate Factories for processing. In general, green leaf conversion to made tea involves production of CTC, Orthodox, and green tea. However, due to multiple methods adopted in processing by STGs, there are other tea variants of specialized nature which needs to be considered. Key made tea varieties which have been considered basis current production by STGs have been detailed below:

- **Popular Made Tea Variants Based on Primary Processing:** it focuses on popular tea types like **CTC, Orthodox, and Green teas**. CTC involves the mechanized Crush, Tear, and Curl process, creating robust and quick-brewing tea. Orthodox processing maintains traditional methods, emphasizing leaf integrity and nuanced flavors, while Green tea undergoes minimal oxidation, preserving its natural freshness.

- **Specialized Made Tea Variants** Based on Secondary Processing: it focuses on specialty teas like white tea, oolong tea, flavored tea and handcrafted teas, including unique varieties like wild tea and falap tea that emerge from specific region and are produced by traditional communities.

3. Niche Products based on Tea Extracts: it considers products which uses tea as concentrates. **Tea-infused skincare products** harness the antioxidant properties of tea for rejuvenation. **Ready-to-drink tea beverages** provide a convenient and refreshing option, while tea-based food products like cakes, cookies, biscuits, and chocolates showcase the versatility of tea flavors.

Besides the value-added potential, Green tea leaves offer diverse applications. In food, they act as natural antioxidants, enhancing shelf-life and quality. Cost-effective and effective in preventing oxidation, they find use in meat and fish products. Beyond food, they serve as eco-friendly options in cleaning and air freshening. In agriculture, they act as organic fertilizers and pest deterrents, promoting sustainability. Industries like crafts and pharmaceuticals benefit from their unique properties. Additionally, researchers explore their use in sustainable fashion as an eco-conscious textile source.

4. Packaging of Tea: Additionally, value addition extends beyond cultivation to the packaging stage. Three primary packaging forms contribute to this value addition: **bulk tea, tea packets, and tea bags**. Bulk tea offers a cost-effective option and ability to combine tea varieties to meet specific flavor requirement. Tea packets cater to a more refined market, providing measured portions for convenience. Meanwhile, tea bags offer the ultimate in convenience, providing pre-measured portions enclosed in filter bags.

5. Product based on type of input used: Increasingly there is demand for sustainable and organic products from consumers globally and in India. The same requires adoption of different cultivation processes which bifurcates into two distinct approaches and products:

- **Organic tea** emphasizing sustainable and chemical-free practices in cultivation of green leaves
- **Non-organic tea** involving the application of agrochemicals like fertilizers and pesticides

6. Tea waste utilization for various end-use industries is also another form of value-addition which has seen improved focus in recent years

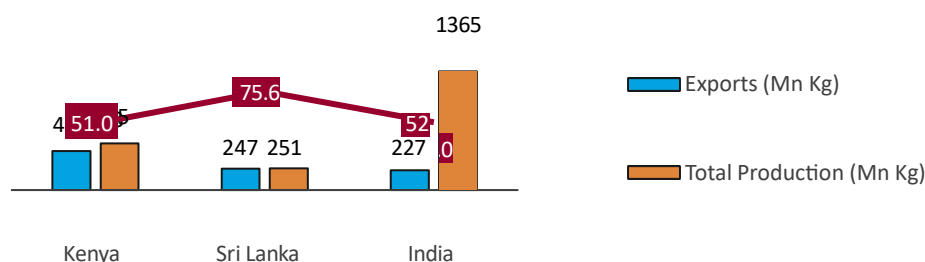
However, despite the potential and diverse forms of value addition, India's level of value addition in the tea sector is low and same can be looked at in a comparative with Sri Lanka. In 2022, Sri Lanka exported ~242 Mn kgs of tea compared to ~228 Mn kg of tea exports from India. However, out of Sri Lanka's total tea exports ~54.6% was in value-added format compared to ~10.3% export of tea in value-added format from India. Sri Lanka outperforms India in the export of value-added tea, especially in the categories of packet tea and tea bags.

Table 1: Type-wise Tea Exports from India¹² and Sri Lanka¹³(in Mn Kg) (2022)

Country/Type	Bulk Tea	Packet Tea	Tea Bags	Total
India	197.6 (86.6%)	20.81 (9%)	9.93 (4.4%) ¹⁴	228.4
Sri Lanka	110.4 (45.4%)	110.7 (45.6%)	21.6 (8.89%)	242.7

Another key aspect in terms of tea exports is that in India the contribution of STGs is relatively low towards exports and there is a seeming predominance of large tea estates and merchant exporters (who do not have their own estates but procure from some factories).

Figure 10: Tea Production by STGs in leading tea export countries¹⁵

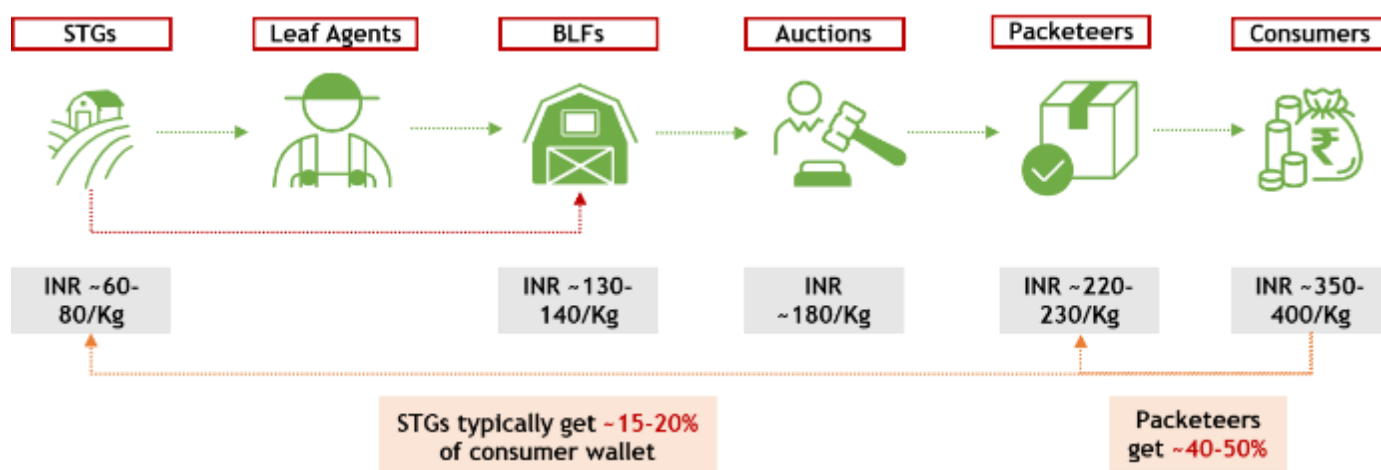


This stands in contrast to other major tea-exporting countries such as Kenya and Sri Lanka. In Kenya, STGs make up nearly 51% of the overall tea production, a proportion similar to that of India. However, Kenya exports majority of its production (~85%). Likewise, Sri Lanka leads in tea production by STGs, with 75.6% of its total tea output attributed to them. Sri Lanka also outpaces India in terms of tea exports and ships a major chunk of its production

NEED FOR VALUE ADDITION AMONG STGS

While the emergence value added products presents a lucrative opportunity for STGs to increase their income and establish a robust position within the tea value chain, STGs continue to focus on the production of green leaves with hardly any presence higher in the value chain.

Figure 11: Cost build up across tea value chain



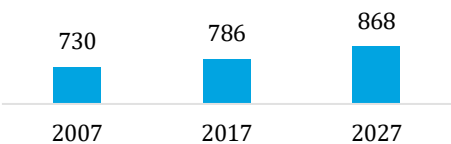
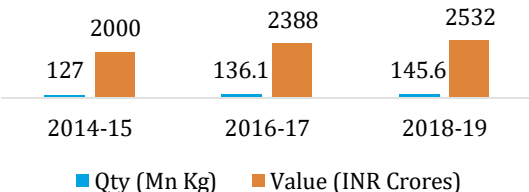
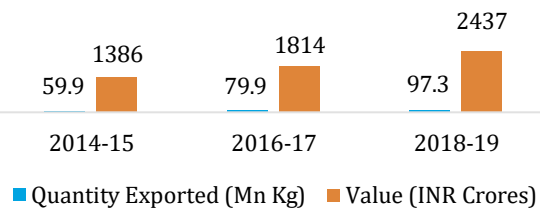
The value chain, primarily involving leaf agents and factories, limits STGs' income, with a disproportionate share going to intermediaries and packeteers. Shifting up the value chain becomes imperative for STGs to capture a more significant portion of the consumer wallet. By engaging in value addition and establishing direct market access, STGs can address the imbalance in income distribution. With consumer preferences shifting towards premium tea varieties, STGs have a unique opportunity to tap into this market segment, ensuring economic benefits and aligning with evolving consumer trends.

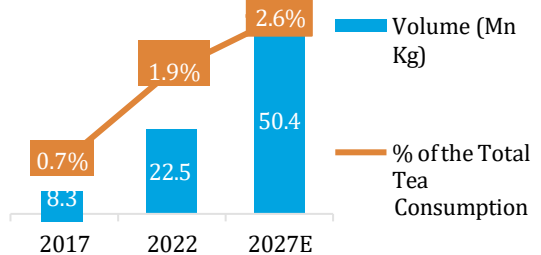
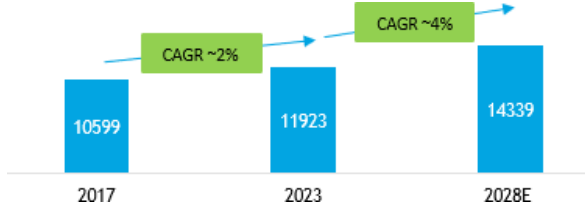
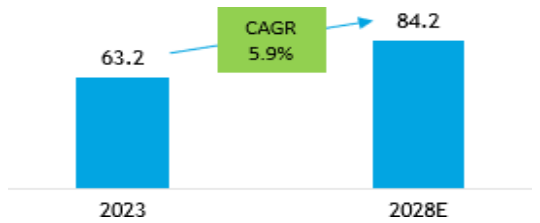
DEMAND POTENTIAL FOR VALUE-ADDED TEAS

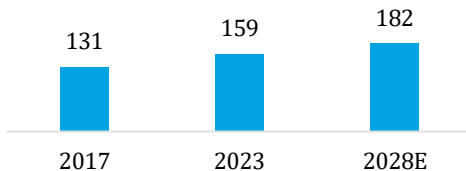
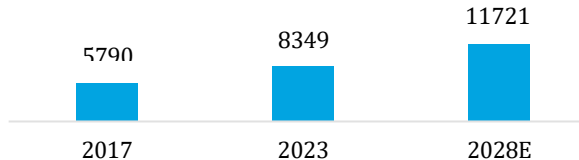
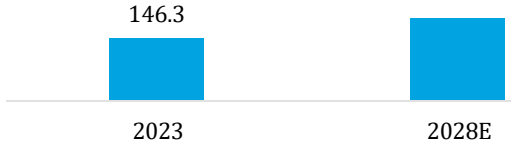
Domestic consumption of tea in India has witnessed a notable increase, driven by factors such as rising disposable incomes, penetration of retail, innovations in value-added products, and emergence of wellness-oriented tea blends.

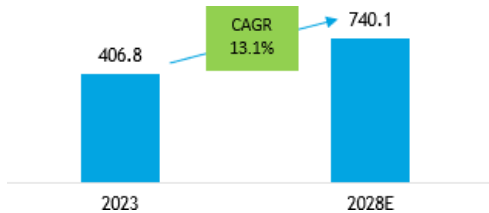
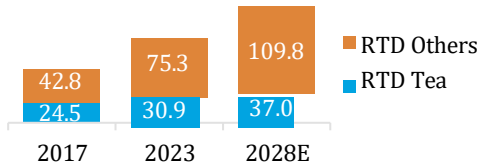
The demand for value-added tea products is expected to rise, presenting a lucrative opportunity for STGs to cater to diverse consumer preferences. The below table encapsulates the potential demand (Domestic and Global) along with the net realisation for various value-added categories in tea.

Table 2: Demand Potential and Cost-Benefit Analysis of Various Tea Categories

Category	Domestic Demand	Global Demand	Packaging	CoP (INR/Kg)	Selling Price (INR/Kg)
Popular Tea Varieties					
CTC Tea	<p>Figure 12: Growth in Per Capita Consumption (in grams per head)</p>  <p>730 786 868</p> <p>2007 2017 2027</p> <ul style="list-style-type: none"> With ~90% of tea demand in India being of CTC variety, overall demand for CTC tea is expected to reach 1155.6 Mn Kg by 2027.¹⁶ 	<p>Figure 13: Export Market for CTC Tea</p>  <p>2000 2388 2532</p> <p>127 136.1 145.6</p> <p>2014-15 2016-17 2018-19</p> <p>■ Qty (Mn Kg) ■ Value (INR Crores)</p> <ul style="list-style-type: none"> UK, Germany, Russia, USA, China and others show significant demand for CTC tea 	Wholesale / Bulk Tea	120-140	160-180
			Retail Packet	160-180	300-400
Orthodox Tea	<ul style="list-style-type: none"> Orthodox tea, accounting for 9.6% of India's total production. Orthodox Tea Market is currently worth USD 54.15 Mn and is expected to grow at a rate of 5.4% per annum. 	<p>Figure 14: Export Market for Orthodox Tea</p>  <p>1386 1814 2437</p> <p>59.9 79.9 97.3</p> <p>2014-15 2016-17 2018-19</p> <p>■ Quantity Exported (Mn Kg) ■ Value (INR Crores)</p> <ul style="list-style-type: none"> Globally Iran, Middle East, UK, USA and other European markets are key markets Robust demand of orthodox teas, however, India exports is limited to select markets 	Wholesale / Bulk Tea	160-180	250-270
			Retail Packet	200-220	600-800
Green Tea			Wholesale / Bulk Tea	200-220	360-400

Category	Domestic Demand	Global Demand	Packaging	CoP (INR/Kg)	Selling Price (INR/Kg)
Green Tea	<p>Figure 15: Domestic Retail Market for Green Tea</p>  <ul style="list-style-type: none"> Despite low contribution to overall sales of tea in India, in terms of value green tea corners ~25% of packet tea market in India 	<p>Figure 16: Growth of the Global Green Tea Market</p>  <ul style="list-style-type: none"> Global green tea market growth is driven by perceived health benefits. In 2022, India exported 2.9 Mn Kg, with Germany as the largest importer 	Retail Packet / Tea Bags	250-270	800-1200
Specialty and Handcrafted Tea Varieties					
White Tea	<ul style="list-style-type: none"> White tea is gaining popularity in India due to a growing interest in health-conscious choices. Its delicate flavour aligns with trend towards wellness 	<ul style="list-style-type: none"> Globally, the white tea market is valued at USD 1.79 billion (2021) and is expected to grow at a CAGR of 6.05% (2022-2029). 	Speciality tea is largely sold in wholesale / retail format. However, given overall high costs involved, the costs do not differ much	4500-5000	10000-12000
Oolong Tea	<p>Figure 17: Oolong Tea – India Market size and Forecast 2023-2028 (\$ Mn)</p> 	<ul style="list-style-type: none"> The global Oolong Tea Market is anticipated to reach USD 0.6 billion by 2028, growing at a CAGR of 5.6% (2023-2028) 		700-800	<ul style="list-style-type: none"> Wholesale: 1500-1600 Retail: 2000-2200

Category	Domestic Demand	Global Demand	Packaging	CoP (INR/Kg)	Selling Price (INR/Kg)																
Flavoured Tea	<p>Figure 18: Retail Volume of Flavored Tea Market in India (Mn Kg)¹⁷</p>  <table><thead><tr><th>Year</th><th>Volume (Mn Kg)</th></tr></thead><tbody><tr><td>2017</td><td>131</td></tr><tr><td>2023</td><td>159</td></tr><tr><td>2028E</td><td>182</td></tr></tbody></table> <ul style="list-style-type: none">Flavoured tea is a significant segment in India, valued at INR 3600 Crore (~16% of the packet tea market). It is expected to grow at 40-45% per annum.	Year	Volume (Mn Kg)	2017	131	2023	159	2028E	182	<p>Figure 19: Value of Global Flavored Tea Market (\$ Mn)¹⁸</p>  <table><thead><tr><th>Year</th><th>Value (\$ Mn)</th></tr></thead><tbody><tr><td>2017</td><td>5790</td></tr><tr><td>2023</td><td>8349</td></tr><tr><td>2028E</td><td>11721</td></tr></tbody></table> <ul style="list-style-type: none">Globally, the flavoured tea market is valued at USD 8349 Mn, with a projected CAGR of 7% to reach USD 11721 Mn by 2028.	Year	Value (\$ Mn)	2017	5790	2023	8349	2028E	11721		400-500	- Retail: 1300-1600
Year	Volume (Mn Kg)																				
2017	131																				
2023	159																				
2028E	182																				
Year	Value (\$ Mn)																				
2017	5790																				
2023	8349																				
2028E	11721																				
Wild Tea	<ul style="list-style-type: none">Wild tea from Manipur is a unique and untapped segment. While there is potential, it remains largely unexplored on the domestic and international stage. Few players have started marketing wild tea, and it holds a distinct appeal for those seeking authentic and untamed tea experiences.																				
Singpho Tea	<ul style="list-style-type: none">Singpho tea is gaining recognition beyond its community roots, with tea enthusiasts drawn to its unique flavour profile and health-enhancing qualities. Global exploration of Singpho Phalap tea is on the rise.																				
Tea Varieties based on Input Usage																					
Organic Tea	<p>Figure 20: Organic Tea – India Market size (\$ Mn)¹⁹</p>  <table><thead><tr><th>Year</th><th>Market Size (\$ Mn)</th></tr></thead><tbody><tr><td>2023</td><td>146.3</td></tr><tr><td>2028E</td><td>223.7</td></tr></tbody></table> <ul style="list-style-type: none">The domestic market is expected to grow at a CAGR of 8.9%, reaching USD 224.7 Mn by 2028	Year	Market Size (\$ Mn)	2023	146.3	2028E	223.7	<ul style="list-style-type: none">Globally, the organic tea market is projected to exceed USD 1.77 billion by 2028, with an annual growth rate of 8.6%.	Spans across the various tea categories and commands a higher price												
Year	Market Size (\$ Mn)																				
2023	146.3																				
2028E	223.7																				
Tea Varieties based on Packaging																					
Bulk Tea, Packet Tea, and Tea Bags	<ul style="list-style-type: none">The domestic market largely comprises 50% in packet tea format, 47.5% in bulk tea format and 2.5% in tea bags format	<ul style="list-style-type: none">India predominantly exports tea in bulk format, comprising 89.5% of overall exports.However, there is a global increase in demand for packet tea and tea bags	Enhanced packaging adds value across all tea categories, allowing STGs to command premium prices																		

Category	Domestic Demand	Global Demand	Packaging	CoP (INR/Kg)	Selling Price (INR/Kg)																		
Products using Tea as a Concentrate																							
Tea-Infused Skincare Products	<ul style="list-style-type: none">In India, the demand for skincare products infused with tea, particularly green and black tea, is rising.	<ul style="list-style-type: none">Globally, the tea-based skincare market is expected to reach USD 1300 Mn by 2033, growing at a CAGR of 8.3%.	Typically set based on factors such as perceived value, competition and consumer demand	285-570 / Unit	50-70%																		
Tea-Infused RTD Beverages	<p>Figure 21: Growth of Indian RTD Market</p>  <table><caption>Figure 21: Growth of Indian RTD Market</caption><tr><th>Year</th><th>Market Size</th></tr><tr><td>2023</td><td>406.8</td></tr><tr><td>2028E</td><td>740.1</td></tr></table> <ul style="list-style-type: none">The demand for RTD tea beverages is driven by changing consumer preferences for convenient and healthier beverage options.	Year	Market Size	2023	406.8	2028E	740.1	<p>Figure 22: Global RTD Market</p>  <table><caption>Figure 22: Global RTD Market</caption><tr><th>Year</th><th>RTD Tea</th><th>RTD Others</th></tr><tr><td>2017</td><td>24.5</td><td>42.8</td></tr><tr><td>2023</td><td>30.9</td><td>75.3</td></tr><tr><td>2028E</td><td>37.0</td><td>109.8</td></tr></table> <ul style="list-style-type: none">Globally, the RTD tea market is on the rise, with the segment accounting for 9.74% of the Non-Alcoholic Drinks market revenue in 2022.	Year	RTD Tea	RTD Others	2017	24.5	42.8	2023	30.9	75.3	2028E	37.0	109.8	Typically set based on factors such as perceived value, competition and consumer demand	105-220/ Liter	20-40%
Year	Market Size																						
2023	406.8																						
2028E	740.1																						
Year	RTD Tea	RTD Others																					
2017	24.5	42.8																					
2023	30.9	75.3																					
2028E	37.0	109.8																					
Tea-Infused Food Products	<ul style="list-style-type: none">The demand for tea-infused food products in India, such as cookies, cakes, sweets, and biscuits, is growing rapidly. The bakery and confectionery industry, inclusive of tea-infused products, is valued at USD 11.3 billion	<ul style="list-style-type: none">Globally, the demand for tea-infused food products is surging, reflecting culinary innovation, health consciousness, and the enduring popularity of tea.	Typically set based on factors such as perceived value, competition and consumer demand	250-500/ Kg	50-70%																		

TARGET ADDRESSABLE MARKET SIZE FOR VALUE-ADDED TEAS

Given the potential supply of diverse tea varieties in the Northeastern Region and potential demand for same in domestic and global market, as highlighted in the previous section, a target market sizing analysis has been done focusing on the specific segments of CTC, Orthodox, Green, Specialty Teas (White, Oolong and Flavoured) and Handcrafted Teas (Wild and Singpho) to identify addressable market which may be tapped through value-addition by STGs. The key findings of the analysis are as follows:

- **Domestic Market Addressable Demand:** The analysis estimates the target market size for conventional teas (CTC, Orthodox, Green) which STGs in NER can tap through bulk and retail sales is **~53 Mn Kg**. Besides, Specialty teas (White, Oolong, Flavoured, Wild, Singpho) market of **~7 Mn Kg** can be considered.
- **Export Market Potential:** With India aiming to increase tea exports to 300 Mn Kg over the years, there is a significant role for STGs in the NER. They can aspire to contribute to ~50% of the incremental export requirement (from ~219 Mn kgs currently) in line with their current production contribution in NER. Given CTC and Orthodox teas currently contribute 60% and 40% of the total exports, similar level has been taken going forward. **Total export market STGs in NER can target is ~40 Mn Kg.**
- **High-Quality Green Leaf Demand:** market for high-quality green tea leaves can be targeted, with an estimated target of around **14.5 Mn Kg**, driven by a growing preference for premium tea consumption.
- **Market Valuation:** The total value of the target market (domestic and export) is projected to be approximately **INR 3085 Crore**, considering current market rates and export prices.

Table 3: Target Market Sizing for Value-Added Tea

Category	Unit	Value	Remarks
Target Market Size			
Target Domestic Market for Conventional Tea	Mn Kg	~53	• Detailed calculation shown in Section 5.5
Target Domestic Market for Specialty Tea	Mn Kg	~7	• Detailed calculation shown in Section 5.5
Target Domestic Market for High Quality Green Tea Leaves	Mn Kg	~14.5	• Detailed calculation shown in Section 5.5
Total Domestic Market Size	Mn Kg	~60	• Please note green leave sales ~14.5 mn kgs has not been taken in this calculation
Total Addressable Export Market	Mn Kg	~40	• Detailed calculation shown in Section 5.5
Total Market Size	Mn Kg	~100	-
Target Market Value			
Domestic Market Value	INR Crore	~2265	• Basis current market prices for different tea varieties and green leaf
Export Market Value	INR Crore	~820	• Average prices for CTC and Orthodox Exports
Total Market Value	INR Crore	~3085	-
Investment Required for Additional Production			
Current Production	Mn Kg	6.2	• Given 62 mini factories in NER
Incremental Production and Processing Capacity Needed	Mn Kg	93.8	<ul style="list-style-type: none"> • Since the total target market size is ~100 Mn Kg (Domestic and Export) • Green leaf target market of ~14.5 Mn kgs has not been taken into account as this is primarily for the processing related investment
Investment Required	INR Crore	469	Investment of INR 0.5 cr per lakh Kg
Expected Households Impacted			

Category	Unit	Value	Remarks
Land Area Impacted	Ha	~34,700	<ul style="list-style-type: none"> Assuming average yield of 2880 Kg / ha for made tea among STGs in the region ~85 Mn Kg of tea to be targeted
Direct People Impacted	Number	~86,750	<ul style="list-style-type: none"> Assuming 1 ha employs 2.5 direct workers
Indirect impact on families	Number	~4,77,125	<ul style="list-style-type: none"> Assuming average family size of 5.5 in the region
Expected Contribution to GSDP			
Total GSDP of NER	INR Crore	1,264,021	Census 2011
Expected Revenue Generated	INR Crore	3085	-
Total Investment in Additional Processing / Infrastructure	INR Crore	469	<ul style="list-style-type: none"> Assuming capex multiplier impact of 2.45x, total impact ~1149 Crore
Total Impact	INR Crore	4184	-
Contribution to Total GSDP	%	~0.33%	<ul style="list-style-type: none"> Considering GSDP of NER as INR 12.64 lakh crore

The proposed focus on STGs in NER, fuelled by diverse offerings and value addition, can bring about a transformative impact on the region's economy. It has potential to generate revenues of INR 3085 Crore, create substantial employment opportunities, and make a strategic contribution to the GSDP of the region.

1.4 ANALYSIS OF CHALLENGES FACING STGS

STGs in India, particularly in the north-eastern states, are integral to the local economies. Given the impact of venturing into value-added tea production, select STGs are trying to transition from selling green tea leaves to creating high-value products with an objective to enhance their economic potential. However, as found during primary discussions, there are multiple challenges which impact them across cultivation, transitioning to organic practices, production, market access, marketing and branding, financial constraints, infrastructural gaps, and policy and regulatory issues.

I. Cultivation Challenges

- Lack of Agricultural Knowledge:** STGs encounter significant hurdles due to limited knowledge about good agricultural practices. Gaps in understanding, ranging from clonal seed selection to pruning and plucking standards, impact the quality of green leaves.
- Escalating Input Costs**
 - Fertilizer and Pesticide Costs:** STGs face rising costs in various stages of tea cultivation, notably in the use of fertilizers and pesticides. They typically use NPK fertilizer in a standard 140:50:140 dosage for one-hectare plantations. This includes 308 Kg urea, 312.5 Kg single superphosphate (SSP) or 250 Kg rock phosphate (RP), and 233 Kg Muriate of Potash (MoP). Costs per Kg are approximately Rs.8 for urea, Rs.16 for SSP, Rs.14 for RP, and Rs.36 for MoP. The total investment per hectare is Rs.14,352 or Rs.15,852, with an additional Rs.15,000 for plant protection measures. Further, costs of above fertilizers and pesticides have grown sharply in the last decade. The rise has been sharper post covid which have increased overall costs of STGs. Green tea leaf prices and even auction prices have not increased at the same rate, impacting the overall profitability of the growers.
 - Soil Testing Costs:** The soil testing phase has significant costs associated, given the lack of testing centres. Currently there are only 15 testing centres located across 10 tea producing districts in India. Therefore, STGs need to travel long distances to get their soil samples tested, which increases the costs of testing. The situation is more challenging in NER where there are only 3 approved soil testing labs in Assam and 1 in Tripura.
- Labor Shortages:** Another key issue is the shortage and escalating costs of labour. While the initial concept involved STGs engaging themselves and family members, the current trend sees increased reliance on hired

labour. Geographically isolated plantations struggle to attract and retain a workforce due to inadequate infrastructure, seasonal variations, and urban employment attraction. This shortage, coupled with a rise in demand for contractual workers, creates fluctuations in labour availability, impacting day-to-day operations.

- **Rising Labor Costs:** Despite offering wages 50% lower than other tea-producing states, STGs in Assam face a paradoxical situation of persistent labor shortages. To attract and retain skilled tea labor, STGs must offer higher wages, contributing to increased operational costs. Labor-intensive activities, such as plucking, witness substantial cost increments, with pluckers incentivized to pluck improperly.

II. Challenges in Transition to Organic Cultivation

Driven by increased consumer preference for organic products, STGs are exploring organic cultivation to meet market demands. Although support from Tea Board of India has spurred this transition, challenges to organic cultivation transition persist such as site selection, crop loss in transition, complex certification process, economic viability concerns, limited certification agencies and evaluation of tea board scheme.

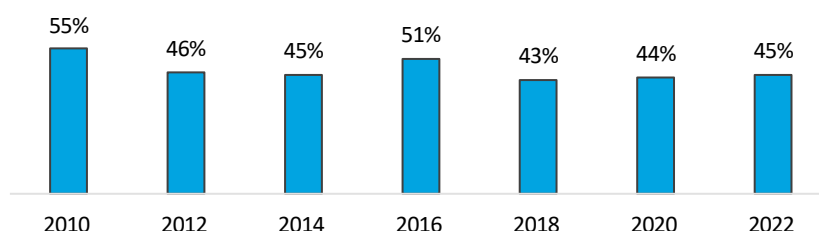
III. Processing Challenges

- **Increasing Processing Costs:** Fluctuating energy costs, skilled labor expenses, machinery purchase and maintenance costs, and transportation costs contribute to rising expenses in tea processing. Producing value-added teas like green, white, and oolong teas intensifies these challenges, requiring specialized equipment and skilled labor. Additionally, Power and labour costs form nearly 60% of the total costs borne by the STGs. With sharp growth in these costs overall viability has been impacted.
- **Limited Presence of Mini Processing Factories:** During primary discussions, many growers expressed a desire to set up mini-tea processing factories, but often, these plans are delayed due to the high costs associated with establishing such processing factory. Setting up a mini-factory involves significant financial investment, ranging from 15 to 20 lakhs (may increase up to 50-60 lakhs depending on the size of the factory) and STGs find it challenging to bear this high expense. While the Tea Board provides support by covering 50% of the cost, up to a maximum limit of 0.33 crore per factory in non-traditional areas of the Northeast (40% in other areas), this subsidy is generally back ended in nature, creating an issue for the growers.

IV. Market Access Challenges

- **Inefficient Auction System:** STGs face inefficiencies in the tea auction system, where a significant portion of their produce is sold privately, impacting transparency. Further, auction prices do not reflect the right market value, and a few dominant buyers lead to suboptimal price realization. Further, limited international buyer engagement further hinders fair competition.

Figure 23: India - Tea Sold in Auction (as a % of total produced)

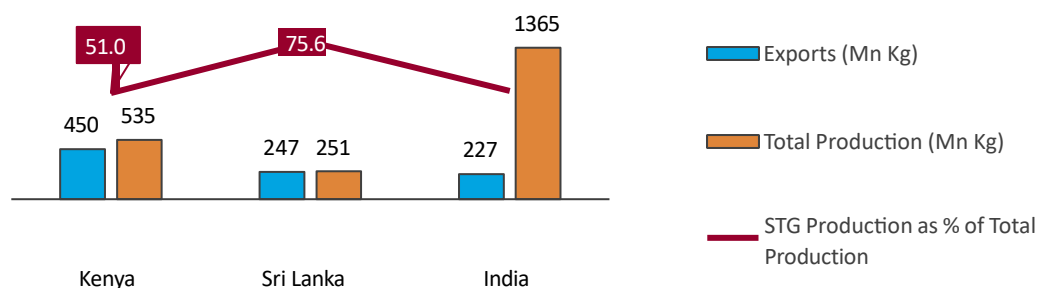


- **Limited uptake of M-Junction Auction Platform:** The m-junction auction centre was launched in Jorhat to provide an alternative platform for tea sales and support STGs as well by providing multiple relaxations and bringing entire auction process closer to production belts in the state of Assam. Despite it, the platform has not taken up adequately with limited sales happening through it.
- **Limited Domestic Market Access:** Most STGs and their collectives are located in remote locations across the north-eastern

states. In many cases during the primaries, it was seen that there was no proper road leading to their factories / plantations which impacted their overall connectivity. Further, limited market information constrains their ability to understand evolving consumer and geographical preferences and trends, making it challenging to tailor products accordingly.

- **Poor Connectivity:** STGs face challenges in transportation due to the terrain and less developed infrastructure in the northeastern states. Inadequate road networks further make it difficult to transport tea products efficiently to domestic markets, thereby leading to heavy reliance on couriers. This often introduces delays, increased costs, and compromises in the freshness and quality of tea.
- **Limited Understanding of Domestic Markets:** STGs often have a confined market presence, selling products within their district or locality. Selling in other states involves selling at wholesale rates to intermediaries with better regional knowledge. The diverse tea consumption landscape in India, influenced by cultural, regional, and lifestyle factors, poses a challenge for STGs to understand evolving consumer preferences and market dynamics. The complexity of the Indian tea market is highlighted in the fact that only two major national players (HUL and TGBL) and other players largely regional in nature.
- **Issues in E-Commerce:** STGs face hurdles in adopting e-commerce due to limited digital literacy and awareness. High upfront costs for website development and complexities in pricing models deter their entry. Limited internet connectivity and smartphone access in the Northeast further hinder effective utilization of online channels.
- **Poor Export Performance:** Despite STGs playing a pivotal role in India's overall tea production, their limited representation in tea exports poses a significant challenge. Large tea estates and merchant exporters dominate the export landscape, leaving STGs with a disproportionately low share. This disparity contrasts starkly with countries like Kenya and Sri Lanka, where STGs actively contribute to both production and exports.

Figure 24: Tea Production by STGs in leading tea export countries



- **Limited Market Understanding:** India exports tea to various countries – UAE (~20%), Russia (~11%) and USA (~9%).²⁰ However, each country exhibits a preference for different varieties of tea. The unique tea consumption patterns in each country pose significant challenges for STGs
- **Inadequate understanding of Quality Standards and Certification:** Exporters, including STGs, encounter challenges in adhering to diverse regulations imposed by importing countries. Obtaining essential certifications, such as the Importer-Exporter Code and compliance with quality standards, becomes a cumbersome process. Specific requirements, like USFDA registration for the USA or adherence to bilateral agreements such as the India-UAE Comprehensive Economic Partnership Agreement (CEPA), add layers of complexity, demanding heightened regulatory awareness and resources from STGs.
- **Limited Scale:** The predominantly small landholdings of over 85% of STGs, often less than 1 hectare, impact both the quantity and quality of tea produced. The fragmented land parcels, a result of inheritance laws, contribute to inconsistent and poor-quality tea. These factors hinder STGs from meeting the minimum quantity criteria of importing countries
- **Limited Export Promotion:** STGs face challenges in boosting tea exports due to limited manpower, financial constraints which lead to inadequate promotional activities. STGs are deeply involved in hands-on tasks like planting, maintenance and struggle to spare resources for marketing amidst seasonal demands. Financial limitations further hinder comprehensive promotional activities, restricting visibility in global markets. Additionally, the absence of dedicated platforms, like boutiques in key locations, limits STGs' ability to showcase their products to a broader audience.
- **Lack of Preference in Government Procurement:** The central government currently conducts all its significant procurements for goods and services through the Government e-Marketplace (GEM) platform, serving as a centralized hub for such transactions. Despite the substantial volume of product orders processed through this platform, there is an absence of specific benefits or preferences accorded to the procurement of products from farmers. Similarly, there is a lack of specific preferences for procurement from tea collectives.

V. Marketing, Branding and Promotion Challenges

- **Identity and Presentation:** in the competitive packet tea market in India where there are over 3,000 brands nationally, it is important to understand the marketing dynamics which can assist in differentiation of products. STGs struggle to identify and communicate their unique selling points effectively.
- **Packaging Innovation Constraints:** Innovating in packaging design poses a challenge for STGs due to limited financial and technological resources. The absence of support for procuring packaging machines and the financial constraints faced by STGs make it difficult to invest in eco-friendly materials or technologies
- **Limited Marketing Expertise:** STGs lack the necessary skills and insights to craft comprehensive marketing initiatives. Understanding how to leverage influencers and optimize messaging to enhance reach is low among STGs, limiting their ability to effectively enhance brand visibility.
- **Budgetary Constraints and Policy Gaps:** Implementing robust branding initiatives requires financial investments that STGs find challenging. Limited budgets restrict their ability to engage in paid advertising, influencer collaborations, or other high-cost visibility strategies.

VI. Financial Challenges

- **Lack of Collateral:** STGs, particularly in economically marginalized regions, face exclusion from formal financial institutions due to inadequate collateral. Improper land documents and territorial norms exacerbate this issue, leading to dependence on informal lending practices.
- **Limited Banking Facilities:** The Northeastern region of India, with its predominantly rural landscape, encounters a scarcity of banking facilities, impeding financial inclusion. Assam, the largest tea producer, suffers from a shortage of banking branches, leaving STGs with inadequate access to credit.
- **Limited Financial Literacy:** Insufficient financial knowledge among STGs hampers their ability to engage with formal banking channels. The lack of awareness about available financial products and loan procedures forces STGs to resort to less favorable informal sources of financing.
- **Inadequate Loan Provision for Tea Growers:** The Government of India has launched several MSME schemes to boost

economic growth, job creation, and support small businesses. However, in many cases benefits for same are not extended to tea. One such example is the PM Mudra Yojana, which provides financial support to small businesses in the country. Under this scheme, loans are provided by banks to non-corporate, non-farm sectors whose credit needs are up to INR 10 lakhs, which is categorized in three sizes of loans such – Shishu (up to INR 50,000), Kishore (above INR 50,000 and up to INR 5 lakh) and Tarun (above INR 5 lakh and up to INR 10 lakh) designed to empower entrepreneurs with financial assistance. The regional distribution of Mudra loans shows disparities, with the NER receiving only 4 percent of total amount sanctioned.

- **Inadequate Subsidy Support:** Delayed subsidy disbursement, restrictive eligibility criteria favoring collectives over individual growers, and a lack of awareness about subsidy programs impede the financial well-being of STGs. Further, subsidies being back-ended contribute to economic uncertainty.
- **Inefficient Public-Private Partnership Models:** Various PPP models have been successfully implemented in agriculture, addressing diverse aspects such as crop diversification, contract farming, agricultural extension, marketing infrastructure, and agricultural services. However, it is noteworthy that no such model has been adopted in the tea sector.

VII. Infrastructural Challenges

- **Absence of Common Infrastructure:** Tea growers, predominantly operating as individuals, face substantial challenges due to the lack of shared infrastructure. The absence of processing facilities and limited market access impedes collective growth and operational efficiency.
 - **Limited number of Collectives in the Tea Sector:** The presence of FPOs is vital for fostering collaboration, enhancing efficiency, and ensuring the economic well-being of farmers. In the Northeastern Region, there are currently 402 FPOs catering to various agriculture crops. However, there are limited collectives as far as tea is concerned.
 - **Agro-Processing Clusters:** Efforts by the Ministry of Food Processing Industries to establish Agro Processing Clusters (APCs) under the Pradhan Mantri Kisan Sampada Yojana have been limited in the Northeastern region. Only a few projects are approved and none dedicated to tea processing
 - **Agricultural Export Zones:** The establishment of Agri Export Zones (AEZs) across India has been successful in promoting agricultural exports. The NER presently houses a limited number of export zones, with one in Assam, two in Sikkim, and one in Tripura, focusing on diverse agriculture and horticulture crops. However, it lags in dedicated export zones for tea. Despite being a major tea producer, even Assam lacks a dedicated export facility (apart from ICD Amingaon) for tea.
- **Absence of Adequate Transport Assistance**
 - **Benefit for Export via ICD Amingaon:** assistance is available for tea movement through ICD Amingaon, @ Rs 2/Kg by TBI. This assistance is availed largely by merchant exporters or large producers with STGs hardly exporting tea.
 - **Tea not included under Kisan Rail and Krishi Udan scheme:** Tea is notably excluded from essential agricultural transportation initiatives like the Kisan Rail and Krishi Udan Scheme. Despite addressing various perishable goods, the Kisan Rail initiative does not include tea, and the Operation Greens Scheme's subsidies for fruits and vegetables transportation similarly exclude it.

VIII. Policy and Regulatory Challenges

- **Existing Tea Board Schemes:** The existing schemes of TBI primarily target collective entities, excluding a considerable number of STGs. The limited availability of funds further constrains the impact and coverage of these schemes. At an overall level, there has been a steady decline in the budgetary allocation of funds for the sector as highlighted in the table below. More importantly the actual disbursement also came down significantly. The budgeted allocation amount saw a steep decline from INR 285 Crore annually to INR 168.5 Crore, an almost 65% reduction. Additionally, the funds given for value addition of tea are even limited

Table 4: Budgeted Allocation across Plan Schemes (in INR Crore)²¹

#	Scheme	FY12-17	FY18-20	Change
1	PDS	600.0	221.9	-63%
2	QUPDS	300.0	73.75	-75%

3	MPS	200.0	89	-56%
4	R & D	150.0	78	-48%
5	HRD	150.0	20	-87%
6	Others	25.0	22.98	-8%
	Total	1425.0	505.6	-65%
	Yearly Allocation	285.0	168.5	-65%

Note:

- Values are based on numbers released by TBI (available as per Annual report)
- Others include NPTR for FY12-17 and FY18-20

While there has been a steady decline in the budgetary allocation of funds for the tea sector, the yearly allocation of the Tea Board Schemes also represents a minimal proportion of the total Agricultural budget of the country, as highlighted in the table below:

Table 5: Yearly Allocation for Tea Board Schemes (as a percentage of total agricultural budget)

#	Year	Yearly Budget Allocation for Tea Board Scheme (INR Crore)	Agricultural Budget (INR Crore)	Percentage
	2018	168.5	46,076.2	~0.36 %
	2019	168.5	101,904	~0.16 %
	2020	168.5	134,399.7	~0.12 %

- **Limited State Specific Schemes:** While states like Assam, Arunachal Pradesh, Meghalaya, Tripura have state specific schemes for tea, other northeastern states like Sikkim, Nagaland, Manipur, and Mizoram, do not have the same. Key state level schemes available have been covered in the state overview section. However, it is important to note that states which have relevant schemes too (apart from Assam), focus is on plantation expansion with no focus on value-addition, market development, infrastructure, linkage, etc.
- **Non-Availability of Crop Insurance Scheme:** Several central and state-level insurance schemes have been implemented in India to address the needs of the agricultural sector, with notable ones being the National Agricultural Insurance Scheme (formerly known as Pradhan Mantri Fasal Bima Yojana) and the Restructured Weather-Based Crop Insurance Scheme. However, equivalent benefit or scheme does not exist for tea growers in the country. Furthermore, the TBI provides biometric cards to STGs, although these cards do not hold legal status. This limits STGs' ability to access the benefits offered by different crop insurance schemes. In certain districts, associations of STGs have attempted to collaborate with financial institutions such as the State Bank of India to introduce a scheme that is otherwise accessible to farmers in the broader agricultural sector.
- **Policies for Other Agricultural Crops:** The central government has introduced a range of policies aimed at enhancing the cultivation, marketing, infrastructure and financial and export support for various agricultural crops. In tea, while the TBI schemes are there, a more comprehensive coverage when compared to agriculture is missing. Detailed comparison of same has been shown in the below table.

Table 6: Comparative analysis of support available to agricultural vs. tea farmers in India

Scheme Name	Objective	Key benefits Available	Is similar scheme available for Tea?
Pre- Production Phase			
Soil Health Card Scheme	<ul style="list-style-type: none"> Promote soil-testing prior to initiation of cultivation 	<ul style="list-style-type: none"> These cards are issued to the farmers and carry the recommendation regarding the proper usage of nutrients and fertilizers for the soil basis crop type It promotes judicious use of agri-inputs to improve productivity, lower production cost and climate sustainable agriculture by soil conservation 	<ul style="list-style-type: none"> Scheme to support soil sample testing at accredited labs is prevalent under plan schemes (however number of testing centres are low and costs high)
Paramparagat Krishi Vikas Yojana	<ul style="list-style-type: none"> Assistance for purchase of inputs such as certified seeds, fertilizers, pesticides, organic manure etc. by farmers 	<ul style="list-style-type: none"> Support towards promotion of organic farming, reduction in dependence on fertilizers and agricultural chemicals and improvement of soil health while increasing the yields in a cluster- based approach Funding under this scheme is available in ratio of 60:40 by Central and State 	<ul style="list-style-type: none"> Similar scheme to support organic tea plantation certification and inputs access is available under current plan schemes
Pradhan Mantri Fasal Bima Yojana (PMFBY)	<ul style="list-style-type: none"> To safeguard farmers against external and uncontrollable vulnerabilities by insuring the crops 	<ul style="list-style-type: none"> It covers all food grains, oilseeds and annual commercial horticultural crops. One season one rate a uniform maximum premium of 2% for Kharif, 1.5% for Rabi, Food & Oil seed crops and 5% for Annual Commercial/ Horticultural Crops and covers all risks of crop cycle 	<ul style="list-style-type: none"> Currently, no crop insurance schemes are available to tea sector It is an integral requirement with plantation areas prone to flooding / droughts / pest infestation
Kisan Credit Card	<ul style="list-style-type: none"> Financial access for timely credit 	<ul style="list-style-type: none"> To help the farmer in getting timely credit at very low interest rate (2-4%) for production related to procurement needs and marketing of agricultural crops 	<ul style="list-style-type: none"> Similar credit is not available for STGs under plan scheme, making them dependent on leaf agents
Rashtriya Krishi Vikas Yojana	<ul style="list-style-type: none"> To modernize food processing, minimize wastage, double farmers' income, and boost rural employment 	<ul style="list-style-type: none"> Focused on modernizing infrastructure and streamlining supply chains in the food processing sector, spanning from farm gate to retail. Efforts to enhance processing, reduces wastage, and boosts exports, contributing to rural employment and overall growth. Encompasses Mega Food Parks, Cold Chain Infrastructure, Food Processing Units, Agro-Processing Clusters, Food Safety Infrastructure, and initiatives like Operation Greens. 	<ul style="list-style-type: none"> Tea in certain states, such as Assam and Arunachal Pradesh, has received food processing support. However, there is a notable absence of such centralized policy for tea at the national level.
Production Phase			
Pradhan Mantri Krishi Sinchayee Yojna (PMKSY)	<ul style="list-style-type: none"> To ensure access to some means of water for irrigation to every farmer and to have more productivity per usage of the water 	<ul style="list-style-type: none"> Encouraging community use of water and farmer specific support such as capacity building, training and skill development in proper usage of water for irrigation Accelerate completion of irrigation projects Creation of new water sources through minor irrigation and restoration Promoting efficient water conveyance and precision water application devices like drips, sprinklers, pivots, rain-guns in the farm Effective management of runoff water 	<ul style="list-style-type: none"> Support for irrigation has been discontinued from current plan scheme due to benefits available under PMKSY scheme (as even STGs have been able to avail benefits under it)
PM-Kisan Samman Nidhi	<ul style="list-style-type: none"> Provide basic minimum income to farmers 	<ul style="list-style-type: none"> Under the scheme an income support of INR 6,000/- per year in three equal instalments is provided to all land holding farmer families. 	<ul style="list-style-type: none"> There is no guaranteed income scheme or assistance available to STGs in India

Scheme Name	Objective	Key benefits Available	Is similar scheme available for Tea?
PM-Kisan Sampada Yojana	<ul style="list-style-type: none"> Aims to create modern infra for efficient farm-to-retail supply chains, boost food processing and raise farmer income. 	<ul style="list-style-type: none"> The initiative includes ongoing projects like Mega Food Parks, Integrated Cold Chain, and new ventures focusing on processing capacities, agro-processing clusters, linkages, food safety, and quality assurance, along with human resources and institutions. 	<ul style="list-style-type: none"> Tea is not included under the scope of agro-processing clusters, export zones, and mega food parks as a part of this scheme.
Krishi Vigyan Kendras (KVKs)	<ul style="list-style-type: none"> Training and technical support on good agricultural practices to farmers through KVKs 	<ul style="list-style-type: none"> Various training and capacity building programmes are conducted by the KVKs which are centres for agriculture extensions created by Indian Council for Agricultural Research (ICAR) and its affiliated institutions at the district level It provides various types of farm support to the agricultural sector and creates awareness about the improved agricultural practices 	<ul style="list-style-type: none"> Tea sector has institutes like UPASI/ TRA for R&D and training; also there are field officers to support training activities of STGs However, there is low manpower deployment for above areas, with limited budget under scheme
PM Pradhan Mantri Kisan Urja Surakshaevam Utthaan Mahabhiyan Yojana (PM-KUSUM)	<ul style="list-style-type: none"> Energy conservation and promoting use of solar energy 	<ul style="list-style-type: none"> The Ministry of New and Renewable Energy (MNRE), to subsidize farmers to install solar irrigation pumps for irrigation, each farmer is provided a 60% subsidy to set up tube wells and pump solar sets. They will also get 30% of the total cost as a loan from the Government 	<ul style="list-style-type: none"> No such support schemes available for promotion of alternate energy for STGs, despite the rising costs and energy shortage in plantation areas
Mission Organic Value Chain Development for North Eastern Region	<ul style="list-style-type: none"> Aims to develop certified organic production, linking growers to consumers. 	<ul style="list-style-type: none"> Supports the entire process, including inputs, seeds, certification, and facilities for collection, processing, and marketing. Provides organic certification via Participatory Guarantee System or third-party systems under the National Programme for Organic Production. 	<ul style="list-style-type: none"> Support for organic cultivation, including provisions for organic inputs, certification, manure, and quality control, is available. However, the implementation of these measures across various northeastern states is limited.
Sub Mission on Agricultural Extension	<ul style="list-style-type: none"> Promote agricultural knowledge through farmer advisory committees, organizations, and extension services 	<ul style="list-style-type: none"> Creating farmer advisory committees, forming farmer organization and extension services to farmer and extension workers, i.e. exposure visit and crops demonstration on new technologies at the state/districts/block level 	<ul style="list-style-type: none"> Similar scheme exists to support FPOs/FPCs offering them financial assistance, training, a revolving corpus for GAAP and Governing Body management.
Sub-Mission on Agricultural Mechanization (SMAM)	<ul style="list-style-type: none"> To promote farm mechanization in Indian agriculture 	<ul style="list-style-type: none"> Government of India releases funds for Farm Mechanization like Establishment of Custom Hiring Centres (CHCs), Farm Machinery Bank, etc. Subsidy of 50% - 80% on agricultural equipment purchase is being provided to farmers 	<ul style="list-style-type: none"> Support for farm mechanization is available across wide range of areas such as plucking, pruning, harvesting, spraying, etc. However, overall allocation is low compared to requirement of STGs in the plans
Mission Organic	<ul style="list-style-type: none"> To promote nature-friendly, scientific, farming systems and practices that are economically viable and energy efficient 	<ul style="list-style-type: none"> Organic Certification and adoption for major crops viz., Arecanut, Pineapple, Black Pepper, Orange, Turmeric, Ginger, Cashewnut 	<ul style="list-style-type: none"> Support for organic cultivation, including provisions for organic inputs, certification, manure, and quality control, is available
Post-Production			
Agriculture Infrastructure	<ul style="list-style-type: none"> Financial support in making post-harvest infrastructure 	<ul style="list-style-type: none"> Long term debt finance facility for projects in post-harvest management of agricultural crops and community farming assets such as making of storage/warehouse, processing plants etc. of up to INR 2 crore. 	<ul style="list-style-type: none"> Support for creation of marketing and post-harvest infrastructure are not available for STGs, which impact value addition and price realization of their produce

Scheme Name	Objective	Key benefits Available	Is similar scheme available for Tea?
Fund (AIF)		<ul style="list-style-type: none"> Outlay of scheme is INR 1 Lakh crore up to 2030 	
Pradhan Mantri Kisan Sampada Yojana	<ul style="list-style-type: none"> Financial assistance to create modern infrastructure for efficient supply chain management in agriculture and better processing to reduce agricultural wastage 	<ul style="list-style-type: none"> It aims to establish mega food parks, integrated cold chains, forward and backward linkages of the crops etc. Financial assistance (grant-in-aid) under the scheme is limited to a maximum of Rs 10 crore per project. Outlay of scheme is around INR 6,000 crore 	<ul style="list-style-type: none"> Support on value addition (modern blending & packaging machine), setting up organic factories etc. is available for STGs and their collectives However, support for development of integrated tea parks in tea producing cluster is not there currently
Agricultural Marketing Infrastructure (AMI)	<ul style="list-style-type: none"> To develop agricultural marketing infrastructure for effectively managing marketable surplus 	<ul style="list-style-type: none"> 33.33% subsidy on the capital cost for construction of storage / farmer consumermarkets/ HAATs and other infrastructure setup 	<ul style="list-style-type: none"> Assistance is available for construction/ renovation of storage infrastructures under plan schemes
KISAN Rail	<ul style="list-style-type: none"> Promote movement of perishable food products with minimal damage 	<ul style="list-style-type: none"> 50% subsidy is given in freight (being borne by Ministry of Food Processing Industries) for transportation of fruits and vegetables There is no minimum quantity requirement for transit to reduce dependence on middleman and for small farmers to transit over long distance 	<ul style="list-style-type: none"> Assistance is available for products moving via ICD-Amingaon, no other dedicated support available for product movement in tea
Minimum Support Prices	<ul style="list-style-type: none"> Protect agriculture farmers from sharp fall in prices 	<ul style="list-style-type: none"> Government announces minimum support prices (MSPs) for 22 mandated crops and fair and remunerative price (FRP) for sugarcane. The mandated crops are 14 crops of the kharif season, 6 rabi crops and two other commercial crops. Fixed at 1.5 times costs of production at present 	<ul style="list-style-type: none"> While price sharing formula exists to assist in price discovery, no MSP is there, despite the low growth in tea prices
PM Formalisation of Micro Food Processing Enterprises Scheme	<ul style="list-style-type: none"> Provide financial, technical, and business support to establish or upgrade micro food processing enterprises 	<ul style="list-style-type: none"> Grants 35% credit-linked subsidy (up to INR 10 lakhs) for micro units Offers 35% credit-linked subsidy (up to INR 3 Crore) for shared facilities Provides INR 40,000/member to SHGs for capital and tools Offers up to 50% grant for branding to FPOs, SHGs, and cooperatives, ensuring standardized packaging and competitive pricing. 	<ul style="list-style-type: none"> Support for establishing micro-industrial units in specific states. Nevertheless, there is a lack of a corresponding national-level scheme.
Agriculture Export Promotion Plan Scheme of APEDA	<ul style="list-style-type: none"> Boost agricultural product exports, offers support to exporters by addressing challenges in the industry. 	<ul style="list-style-type: none"> Offers financial aid in areas such as export infrastructure development, quality enhancement, and market expansion. The scheme focuses on three broad components: Infrastructure Development, Market Development and Product Quality Development 	<ul style="list-style-type: none"> Export assistance for tea is accessible in certain states, yet there is an absence of a centralized scheme at the national level.
Other enabling areas			
Innovation and Agri-entrepreneurship Development programme	<ul style="list-style-type: none"> Financial help for innovation and promotion of agriculture entrepreneurship 	<ul style="list-style-type: none"> It has been launched to promote innovation and agri-entrepreneurship by providing financial support and nurturing the incubation ecosystem These start-ups are in various categories such as agro-processing, AI, digital agriculture, farm mechanisation, waste to wealth, etc. 	<ul style="list-style-type: none"> Assistance for promotion of start-ups focused on innovation and other aspects not there in tea
KISAN Drones	<ul style="list-style-type: none"> To promote crop assessment, digitization of land records and drone adoption 	<ul style="list-style-type: none"> It is a sub-component of the SMAM scheme. Assistance ranging from 40-50% of the costs for procurement would be provided to farmers under this scheme 	<ul style="list-style-type: none"> Currently mechanization support available do not factor in new age technologies to support the industry

1.7 RECOMMENDATIONS

This section summarizes the recommendations of the present study titled ‘Study on the Value Addition to Tea, with Special Reference to the STGS of the North-Eastern Region’. The discussion seeks to present the way forward for the development of value-added products based on tea grown in the NE Region, especially by the small tea growers. The recommendations have been categorized into themes and sub themes as discussed below.

#	Theme	Sub-Theme
1.	Promotion of Dedicated Clusters by establishing an integrated model, operative from STGs to Customers through Integrated Tea Promotion Facility (ITPF)	<ul style="list-style-type: none"> Establishment of ITPF in key clusters across the states Promotion of tea-entrepreneurs to support green leaf collection, equipment access and advisory support Establishment of solar power clusters to reduce dependence on conventional power sources Development of feeder roads to clusters
2.	Building Scale by establishing SHGs and FPOs of small tea growers	<ul style="list-style-type: none"> Promote establishment of SHGs and FPOs across the key clusters specifically and overall Expedite STG registration Resolution of NOC requirement in Arunachal Pradesh Strengthen SHG/FPO/FPC governance by promoting women participation and professional board for management of collectives Promote shared services across collectives for compliances Digitization of systems and processes of collectives Improved access to credit for collectives by promoting sub-ordinate debts Establishment of a stabilization fund Launch of a dedicated platform for FPO financing
3.	Supporting the Establishment of Tea Processing Units by SHGs and FPOs as well as Meeting Customized Equipment Needs of STGs	<ul style="list-style-type: none"> Augment support under TBI schemes and extension of existing schemes for agriculture to tea Augment support for individual STGs Promotion of standardization of equipment required by STGs Promote Local Equipment Production Exemptions in customs duty
4.	Promoting Viable Value Added Teas and Tea Products	<ul style="list-style-type: none"> Focus on quality green leaf promotion: <ul style="list-style-type: none"> Support for organic conversion Improve availability of bio-fertilizers: PM-PRANAM (PM Programme for Restoration, Awareness Generation, Nourishment, and Amelioration of Mother Earth) scheme Improve certification ease: expand the list of agencies empanelled for organic certification with 1 agency Focus on speciality tea <ul style="list-style-type: none"> Define parameters for tea varieties Engage with technical bodies (e.g. NECTAR - North East Center for Technology Application and Reach) for development of standardized technology Establishment of State Specific TDCs (Technology Demo Centre) to develop awareness among local people about the know-how of various technologies for tea value addition and their useful applications Assistance upto 50% of the factory cost may be extended to growers Focus on tea waste management Support product innovation for other value-added tea products (e.g. tea chocolates, tea balls, non-plastic based tea dips)

5.	Addressing the Training and Capacity Building Requirements of the Small tea grower	<ul style="list-style-type: none"> • Support training across key aspects such as: <ul style="list-style-type: none"> ○ Quality management (GAP) ○ Processing of value-added tea ○ Good manufacturing practices (GMP) ○ Storage, packaging and labelling ○ Food Safety and Maximum Residue Levels ○ Branding and Marketing (Domestic/Exports): ○ Enterprise Management ○ Banking and Funding ○ Financial Management and Book-keeping ○ Standardization of Process ○ Promotion of Regenerative and Precision Farming • Adopting Master Trainer and Train the Trainer module for wider reach of training • Development of an online platform with all training material for ready access by STGs
6.	Formalization of agents and promoting them as tea-preneurs	<ul style="list-style-type: none"> • Leaf agents within the tea value chain to be registered with the Tea Board of India (TBI). • Regularizing them as stakeholders in the supply chain by the introduction of assistance to strengthen infras for leaf collection and storage and also vehicles for leaf transport for dealing in value added teas. • Promote development of leaf agents into the proposed tea-preneurs across blocks and villages to support in development of the value chain, collectivization, value addition and supporting income of both STGs and agents • Bringing agents into the Chai Sahyog Platform and conduct awareness campaigns for these agents
7.	Promoting Mechanization and Technologies for Tea Cultivation and Processing	<ul style="list-style-type: none"> • Promote adoption of mobile infrastructure <ul style="list-style-type: none"> ○ Mobile soil testing labs ○ Pest detection machines ○ Mobile weather stations ○ Fine-leaf count machines • Advisory support to STGs • Technology for Equipment Standardization for Tea Processing • Promotion of Custom Hiring Centers (CHCs)
8.	Implementing Market Development and Promotion activities;	<ul style="list-style-type: none"> • Support domestic promotion covering: <ul style="list-style-type: none"> ○ Promotion of STG tea from North-Eastern states across major cities in India ○ Developing program for recognizing good performing STGs with potential ○ Promote linkage with startup and new online platforms ○ Preferential procurement in state and central requirements ○ Collaboration with NERAMAC and NAFED for promoting tea sourced from STGs under a new brand ○ Provide a one-time support for online trading platforms ○ Promotion support in line with Production Linked Incentive Scheme ○ Establishing a common portal for FPOs/FPCs • Support for market linkages <ul style="list-style-type: none"> ○ Subsidize costs for sending samples ○ Extend support under existing agri linkage schemes • Support overseas promotion by promoting tea in specific export markets • Support tie-up with new age tea players
9.	Exploring Convergences with existing Government Schemes	<ul style="list-style-type: none"> • Extend specific schemes across production support, processing, value addition, promotions, linkage and other aspects to STGs

The above recommendations cover the necessary interventions across the value chain of the suggested tea-based products, as well as the development of a supporting eco-system. Action points related to the recommendations have been segregated as short term (up to 2 years) and medium term (for 3-5 years hence) measures. The following table gives the summary of the financial requirements under the above recommendations.

Recommendation	Financial Requirement (Rs. in Lakh)		
	Short Term (2024-26)	Medium Term (2026-31)	TOTAL SHORT & MEDIUM TERMS
Promotion of Dedicated Clusters by establishing an integrated model, operative from STGs to Customers through Integrated Tea Promotion Facility (ITPF)	2115.0	2116.5	4231.5
Building Scale by establishing SHGs and FPOs of Small Tea Growers	7750	14388	22138
Supporting the Establishment of Tea Processing Units by SHGs and FPOs as well as Meeting Customized Equipment Needs of STGs	290	1656	1946
Promoting Viable Value Added Teas and Tea Products	340	608	948
Addressing the Training and Capacity Building Requirements of the Small tea grower	373	450	823
Formalization of agents and promoting them as tea-preneurs	992	2262	3254
Promoting Mechanization and Technologies for Tea Cultivation and Processing	1400	1650	3050
Implementing Market Development and Promotion activities	4225	5180	9405
Exploring Convergences with existing Government Schemes	---	---	0
TOTAL	17485.0	28310.5	45795.5

Detailed recommendations have been discussed subsequently. Please note further details on reasoning for recommendation and implementation plan have been provided in the detailed section on Study Recommendations (Chapter 10).

Recommendation-1: Promotion of Dedicated Clusters by establishing an integrated model, operative from STGs to Customers through Integrated Tea Promotion Facility (ITPF)

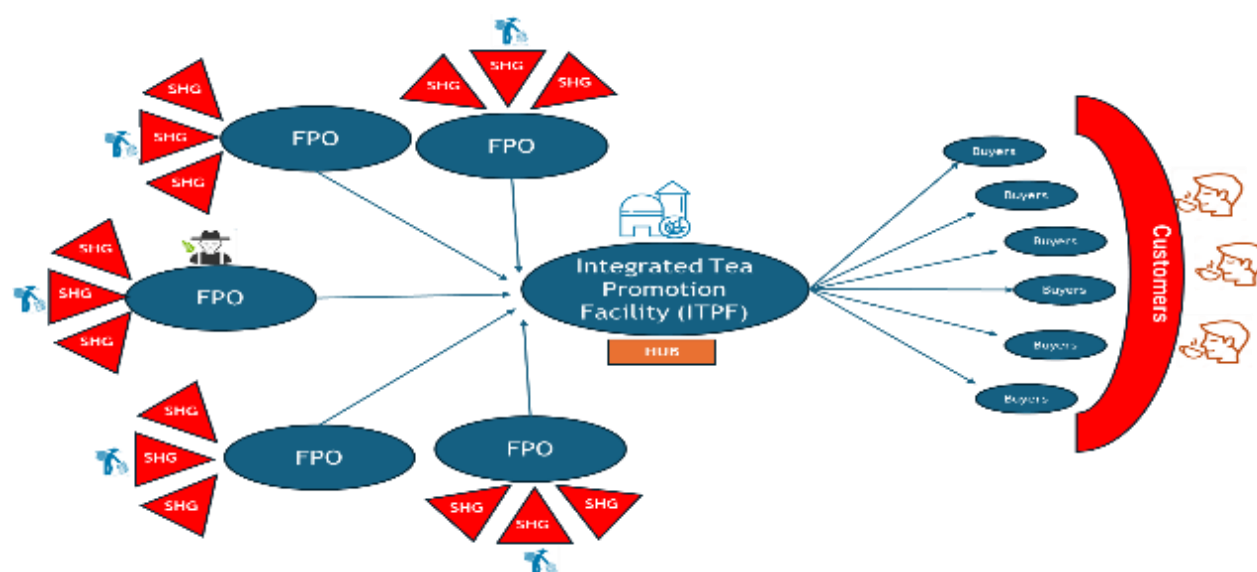
From the STG discussions conducted it was seen that limited access to markets, due to volume and quality concerns, is one of the major impediments impacting the income and economics of STGs. The effort of collectivization seems to provide a solution to the issue, but this initiative needs to be coupled with an end-to-end improvement in efficiency of various components across the tea value chain from the producers (STGs) to the consumers. Further, most of the STGs face issues related to economies of scale and standardization even when they form collectives which impacts access to better markets through bulk sales and by proper branding and marketing of the produce.

To put together all required facilities across the value chain in an integrated manner, it is recommended to set a value chain model linking STGs to SHGs & FPOs at village / block level. The FPOs across blocks / districts would be further linked to an establishment known as Common Facility Centre (CFC), which can also be called "Integrated Tea Promotion Facility (ITPF)". These facilities would be developed at key clusters across the states based on concentration of STGs and connecting infrastructure to support the entire chain.

A conceptual structure of this integrated model comprises of both backward and forward integration support to STGs through skilled human resources, in form of Farmers' Friend (FF) at the SHG level, Tea-preneurs (TP) at FPO level and Tea Cluster Manager (TCM) in the district at the Integrated Tea Promotion Facility (ITPF) level.

Thus, it can operate in a hub & spoke model with ITPF being at the centre, acting as a hub and SHGs and FPOs acting as spokes to route fresh tea leaves and sorted graded leaves respectively to Integrated Tea Promotion Facility (ITPF) for processing, packaging and marketing of the manufactured tea.

Figure 25: Integrated Tea Promotion Facility to Support Cluster Development (Hub and Spoke Model Illustration)

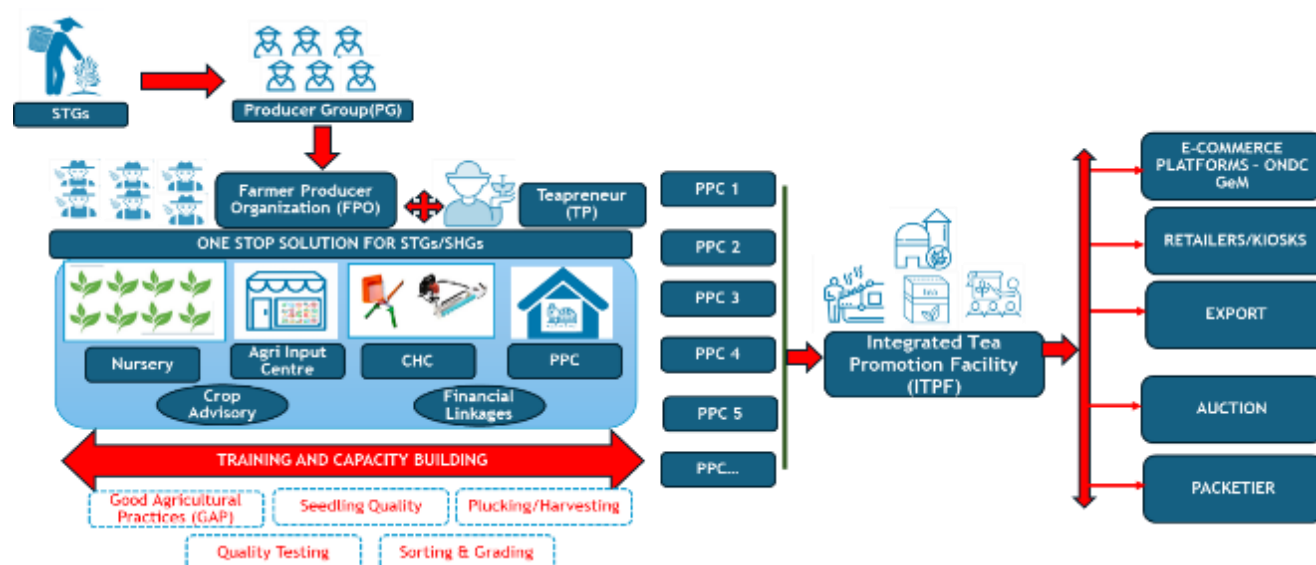


STGs in the villages would be encouraged to form Self Help Groups (SHGs), which will aggregate the fresh leaves from the STGs and will send the lots to the FPO. The Farmers' Friend at SHG will handhold the STGs in production and post-production processes and also in collection of the leaves at **one place (termed as the Collection Centre (CC))** for supply to FPOs.

The major process of value addition as well as backward and forward integration process will be initiated at the FPO with the help of STG members and the Tea-preneurs (TPs) working with the FPO. The initiative will consist of establishing one centre as **"One Stop Solution"** for the farmers, providing quality seedlings from nurseries, standard inputs at affordable rates, financing support and the facility of equipment on rent basis through the CHCs. This centre will also act as platform where TPs would provide crop advisory along with training the Farmers' Friends/STGs as ToT for propagating GAP and enhancing efficacy of production. The centre will create a pool of skilled resources along with the TP to operate and manage this One Stop Solution centre for STGs. Existing leaf agents may be encouraged to establish themselves as TPs to minimize any impact on existing value chains.

At the FPO level, the aggregated tea leaves can undergo grading for supplying the produce to the Integrated Tea Promotion Facility (ITPF). FPOs can process the collected leaves on their own in case of an existing mini-tea factory or utilize the ITPFs for processing, value addition and packaging.

Figure 26: Integrated Tea Promotion Facility to Support Cluster Development (Hub and Spoke Model Illustration)



The ITPFs may be established in Public – Private – Partnership (PPP) model, in collaboration with the Central Government, State Government and interested private players (selected based on defined parameters).

The major activities at ITPF will include:

- **Value-Addition Infrastructure:**

- Infrastructure to support processing of tea in multiple value-added formats (specifically for CTC, orthodox, green, white and oolong tea)
- Availability of infrastructure for quality check, testing and certification.
- Equipment for packaging and branding of made tea in different formats – bulk, packet, bags for domestic and exports
- Storage space

- **Technical Support Facility:**

- Training and Capacity building of associated FPOs
- Liaison with experts, research institutions, industry players for technical support and expertise
- Market Linkage with different types of buyers with facilitating activities like buyers – sellers’ meetings
- Promotion and facilitation of export of Tea, following norms and regulation.
- Domestic and Export Facilitation Desk

The graded tea leaves will be collected at the facility to undergo the process of withering, rolling, fermenting, drying and sorting to manufacture made tea of different varieties. ITPF will be equipped with proper quality testing and certification facilities. After processing, the sales / supply of tea can be done through multiple channels:

- Direct to consumers (D2C) model
- Retail Kiosks
- E-commerce platforms as GeM, ONDC etc.
- Export to international markets
- Auction

It is to highlight here that the proposed facility will not only act as a processing centre but will also promote the creation and promotion of one umbrella brand from the facility, which can be used by products manufactured from the supply of different FPOs. Standard packaging, branding and regulatory guidelines will be adhered to for the promotion of the product under this umbrella brand.

The facility would be actively involved in collaboration and liaison with different research institutions, private players and other stakeholders for development of technical expertise and creating the best of brand in the Tea market. This would in turn capacitate the facility in creating ToTs of STGs /members of FPOs for quality production and manufacturing of tea.

Market linkage efforts along with export promotion, with initiatives as buyers-sellers meet and adherence to regulatory norms in export promotion will be an integral part of the established facility.

The Domestic and Export Facilitation Desk needs to be established at the facility to promote access to remunerative markets inside and outside the country for STGs beyond the ones associated with the FPOs.

Apart from the common umbrella brand to be created under the model, existing SHGs and FPOs would be encouraged to use the facility on a “Pay-per use” model to support them in different value addition activities.

In the initial phase, it is proposed that the Integrated Tea Promotion Facilities (ITPFs) can be established in major districts of the states with high concentration of STGs, have connecting linkages, and where the FPOs from nearby districts can also collaborate and in future, depending on the volume of business and economic feasibilities, such facilities can be spread in all the districts of the state in due course of time.

These districts may be identified as aspirational districts for development of tea sector in the region.

State	Location of ITPF	Reason
Assam	<ul style="list-style-type: none"> - Dibrugarh (adjoining districts of Tinsukia, Sivasagar, Dhemaji, Charideo can be covered by it) - Jorhat (adjoining districts of Golaghat and Sonitpur can be covered by it) 	<ul style="list-style-type: none"> - Together these districts account for over majority of STG production and presence in the state - Both the locations have their own airports - Jorhat houses the TRA which can be integral towards development of the ITPF and is also close to Guwahati providing convenient access to auctions
Arunachal Pradesh*	<ul style="list-style-type: none"> - Common ITPF in Namsai to meet requirement of Namsai & Lohit 	<ul style="list-style-type: none"> - In consideration of the views of the Hon'ble Members of the Internal Committee the district has been considered. It may be noted that Namsai district had been a part of the undivided Lohit district of the state. Further, Namsai district has almost 90% of the number of STGs in the above districts (forming the erstwhile composite Lohit district), as well as 76% of the total area under tea of STGs in these districts hence it addresses both Lohit and Namsai requirements
Nagaland	<ul style="list-style-type: none"> - Common ITPF in Dimapur to cater to Mon, Tuesang, Monkokchung 	<ul style="list-style-type: none"> - Together these districts account for majority of STGs in the state - While these districts are dispersed, a common facility needs to be established given low number of STGs - TPs present in each district can assist in providing basic value add support
Meghalaya	<ul style="list-style-type: none"> - Common ITPF in Shillong to cater to Ribhoi & East Khasi Hills and West Garo Hills 	<ul style="list-style-type: none"> - Together these districts account for most of the STG production in the state - While these districts are dispersed, a common facility needs to be established given low number of STGs - TPs present in each district can assist in providing basic value add support
Tripura*	<ul style="list-style-type: none"> - Common ITPF to cater to Dhalai Unakoti and West Tripura at Unakoti 	<ul style="list-style-type: none"> - Together these districts account for >90% of STGs in the state - Given the location of these districts the facility may initially be established in Unakoti given presence of high number of STGs in this district with feeder units from TPs in Dhalai and West Tripura

To strengthen these clusters in addition to the ITPF, following facilities may be augmented in these clusters:

- **Solar Power Cluster:** Tea manufacturing involves various energy intensive operations, such as withering, maceration, fermentation, drying and grading/packing. Each kg of made tea requires 0.65 kW-hour of electrical energy on an average in a medium sized tea factory, which can go up to 0.85 kW-hour per kg of made tea in a smaller factory. Due to increasing power costs of grid electricity and frequent interruptions in such power supply, as well as support being extended for solar power installation; it may be worthwhile to promote solar power development for a cluster of FPOs and SHGs in proximity
- **Feeder Roads:** For the hub-and-spoke model proposed respective State Government's can support development of connecting roads to such proposed clusters from the blocks to support in timely movement of products for storage, processing and marketing.

Recommendation-2: Accelerating Formation of Self Help Groups (SHGs) and Farmer Producer Organizations (FPOs) / Co-operatives (FPCs) of Small Tea Growers

Given the need for collectivization and governments thrust to improve value addition and exports, **it is recommended that Small Tea Growers may be federated through the following organizations:**

- (a) Self Help Groups (SHGs) based on membership of active small tea growers with production; and**
- (b) FPOs / FPCs consisting of organizations formed by small tea growers, and of small tea grower members.**

SHGs and FPOs may be formed as per the extant provisions of the Tea Development and Promotion Scheme, 2021- 2026. The SHGs and FPOs may be formed by small tea growers, who preferably have been registered with the Tea Board India. SHGs need to have a minimum of 15 grower members, while FPOs may be formed by one or more SHGs with at least 20 members. FPO may be registered as a Producer Company or Cooperative Society, with provision for sharing of profits amongst the members. They may be federated as provided under the guidelines of the above-mentioned scheme of Tea Board India.

It may be noted that in March 2024, the Government of India announced a 82% hike in the provisions under the above-mentioned on-going scheme of the Tea Board India for the two remaining years of the same till March 2026. It has targeted the formation of 800 SHGs and 330 FPOs in the next two financial years. A substantial portion of these can be formed in the NE Region, including in the hill states, which are non-traditional areas for the cultivation of tea.

These SHGs and FPOs would also assist in servicing the proposed ITPF

Additional Suggestions related to above Recommendation to address existing Challenges:

- (a) Cluster development for Marketing and Value-Addition Support:** As highlighted earlier there is a need to promote specific clusters across the NER states to achieve scale and efficiency in value addition and its associated activities. In Recommendation 1 dedicated clusters for development of Integrated Facility has been proposed to assist with common processing and marketing. Further, hubs which can supply to such facility have been proposed. Focus of the new SHG/FPO/FPC formation needs to be in these clusters specifically. Support may be extended towards development of these clusters for pre-production, production, post-harvest management, value addition, logistics and marketing and branding.

The Cluster Development approach will facilitate in realising suitable economies of scale in production and post-harvest activities and is required to help in better price realisation and empowerment of the STG community to enhance their income through building competitiveness across the entire value chain. Key aspects where SHGs / FPOs/FPCs are to be supported in these clusters would include the below:

a. Pre-production and Production:

- i. Leverage and/or promote the creation of Farmer Producer Organisations/Farmer Producer Companies (FPOs/FPCs) and build their capacities through training and awareness, as well as necessary credit linkages.
- ii. Assist in the provision of quality planting material
- iii. Assist in area expansion, introduction of new and improved varieties based on requirement of the cluster
- iv. Promote the adoption and dissemination of Good Agricultural Practices including Integrated Nutrient Management (INM), Integrated Pest Management (IPM) and Crop Care Practices, to improve global competitiveness.
- v. Assist in the adoption of new and advanced machinery and technologies in such farms
- vi. Assist in the development of production-related infrastructure for protected cultivation, micro-irrigation, precision farming, etc.
- vii. Facilitate the establishment of labs for soil testing, plant nutrient testing, Maximum Residue Levels (MRL), etc., by dovetailing of relevant schemes.

b. Post-Harvest Management and Value Addition:

- i. Facilitate farmers/FPOs in creation of decentralised infrastructure at the farm gate for post- harvest handling of produce, including collection centres at primary processing as elaborated in Recommendation 1 for ITPF
- ii. Facilitate the development of packaging standards and other ancillary facilities including packaging required for post-harvest handling of produce

c. Logistics, Marketing and Branding

- i. Assist in the development of transport and other logistics infrastructure from farm gate to the domestic market and up to the exit point for export markets

- ii. Promote the use of alternative multi-modal means for seamless transport leveraging - Krishi Udan, Kisan Rail, Inland Waterways, Dedicated Freight Corridors, etc., by the creation of appropriate infrastructure, wherever required.
- iii. Facilitate the development of sea protocols for long distance transportation.
- iv. Establish market linkages in identified domestic and export markets including use of e- commerce platforms and digital marketing
- v. Develop and promote distinct 'Cluster Brands' for identified clusters on common agreed values, such as freshness, flavour, nutritional values, variety, Good Agricultural Practices (GAP), food safety and environmental sustainability, among others
- vi. Assist in the promotion of cluster produce through marketing campaigns (print/electronic), road shows/buyer-seller meets, product sampling in target markets.
- vii. Dedicated entrepreneurs may be promoted in these clusters for providing packaging and marketing support. Detailed bankable document for such an entrepreneur has been explained in the Model Bankable Document section later in the document.

Further the Tea Board India / State Government can nominate a Cluster Development Executive (CDE) for timely monitoring of progress of such clusters through support from the IA and CBBOs identified for such clusters.

- (a) **Expedite Registration of STGs:** The Tea Board India may expedite the matter of registration of small tea growers, including the issue of QR Code based Smart ID Cards. It may carry out special drives in states and districts, where the registration of small tea growers is low.
- (b) **Resolution of NOC requirement in Arunachal Pradesh:** In Arunachal Pradesh, the existing matter of requiring no-objection certificate (NOC) from the Ministry of Environment, Forests, and Climate Change of the Government of India may be reviewed, so that compliance is facilitated and Tea Board India can start registering small tea growers from the state.
- (c) **Awareness camps** may be organized so that the benefits of SHGs and FPOs are made known to the small tea growers, especially in the hill states of the NE Region where awareness has been found to be very low in many areas.
- (d) **Promotion of FPOs:** Vigorous measures may need to be taken along with the formation of FPOs / FPCs to address lacunae that may arise in these bodies regarding matters like membership and fee payments, financial weaknesses, management problems, weakness in planning and implementation, issues in credit and marketing etc. If needed, a system of Implementing Agency and Cluster Based Business Organizations (CBBOs) may be instituted as provided for under the Central Sector Scheme (CSS) titled 'Formation and Promotion of 10,000 Farmer Producer Organizations'.
- (e) **Governance and Management of FPOs:** TBI focus to promote FPOs have led to growth in number of collectives, focus now needs to be on shifting these organizations to have more target and business oriented focus. For the same it is important to strengthen the FPO board as well as other key members to drive active participation from members as well. Select aspects to focus on include:
 - **Improving women participation:** while there are many women SHGs, their participation at FPO and board level is limited. Promotion of more women to join FPOs as shareholders which have mixed membership is needed. Specific scheme benefits may be linked in such a manner that priority may be provided to FPOs which have women representation in their boards
 - **Developing professional board and HR:** need for more systematic training & incubation for the FPO Board of Directors, CEOs and Accountants with a focus on output marketing – value-addition through primary & secondary processing. Existing training modules need to be revamped to further augment capability of FPOs.
 - **Promoting shared services across FPOs for compliance:** FPOs registered under the Company Act (as Farmer Producer Companies) are facing major challenges in ensuring timely compliances as a) FPCs have to fulfil compliances at par with other Private Companies which are complex for the FPOs to adhere on time and in result they face penalties, b) the FPOs struggle to bear the expenses for the services of the expertise like Company Secretary / Chartered Accountant and are also dependent a lot on them leading to exploitation in many cases. Due to non-compliances, many FPOs need to pay unnecessary high penalties which increase on a daily basis. It is hence important to promote share services among FPOs and promote development of a more federation based structure at cluster level.
 - **Digitization of systems and processes:** for FPOs to engage with a number of private companies, banks and other forms of business organizations, digitization of the FPO becomes a prerequisite. Digitization is also important for the FPOs to effectively manage their legal & statutory compliances, including GST, Income Tax, etc. and enable

the governing body of the FPO to take effective decisions. Hence support towards adoption of digital systems especially for book-keeping and reporting may be promoted.

(f) Support in accessing credit: Given the unique nature of FPOs in India, despite presence of various credit facilities lending continues to be a challenge due to variety of reasons. To support in accessing credit more conveniently to support overall investment in infrastructure development and other aspects additional financing in the form of:

- **Subordinate debt facilities:** FPOs are currently allowed to raise equity only from its members which restrict ability to raise funds. Sub-ordinate debt facilities may be encouraged among FPOs which are typically of long duration (over 10 yrs) and can be made through NABARD
- **Stabilization funds for FPOs:** in the primaries many FPOs indicated that they had invested for establishment of processing facility, however, due to delayed subsidy payment or cost escalations or external risks (e.g. COVID) leading to them defaulting on loans. This impacts FPOs from raising any future financing from banks/ NBFCs. To prevent such a situation, a stabilization fund may be established in the region wherein only in genuine cases (no malpractice or intentional default) the loan amount may be converted into a term loan facility of 2-3 years. This may be funded through a joint body in the NER like NEDFI with support from Tea Board and State Government towards the corpus fund for such purpose.
- **Dedicated platform for FPO financing by TBI:** presently there is no comprehensive database to know the status of the lending to FPOs and no platform available to connect the lenders and borrowers. A robust and reliable database on loans availed by FPOs will immensely help the FPO ecosystem. Further, there is need for a platform where the lenders and borrowers can discover each other. TBI can fund establishment of such a platform and encourage financial institutions to participate in it. Regional support may be extended by NEDFI.

Recommendation-3: Supporting the Establishment of Mini-Tea Processing Units by SHGs and FPOs as well as Meeting Customized Equipment Needs of STGs in Clusters Identified

It is recommended that once SHGs and FPOs are successfully formed and federated, they may take up the task of establishing processing units, with the support of the Tea Board India, under its extant Tea Development and Promotion Scheme (2021-2026) and possible support under other Gol schemes (such as PMFME and AIF).

Since, setting up of large-scale factory requires continuous supply of green leaf in bulk amount which is a major concern for sustainability of such factories in the long run; it is suggested that feasible mini-tea processing units for STGs taking into consideration different production clusters in the region may be promoted. Therefore, It has been suggested that 25 Mini-Factories be established with an investment of Rs 40 lakh per factory as per the Tea Board India norms.

In the short-term (next two years), 10-15 mini tea factories can be established with Government support, with capacity of up to 500 kg of made tea per day. In the medium term (next five years), 10 mini-tea factories can be similarly supported, with focus upon high quality tea (including orthodox tea and organic / 'nature grown' tea) in the clusters where ITPFs are to be established.

Under the component for 'Plantation Development for Small Tea Growers', the Tea Board India has included sub- components (activities) like (a) Assistance for setting up of tea Factory by FPOs, and (b) Assistance for setting up Mini Tea Factory. For the former case of establishing tea factory by FPO, the support of the Tea Board India is limited to 40% of the cost, with a ceiling of Rs 2.00 crore. In the latter case, for setting-up mini-factories by individuals, association of small tea growers and FPOs, the assistance is provided up to 40% of the cost (50% in non-traditional areas of NE Region) subject to a ceiling of Rs 33.00 lakh. It suggested as follows.

- Augmentation of support under the TBI scheme** component to support development of mini-tea factory. The overall subsidy percentage provided for establishment of tea factories and mini-tea factories may be increased, while keeping the overall ceiling limit unchanged under existing schemes of the TBU. Current subsidy may be revised to 50% of the overall cost for such factory and additional 10% may be provided in case of imported equipment
- Other schemes which may extended and leveraged** to support establishment of units. Awareness around other schemes which are already allowed for tea needs to be done

(1) the Agriculture Infrastructure Fund, whereby the above scheme is open to eligible organizations like FPOs, SHGs etc. working in the area of tea as per Revised Scheme Guidelines of January 2023; and

(2) the PM-Formalization of Micro Food Processing Enterprises, whereby organizations like FPOs, FPCs, and SHG Federations etc. (apart from Government agencies) are being provided with credit linked capital subsidy @35% of the eligible project cost (the maximum project cost being Rs 10.00 crore), with a ceiling of Rs 3.00 crore for the subsidy.

- (c) **Augment support for individual STGs:** While current support for processing facility is geared more towards the SHGs and FPOs, individual STGs also need to be supported for the same. Overall scheme allocation for individual STGs may be augmented to support establishment of mini-factory and meeting their customized equipment needs

(d) Promotion of standardization of equipment required by STGs

It was seen in the STG discussion that despite efforts to promote collectives, many STGs continue to operate individually. Many such STGs are focused on value-addition and have adopted custom build equipment (for crushing, drying, processing, etc.) given low volume of leaves and space constraints. To support mechanization and standardization among such STGs, support of TRAI along with select manufacturers can be taken to develop equipment which can be utilized by individual STGs for value-addition. Capacity of maximum 10000 kgs of made tea annually should be considered for such equipment with limited power requirement for operation.

(e) Promote Local Equipment Production

Above equipment list can be included in the TBI scheme guidelines for facilitation of procurement. Overall costs and ceiling can be determined based on market rates and similar support provided for other equipment. Players manufacturing such equipment can be promoted as well under the program to ensure sourcing at competitive prices and ready availability of maintenance infrastructure by STGs.

(f) Exemptions in customs duty

To support in procurement of quality machinery for value addition, processing and packaging duty exemption may be granted to STGs/FPOs/ FPCs which import such equipment

Recommendation-4: Promoting Viable Value Added Teas and Tea Products

For small tea growers, value addition can commence when they start processing their green leaf in tea factories owned by their SHGs and FPCs/FPOs. Other forms of value addition can include the production of: (a) quality teas (conventional teas such as CTC tea, orthodox tea, and green tea) made from select leaf grown under a GAP regime or organic teas; (b) specialty teas like oolong tea, white tea and other types of teas like ethnic teas; (c) packet teas, tea bags and instant tea that are covered by 'value-added tea' in Tea Board India parlance; and (d) products based on tea like including iced tea, ready to drink (RTD) tea, tea infusions etc. apart from innovations like tea balls, chocolates from tea etc.

Suggestions related to above Recommendation

- (a) **Focus on Quality Green Leaf Production:** Green leaves which are prepared with due care, adoption of GAP (timely maintenance, plucking, adoption of 2 leaf and a bud norms, etc.) have better pricing compared to other green leaves. To promote the same, it is important to provide training on such aspects to STGs across the region. TBI under its planned scheme component of "Sector Specific Action Plan For Niti Forum For North East" already provides support and training for GAP and organic cultivation. Support for same needs to be augmented and continued to ensure quality leaf and organic cultivation. Select other measures include:
- **Support for organic conversion:** timely disbursement of organic conversion support to ensure STGs stay motivated and do not leave the process mid-way
 - **Improve availability of bio-fertilizers:** PM-PRANAM (PM Programme for Restoration, Awareness Generation, Nourishment, and Amelioration of Mother Earth) scheme has been launched in 2023-24 union budget under which focus is on promoting supply of biofertilizers and organic fertilizers across the states. Tea may be promoted under the same as many STGs which have shifted to organic face challenges in procuring bio-fertilizers which are often very expensive
 - **Improve certification ease:** expand the list of agencies empanelled for organic certification with 1 agency at least in the key tea producing states in NER to support timely and cost-effective certification process. TRA may be made a nodal agency in charge of such certification in the region
- (b) **Focus on Specialty Tea:** while CTC tea has dominated the Indian tea market, specialty tea like green tea, white tea and oolong tea are also seeing increasing demand. Further they provide high value at low volume in both domestic and global markets. Following aspects are recommended for it:
- **Define parameters** for production of such specialty tea in conjunction with TRA and TBI
 - **Engage with technical bodies (e.g. NECTAR - North East Center for Technology Application and Reach) for development of standardized technology** which can operate at low scale and power for STGs. Existing players engaged in production of such machinery to be supported for capacity expansion and reduction in overall costs for machinery and equipment

- **Establishment of State Specific TDCs (Technology Demonstration Centre)** to develop awareness among local people about the know-how of various technologies for tea value addition and their useful applications. These can be developed in collaboration with respective state governments and specific funding under central government. PMFME or PM-DEVINE scheme may also be leveraged to support in establishment of such centers across NER. These incubation centers may support in providing training, demonstration and providing common facilities. Training and method demonstrations of STGs on such production techniques may be conducted here. These may be supplemented with videos and training materials for preparing value added tea.
- **Assistance upto 50% of the factory cost** may be extended to growers for establishment of specialty tea factories
- **Awareness session** on possible incremental price realization from production of such varieties of made tea needs to be conducted across growers

- (c) **Focus on tea waste management:** ‘Tea Waste’ means tea sweepings, tea fluff, tea fiber or tea stalks or any article purporting to be tea which does not confirm to the specification for tea laid down under the Prevention of Food Adulteration Act, 1954 (37 of 1954) but does not include green tea or green tea stalks. Tea Board of India has initiated the Tea Waste Auctions through a online platform for registered users under the Tea Waste (Control) Order. Presently tea waste can be sold for usage in another end-use industry due to its benefits or sold for exports or burned or disposed of in other specified means.

Tea waste have bioactive compounds of medicinal importance, which can be used for the creation of different value-added materials from tea waste. In fact, tea waste contains plentiful amounts of polyphenolic substances which show outstanding activities beneficial for human health. Therefore, tea waste can be utilized as an important source for the formation of such products with medicinal importance like polyphenols and polysaccharides. Further, tea waste has a lot of usage in several end user industries such as pharmaceuticals, nutraceuticals, cosmetics/ fragrances etc, if such niches can be explored.

Usage of tea waste aligns with the focus on “Waste to Wealth Mission” as well and the research and development works carried out by Assam Agricultural University and IIT Guwahati for the utilization of tea wastes can be leveraged for improving the economics of tea waste in the NE Region.

- For example: IIT Guwahati has carried out cutting age research on the diversified application of tea factory waste to various pharmaceutical and foods products. These carbonaceous pharmaceutical materials form the basis for a broad spectrum of application-based commodities. The range of products developed using tea waste include:
 - Low-cost antioxidant-rich supplements which are designed to provide an affordable healthier lifestyle option by harnessing green tea's potential properties
 - Organic preservatives developed from the green tea have redefined food preservation by extending the shelf life of vegetable and fruit juices for up to one year, effectively reducing waste and ensuring long-lasting freshness
 - In the sustainability realm, pharmaceutical super-grade activated carbon is setting new standards with its exceptional surface area, making it an incredibly versatile product in pharmaceutical as well as in Fast-moving consumer goods (FMGC)
 - Biochar produced from the waste contributes significantly to waste reduction and environmental restoration including carbon sequestration in various contexts
 - For pharmaceutical applications, the liquefiable carbon source promises innovative solutions that embrace the future of medicine
 - Micro and nano-crystalline cellulose tailored for intelligent packaging brings intelligence to product packaging, satisfying the evolving demands of modern consumers and industries
 - Carbon quantum dots are currently being explored for their sensing potential in detecting harmful contaminants in water bodies

Currently focus of the project is on advancing towards advanced Pilot stage (TRL-7) for Transfer of Technology (ToT) phase to potential industry partners. These value-added products can not only enhance the economic viability of tea cultivation but also encourage sustainable practices by reducing waste and promoting resource efficiency.

- In the Assam Agricultural University, scientists have utilized tea waste as a carpet for decomposition, apart from the production of bio-char using factory tea waste which may also be a good option for carbon sequestration and also for soil application for crop growth.

Further, scientists at the Assam Agricultural University (AAU) have pioneered a novel technique for producing tea powder from raw tea leaves (Green Tea Leaf Powder). This innovation is poised to benefit over 500 organic tea farmers in the state. This is a low-cost and easily implementable process; which has been specifically tailored to cater to the needs of small tea farmers.

Antioxidant-rich tea powder has been extracted from raw tea leaves by means of a process of gentle drying and precise grinding. This versatile tea powder can be sipped as a comforting hot beverage or seamlessly incorporated into various culinary delights. Enriched with antioxidants, it holds the potential to bolster the body's defences against ailments. Additionally, tea powder boasts of caffeine content, offering an invigorating energy boost

Such innovations and value-added usage needs to be piloted for commercial viability and basis the same STGs need to be trained for promoting value-addition in tea waste. To support its adoption for usage in end-use industry and specifically for STGs support may be extended in two parts as follows:

- **Initially, large FPOs/FPCs engaged in made tea production may be targeted for utilization of tea wastes at first:** standard format for collection of tea waste may be defined at first. Then, ITPFs may be nominated as standard collection points in the cluster for such tea waste and forward linkage to end-use industries. Logistics costs for movement of tea waste would have to be subsidized by respective state governments and end-user industries operating in the region may be encouraged to procure from such facilities. The following steps may be taken up.
 - In collaboration with the end-user industries and NECTAR, standard forms for procurement of such tea waste may be defined;
 - Guidelines to be prepared on conversion of tea waste to such standard forms;
 - Specific machinery required for such purpose to be promoted and subsidized under TBI scheme and developed in collaboration with NECTAR and TRA;
 - The ITPF defined earlier to act as nodal points for collection of such tea waste in relevant forms and supply to potential industries;
 - Given the low scale involved and initial stage of adoption, ITPFs which source and supply such ingredients be provided 75% exemption on logistic charges for a period of 1 year from start of supply;
 - Alternatively, end-user industries (especially ones operating across NER) may be encouraged to source from such facility by providing subsidy on overall procurement amount which can be funded by the State Governments; and
 - TBI to facilitate research and studies into potential benefits of tea for health purpose to support adoption of such products among consumers.
 - **Post the initial adoption, in the medium term, FPOs/FPCs may be encouraged to enter into production of such end use product itself. The following measures may be undertaken.**
 - Support for attending training / certification to develop understanding of such end use product production process may be extended by respective State Governments
 - Sourcing of machinery and equipment may be subsidized under extant state government schemes
 - NEREMAC may be leveraged to brand and market such value-added niche products developed on the back of tea waste from STGs.
- (d) **Support overall product innovation for growers:** primaries revealed many STGs adopting production of tea chocolates, tea balls, non-plastic based tea dips, etc. which have a niche market but command premium. Innovation across these products need to be encouraged through special focus on innovation by the respective state governments. Value added products beyond tea consumption in beverage form may be provided special aid for infrastructure establishment and marketing /branding support by respective State Governments. Promotion may be conducted at key locations of high footfall for such products.
- (e) Tea Board India may need to support small tea growers for an extended period beyond the 15th Commission period of 2021-26 covered by its present scheme.

Recommendation-5: Addressing the Training and Capacity Building Requirements of the Small Tea Growers

It is recommended that meeting the training and capacity building requirements of small tea growers may be made an integral component for the development of the tea sector undertaken by the Government of India or by any of the State Governments of the NE Region.

The tea-making eco-system, especially the parts related with cultivation, processing, and trade, has been almost exclusively oriented towards the production of black tea, especially CTC teas. Orthodox tea has been a focus of some companies oriented largely towards exports.

Further as, small tea growers have started increasing in the past few decades in Assam and nearby states of the NE Region, capacity building is a foremost requirement if the tea industry, especially for the small tea growers to move forward along the value chain, especially in making new products like specialty teas and quality teas.

Key aspects to focus on in the training:

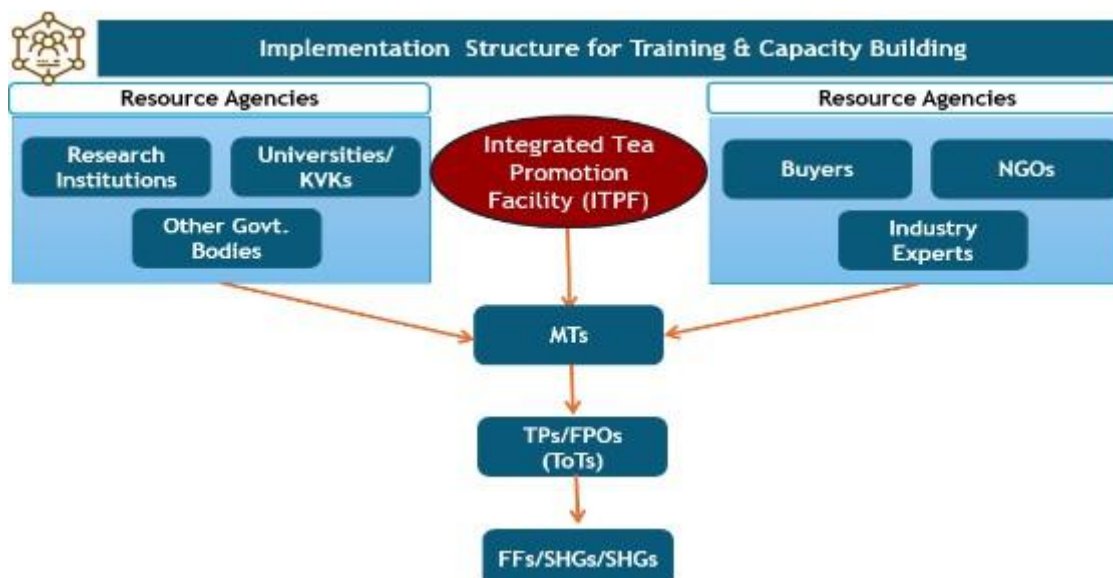
Skill and capacity building will involve trainings of the STGs/FPOs and Tea-preneurs on various relevant topics which are relevant across value chain starting from pre- production/production to marketing of the products to the customers. Various proposed topics of trainings are listed as depicted below. Detailed coverage required under each component has been elaborated in the chapter on Recommendation.



Master Trainer Program for Training

As described earlier, ITPF at the district level will not only act as a centre for processing and marketing of tea, but also would act as a centre for knowledge upgradation and dissemination for the associated stakeholders. The capacity building activities at ITPF will be carried out in collaboration with various research /academic institutions as well as private industry players/Buyers/NGOs who would act as expert resource persons for training and creating a pool of Master Trainers (MTs), capacitated in different aspects of tea production, processing and marketing. These MTs will also provide technical support for smooth and efficient operation of ITPF. The MTs would coordinate with FPOs to conduct in-house and on-field trainings of the TPs. The skilling requirement of TPs will encompass knowledge on production (GAP) , aggregation, storage , logistics and quality assurance in procurement from STGs/SHGs and also knowledge on nursery management, input sales and management , operation of CHC etc. for effective functioning of the One Stop Solution (OSS) by the TPs. Every TP will have a set of FFs , who would support in organizing and coordinating for training sessions or Farmer Field Schools(FFSs) for the STGs/SHGs.

Thus , the implementation structure for the training would involve almost all stakeholders, with flow of information and knowledge both from the producers to buyers and also from buyers to producers, with a lot of technical guidelines from the research and development institutions.



Development Master Trainer Module and Online Database for Training Access: Develop Master Trainer and Train the Trainer module for key aspects as defined above for STGs to support quality production, value addition and entrepreneurship. An online portal with ready access to all the training materials would be created. SHGs and FPOs trained by trainers would be provided access to such portal for ongoing support whenever needed. The portal to comprise detailed description on the different varieties of tea and videos on process to make different varieties of tea for promoting standardized practices.

Recommendation-6: Formalization of Agents

It is recommended to incorporate green leaf agents within the tea value chain by ensuring their registration with the Tea Board of India (TBI). This registration will facilitate effective regulation and monitoring, thereby enhancing the overall efficiency and profitability of the tea industry.

Green leaf agents play a critical role in the tea value chain, acting as intermediaries who supply green leaves from Small Tea Growers (STGs) to Bought Leaf Factories (BLFs) or Estate Factories (EFs). However, the increase in the number of STGs and BLFs over time has led to a significant rise in the number of agents. Many of these agents charge exorbitant commissions, which substantially reduces the profits earned by the STGs.

By integrating these agents into the formal tea value chain and subjecting them to regulation, it is possible to control and standardize the commissions they charge. This regulatory oversight would ensure fairer pricing and better profit margins for STGs. Additionally, regular monitoring and regulation would enhance transparency, accountability, and the overall quality of the tea supply chain.

Implementing such measures will not only protect the interests of STGs but also contribute to the sustainable growth and development of the tea industry. Therefore, it is recommended that green leaf agents be registered and regulated to foster a more equitable and profitable tea value chain.

Additional Suggestions related to above Recommendation

- The Board should make it mandatory for the BLFs and EFs to disclose the names of agents and sub agents within a definite timeline
- Once TBI gets access to the data of the agents (and sub agents, hereafter will be referred to as agents), TBI may start the process of registering these agents and issue them license for doing green leaf business.
- Regularizing them as stakeholders in the supply chain by the introduction of assistance. The Board may consider introducing assistance for the agents for developing and strengthening infrastructure for leaf collection and storage and vehicles for leaf transport for dealing in value added teas.
- Promote development of leaf agents into the proposed tea-preneurs across blocks and villages to support in development of the value chain, collectivization, value addition and supporting income of both STGs and agents
- Once the agents are brought into the mainstream, TBI may consider fixing slabs of commission for agents as well as sub agents which will address the discrepancy related to deductions.

- Bringing agents into the Chai Sahyog Platform and conduct awareness campaigns for these agents.

Recommendation-7: Promoting Mechanization and Technologies for Tea Cultivation and Processing

It is recommended that appropriate technologies be identified for application in various areas of tea cultivation and processing by small tea growers. Key aspects where focus needs to be made are as below:

- Promote adoption of mobile infrastructure** across multiple aspects to assist in quality tea production. Select aspects which can be focused comprises development and promotion of mobile soil testing labs, pest detection machines, mobile weather stations and fine leaf count machines. All these would enable the STG to make more informed decisions and improve their overall costs as currently they need to travel for long distances to avail such services.
- Advisory support to STGs:** presently select not-for-profit organizations and agritech startups are providing varying advisory services to STGs and their collectives. TBI had also initiated advisory through the Chai Sahayog App but it has had limited adoption. Focus need to be on promotion advisory and other services to STGs for improve costs, decision making, planning, profitability and market visibility. Chai Sahayog App may be updated with required information and promoted for such aspect among STGs.
- Technology for Equipment Standardization for Tea Processing:** even though the new plan schemes have provision to support field mechanization, the physical targets are way lower than its actual requirement. As per the targets 700 machineries (across multiple items such as pruning machines, mechanized harvesters, power sprayer, brush cutter, plucking shear) are planned to be provided in the current 5-year plan (2021- 26). Further for establishment of mini-tea factories the target is 8 for pan-India. Given the large number STGs in the region and the challenges they are experiencing in terms of growing labour shortages, the target needs to be much wider to make any meaningful impact from mechanization. Additional support required in this aspect are:
 - Individual machinery:** while much of the support towards mechanization is for collectives, it can be seen from the primaries that overall number of individual STGs continue to dominate. These individual STGs often conduct many parts of the processing manually. Current coverage and targets for equipment needs to be augmented for individual STGs.
 - Capital support to equipment manufacturers:** currently there are select players engaged in manufacturing of relevant equipment for tea processing and they focus primarily on mini-tea factories. Also there for tea plantation equipment there is reliance on imports. For the same augmentation of capacity of existing players and entry of new players needs to be promoted.
 - Development of affordable and low energy consuming dryers:** An important step of tea processing and something that all tea must go through to be considered shelf-stable is drying. Drying both makes the tea leaves shelf stable and enhances their flavour. To dry the tea leaves for stability, the moisture levels need to be reduced to about 2%-3% to virtually stop the oxidative process induced by the rolling (or CTC process) of tea withered leaves. The most common drying methods include:
 - commercial dryers; (b) oven drying; and (c) sun drying (traditional). In commercially used driers; tea leaves are moved through a heat source in perforated conveyors in Endless chain pressure drier is also called conventional drier; or (b) dried on a bed of hot air in Fluidized bed or Vibro-fluidized bed drier (FBD/VFBD). It may be noted that commercially used driers consume large amount of energy, and research is being undertaken to devise cost-effective solutions. However, the above technology (or alternatives like solar energy based driers) has not been fully established in the Indian market. It is important to promote research in this area and assist in development of a suitable equipment to meet drying requirements in a cost-effective manner by STGs. Collaboration with IIT- Guwahati, AAU and select equipment manufacturers may be explored for development of such prototypes or leveraging any existing prototype for testing and deployment.
- Promotion of Custom Hiring Centers (CHCs):** promote development of Custom Hiring Centres (CHCs) in the tea producing districts with sizeable STG concentration, where equipment can be made available for STGs to use on sharing basis instead of having to purchase it outrightly. Ideally, the CHC shall have to be located in a place where by and large small land holdings are located within a radius of 5 to 7 kms. This will reduce the transport cost and time of transport of equipment and machinery. In other terms, one CHC is expected to cater to 4/5 villages and therefore a common place equidistant from the villages catered is advisable. **Details for a model CHC project has been provided in model bankable project section.**

Recommendation-8: Implementing Market Development & Promotion activities

It is recommended that the SHGs and FPOs formed by small tea growers may be supported in their efforts at market development and sales promotion; and further, that the domestic and overseas promotion initiatives of the Tea Board be strengthened.

While several channels exist for selling to the customers, small tea growers are unable to adequately explore these due to investment requirements, physical distance from the region, barriers in the use of e-commerce platforms and tea auctions etc. Specific recommendations which needs to be implemented to support marketing of STG value-added products have been discussed below:

(a) Support for Domestic Promotion

- **Promotion of STG tea from North-Eastern states across major cities in India:**

Major share of tea produced in India is consumed domestically which makes it a key focus market for STGs as well. With rising disposable income the Indian tea consumer is increasingly willing to explore new varieties of tea. Further, while milk tea continues to dominate tea consumption, consumers increasingly are looking for non-milk based tea options as well due to various health reasons. NER tea from STGs need to be positioned righting among this evolving consumption trends to tap the Indian tea consumer. Given the same, key aspects that need to be focused on:

- **Focus on differentiation factors / value proposition in promotions:** conduct generic promotion campaign on the legacy of Indian tea and the role STGs play in tea production in India. Highlight key value proposition of STG tea across multiple facets such as freshness, quality, health benefits and social development perspectives

Developing program for recognizing good performing STGs with potential: launch an award system for STG branded tea in each NER state. An annual event to recognize quality/ innovative tea produced by STGs and players which have achieved some scale can be conducted to identifying STGs for providing dedicated round the year promotion support. List to be revised annually with no player provided support for more than a 1 year period.

STGs selected under this mode would be encouraged to place a QR code on their packs which can be scanned for highlighting the STG story / tea production process / quality / varieties of tea etc. for consumers to understand and connect better

- **Focus on Establishing Kiosks at key locations :** State government in conjunction with the Tea Board can establish kiosks and experience centers for tea across key locations in the state (e.g. airports, railway stations, high footfall locations – tourist spots/ malls) to promote STG tea. In such places, the identified STG tea (from earlier point) can be provided space for selling and promoting tea over a year without any charge
- **Support in Linkage through Buyer-Seller Meets:** annual calendar for buyer-seller meets in domestic markets to be prepared for conducting buyer-seller meets at key cities in India. Identified STGs and FPOs from each state to be provided opportunity for presenting their tea in such locations. These events to be used also for raising awareness on STG tea across India. Along with the buyer-seller meets, promotional campaigns in such cities can be conducted at high footfall locations
- **Promotion through digital channel leveraging influencers:** to reach a wider audience at an affordable cost it is recommended that social media platforms be focused on for conducting such campaigns. Further, influencer mode can be adopted wherein regional influencers can be roped in for conducting promotions in a cost-effective manner.
- **Preferential procurement:** to support SHGs and FPOs in tea, they can be provided preference in procurement of CTC variety tea across channels of State procurement (e.g. **Public Distribution System (PDS)**) and Central government procurement (e.g. GEM, Indian Railways, Indian Army, etc.)
- **Collaboration with NERAMAC and NAFED:** both NERAMAC and NAFED currently sell tea branded under their names by sourcing it. They operate through multiple sales channels – own website, other marketplace, retail outlets at key locations, tie-ups with other brands (e.g. NAFED with Mother Dairy) to sell such products. Further, NAFED is already collaborating for development of specific processed food items under the PMFME scheme as well across multiple state.

- **Launch of dedicated brand from the region:** development of a tea brand under the aegis of NERAMAC / NAFED focused on STGs can be done by these bodies at respective state level. Focus can be more on newer tea varieties such as orthodox, green, white, oolong tea in different packaging formats (packets and tea bags)
- **Sourcing support:** procurement of tea from SHGs and FPOs in the region to support them achieve scale and provide constant source of supply for such branded products. This can further be augmented by processing being done at the identified Integrated Tea Promotion Facilities proposed across key districts to provide both with a ready sales and source for tea.
- **Training to collectives:** SHGs and FPOs supplying under such brand to be provided training by NERAMAC and NAFED on production practices, quality, processing, packaging and other aspects to have consistent quality and become scalable. Proposed network of TPs across the districts can be leveraged for it.
- **Promotion leveraging online marketing:** Online marketplace has provided an opportunity for players to sell products (such as value-added teas, organic teas etc.) from any corner of the country to a customer in another corner. Online data reflects the emergence of multiple home-grown brands etc. over the years. Globally, nearly 10% of all sales of tea in 2022 had been carried out by online means (as per Statista). In fact, online sales are expected to be the fastest growing segment for packet tea players in India as well as indicated earlier with many large and new age startups adoption this route to reach directly to customer and at a faster pace. This provides a unique opportunity for STGs to tap into. While e-commerce platforms can assist sales, awareness of their benefits is lower amongst the small tea growers. They may find it difficult to navigate the intricacies of these platforms in terms of product cataloguing and order fulfilment. Further, these charge a sizeable commission ('referral fees') for their usage, ranging at 8-15% of the sales generated. Hence, hand-holding of small tea growers is needed to help them to become aware of the possibilities of online sales, as well as the use the e-commerce platforms. Following recommendations may be adopted to support with the same:
 - **Support for web-portal development:** going beyond online marketplaces like Amazon, Flipkart, Bigbasket, etc. many new age players are developing their own website for catering to the customer directly allowing for improved customization and pricing. Development of such a portal which would have payment option integrated would require at a minimum about INR 5 lakhs as one-time cost excluding periodic maintenance. To encourage and support small growers their collectives (SHGs/FPOs/FPCs) may be provided a one-time support towards development of the portal. Cost for such may be borne 60:40 between the Tea Board India and the respective State Government
 - **Listing on third-party online marketing platforms:** reimbursement of expenses towards online registration on different marketplaces and for any branding activities may be provided to SHGs and FPOs. A one-time cost of INR 25,000 per STG and INR 2 lakh per SHG/FPO/FPC may be provided towards it to assist in take product pictures, listing, promotion, etc.
 - **Create Awareness and Facilitate Listing on Central Government Portals:** Along with the subsidy it is important to promote awareness of different marketplaces and new platforms like Open Network for Digital Commerce (ONDC) to facilitate participation. These platforms charge much lesser charge and facilitate in reaching to a wide audience.

On similar lines the Government e-Market (GEM) portal is a 100 % Government-owned & National Public Procurement Portal. GeM is dedicated e-market for different goods and services that provides a complete end-to-end contactless, cashless and paperless procurement system. The portal is marked by three pillars: openness, fairness and inclusiveness. At mid-August 2024, there were 11,382 product categories and 327 service categories being sold over the GEM portal. The GEM portal has zero (0) registration fees and other many advantages including minimal commission (annual charge and transaction charge). Government purchases are being now routed through the GEM portal. In fact, due to these factors, 194 products were listed for 'Black Tea' meeting the specifications of IS 3633 (as mid-August 2024). In view of the above advantages of the GEM portal, especially to reach the Government sales, awareness needs to be created among STGs needs to be created and collectives need to be assisted in listing on such websites

- **Develop understanding of e-commerce platforms, online marketing and basic technology usage (smartphones / computer) through training program:**

The sale of tea through online platforms will require some steps to be carried out; such as (a) registration (which will require PAN Card, GST Registration, and active Bank Account), (b) Listing of the Products after FSSAI licensing; (c) choice of the delivery channel to reach the customer like self- delivery, or delivery by the ecommerce platform such as Fulfilment by Amazon (FBA); and (d) finalisation of payment cycle by the ecommerce platform. It may be noted that due to commission to the ecommerce platform, delivery charges, and GST on the above; the STG may receive less than 75% of the sales realizations received online by the platform. All costs (including GST on tea) have to be borne out of the above net realization (below 75% of the customer's rupee).

Hence it is important to provide training on such aspects to STGs and their collectives through the proposed ITPFs and tea-preneurs being promoted across the clusters. Training module in local language needs to be developed for imparting such training in a lucid manner. To promote faster dissemination of such training an online module can also be explored.

Given the presence of multiple platforms already a dedicated platform for such sales is not recommended. Instead understanding about prominent platforms for ecommerce sale of teas may be made aware to STGs to develop an understanding of different type of online marketplaces like Amazon, Flipkart (part of Wal-Mart), India MART, ONDC, GEM etc. The STGs can analyse the terms of the above (or similar) platforms, including the sales commission charged by them, and decide about their choice of the platform to be used.

- **Promote linkage with startups:** state government can assist in facilitating dialogues between new players in tea retailing to assist them in connecting with large FPOs/FPCs in tea in the region for steady supply of quality tea. e.g. **Cuppa trade is a B2B platform engaged in connecting tea buyers globally with sellers.** Collectives with scale may be encouraged to participate on such platforms. Similarly, tie-up with new age tea retailers (e.g Chaayos, Chai Point, etc.) may be encouraged for supplying directly to such players by promoting right quality
- **Promotion support in line with Production Linked Incentive Scheme:** providing subsidy for investment in marketing and branding and infrastructure development for value addition by FPOs/FPCs may be provided to select collectives. Applications received for round the year promotion as indicated earlier in promotion recommendation may be selected specifically for providing such subsidy.
- **Establishing a common portal for FPOs/FPCs:** in an earlier recommendation on financing promotion of a common platform for financing support to FPOs has been recommended. The same portal may be augmented to support buying-selling among collectives of STGs. This will enable collectives to come together and trade among themselves. Collectives engaged primarily in green leaf collection or processing (but not retailing) or having excess produce may sell it another collective which has high demand for green leaves /primary processed tea product for its own packaging and other needs.

(b) Support for market linkages: Apart from domestic market it is important to support STGs in promotion in export markets specifically which has potential

- **Subsidize costs for sending samples:** given the small sample size STGs are facing high costs for sending such samples to different parts of the country. To facilitate the same for domestic couriers upto 50% of the cost may be subsidized for sending samples by SHGs and FPOs upto a maximum of Rs. 5000 in a year. For export couriers upto 75% of the cost may be subsidized for sending samples by SHGs and FPOs upto a maximum of Rs. 25,000 in a year.
- **Extend support under existing agri linkage schemes:** Tea is notably excluded from essential agricultural transportation initiatives like the Kisan Rail and Krishi Udan Scheme. Despite addressing various perishable goods, the Kisan Rail initiative does not include tea, and the Operation Greens Scheme's subsidies for fruits and vegetables transportation similarly exclude it. The Krishi Udan Scheme, designed for cost-effective air transportation of agricultural products, also overlooks tea, leaving a significant gap in support for the sector, especially in remote and hilly regions. Benefits under these schemes may be extended to STGs and FPOs in NER to support them in accessing markets at affordable rate

(c) Support for Overseas Promotion: Apart from domestic market it is important to support STGs in promotion in export markets specifically which has potential for better realization and where STGs despite making efforts continue to struggle due to low understanding of markets and norms.

- **Prioritize support for export to specific markets:** based on the type of tea to be exported different markets can be prioritized for tea exports. List of select markets where focus can be made have been tabulated below:

Type of Tea	Existing Markets	New and Emerging Markets
CTC tea	<ul style="list-style-type: none"> • Russia • China • UK • Saudi Arabia 	<ul style="list-style-type: none"> • Singapore • Canada •
Orthodox and Other Specialty Varieties	<ul style="list-style-type: none"> • Iran • UAE • USA • UK • Germany • Iraq • Poland 	<ul style="list-style-type: none"> • Turkey • Taiwan • Japan • Netherlands

To prioritize above markets following support needs to be provided:

- **Liaison with Industry Bodies/ Indian Embassies in such countries:** conduct discussions and dialogues with industry bodies / Indian embassies in such markets to understand product requirement in detail and how can Indian STG tea be positioned
- **Formulation of guides for export to specific markets:** formulate detailed guides on export requirement and norms to specific countries covering:
 - Information about the countries covering market, product type, etc.
 - Packaging and labelling norms
 - Quality requirements, standards and certifications
 - Financing requirements
- **Facilitation desks at clusters recommended:** across the key clusters defined earlier, facilitation desks to assist possible STGs or their collectives in meeting various export related queries to be established
- **Showcasing STG tea in global trade shows/events:** provide dedicated subsidy to SHGs/FPOs/individual STGs for participating in global trade fairs and events based on tea.
- **Certification process:** clusters recommended earlier in the recommendation to have certification facilities for products to be exported from the region. This would assist in compliance with norms and reduction of rejection chances at the outset
- **Finance and risk management:** many of the STGs and FPOs engaged in export face challenge in the form of lack of adequate assistance towards financing such activities and management of risks associated with exports. To assist with the same insurance support for managing export risks can be extended to SHGs and FPOs in tea. Further benefit in line with the PLI scheme of the GoI, wherein subsidy for achieving targeted revenue growth and investments is provided to large players can be introduced for SHGs and FPOs in tea.
- **Conduct promotional events at key locations:** state government can support in conducting promotional events in high footfall locations (large hypermarket chains, key localities, etc.) in key export markets for the SHG/FPO branded tea. Priority can be provided to players identified under the annual award/recognition program being conducted for domestic promotion. The kiosks developed under such events need to have an attractive display with clear highlight of the product origin, benefits, etc.
- **Support tie-ups with new age tea players:** tea industry is witnessing emergence of new players (and even select existing players) who are focusing on direct sourcing from tea estates / factories and branding /retailing such products. State governments can support in connecting such players who are primarily focused on sourcing (and do not own plantations) for sourcing from key SHGs/FPOs with scale. Training on understanding of requirements of such players can be provided to identified SHGs/FPOs

Recommendation- 9: Exploring Convergences with existing Government Schemes

It is recommended that the Government of India may be moved for extending benefits to tea growers as has been already granted to farmers cultivating other crops, including horticultural crops, through the Ministry of Agriculture and Farmers' Welfare. Specific schemes for extension to STGs and Co-operatives under the same has been tabulated below followed by details on specific schemes:

Phase	Scheme to be extended
Production	<ul style="list-style-type: none"> • Pradhan Mantri Fasal Bima Yojana (PMFBY) • Kisan Credit Card • Pradhan Mantri Krishi Sinchaye Yojna (PMKSY)
Processing and Value addition	<ul style="list-style-type: none"> • PM-Kisan Sampada Yojana • Agriculture Infrastructure Fund Scheme • PM Pradhan Mantri Kisan Urja Surakshaevam Utthaan Mahabhiyan Yojana (PM-KUSUM) • Sub-Mission on Agricultural Mechanization (SMAM)
Promotion and Linkage	<ul style="list-style-type: none"> • Krishi Udan and Kisan Rail • PM Formalization of Micro Food Processing Enterprises (PM-FME) Scheme
Other Aspects	<ul style="list-style-type: none"> • PM-Kisan Samman Nidhi • Innovation and Agri- entrepreneurship Development programme • KISAN Drones

Apart from above other specific aspects where schemes may be introduced to support SHGs in value addition in a competitive manner include:

- **Subsidize energy costs:** further in conjunction with respective state governments, the energy costs (power and gas) for SHGs and FPOs / FPCs may be subsidized to improve their competitiveness. Priority in gas lines with no deposit requirement may be extended to FPOs / FPCs.

1.5 ACTION PLAN FOR VALUE ADDITION TO TEA WITH REFERENCE TO SMALL GROWERS

The study recommendations have covered the necessary interventions for the short term (up to 2 years hence) and for the medium term (for 5 years hence). The short term corresponds to the remaining years of the extant scheme of Tea Board India for Tea Development and Promotion, while the medium term will correspond to the period under the next (16th) Finance Commission award period. A summarization of the action plan mapped to key stakeholders have been provided subsequently.

Action Point	Involved Stakeholders			
	Tea Board India	State Government	STGs / SHGs / FPOs	Others
Theme: Promotion of Dedicated Clusters by Integrated Tea Promotion Facility				
Short term Action Points (FY 2024-25 & FY 2025-26)				
• Target the formation of 2 ITPFs and 60 TPs. Alignment with the existing schemes for supporting establishment of the facilities	YES	YES	YES	Industry associations and investors
• Identification of locations for development of the proposed ITPF	YES	YES	---	Industry associations and investors
• Partner identification for development of the ITPFs	YES	YES	YES	Industry associations and investors
• Awareness among SHGs and FPOs on the proposed model	YES	YES	---	Implementing Agency CBBO
• Ground-work for establishing one Food Testing Laboratory in Eastern Assam to undertake quality testing of teas as per FSSAI norms	YES	YES	YES	FSSAI Equipment Suppliers
• Ground work for establishing Demonstration Solar Power plant to serve a STG cluster	YES	YES	YES	APDCL Equipment Suppliers
Medium term Action Points (1st April 2026-31st March 2031)				
• Target the formation of 4 ITPFs and 40 TPs. Alignment with the existing schemes for supporting establishment of the facilities	YES	YES	YES	Industry associations and investors
• Partner identification for development of the ITPFs	YES	YES	YES	Industry associations and investors
• Awareness among SHGs and FPOs on the proposed model	YES	YES	---	Implementing Agency CBBO
• Complete work on establishing one Food Testing Laboratory in Eastern Assam to undertake quality testing of teas as per FSSAI norms	YES	YES	YES	FSSAI Equipment Suppliers
• Establishing Demonstration Solar Power plant to serve a STG cluster	YES	YES	YES	APDCL Equipment Suppliers
Theme: Building Scale				
Short term Action Points (FY 2024-25 & FY 2025-26)				
• Target the formation of about 300 SHGs and 100 FPOs (being about 37.5% and 30% of the national target of SHGs and FPOs planned to be formed in India under revised scheme outlay)	YES	YES	YES	Implementing Agency CBBO
• Support to small growers / members of SHGs and FPOs for purchase of simple hand tools (plucking shears, brush cutters, power sprayer, pruning machine etc.) as required	YES	---	YES	Machinery / Equipment Suppliers
• Support to SHGs / FPOs for common infrastructure (weighing scales, mechanical harvesters, collection crates and nylon bags, leaf collection shed, godown, leaf collection vehicle, soil testing kit etc.)	YES	---	YES	Machinery / Equipment Suppliers
• Special registration drives to cover small tea growers in districts and states with low coverage, provision of Smart ID cards to all small tea growers	YES	YES	YES	STG Associations

Action Point	Involved Stakeholders			
	Tea Board India	State Government	STGs / SHGs / FPOs	Others
<ul style="list-style-type: none"> Review of NOC system in Arunachal Pradesh to formulate outcome-based solution to issues of registration of STGs in the state 	YES	Govt. Of Arunachal Pradesh	YES	Ministry of Environment Forest & Climate Change Big Growers
<ul style="list-style-type: none"> Awareness camps in districts and states with low awareness about benefits of SHGs and FPOs 	YES	YES (District Administration)	YES	Implementing Agency CBBO / Associations
<ul style="list-style-type: none"> Improve governance and management of SHGs/FPOs/FPCs 	YES	YES	YES	Implementing Agency CBBO / Associations
<ul style="list-style-type: none"> Improved credit access by promoting additional financial instruments and establishment of an online platform 	YES	YES	YES	Financial institutions
<ul style="list-style-type: none"> Putting in place a system of Implementing Agency and Cluster Based Business Organizations (CBBOs) for supporting formation of SHGs and FPOs of tea producers with targets of SHGs / FPOs formed and activities carried out for address lacunae that may arise in these bodies regarding matters like membership and fee payments, financial weaknesses, management problems, weakness in planning and implementation, issues in credit and marketing etc. 	YES	---	YES	Implementing Agency CBBO Training Agencies
Medium term Action Points (1st April 2026-31st March 2031)				
<ul style="list-style-type: none"> Extend support to all uncovered SHGs and FPOs formed in the FY 2024-25 and FY 2025-26 for field mechanization, leaf carriage vehicles, leaf sheds, godowns and other infrastructure 	YES	---	YES	Machinery / Equipment Suppliers
<ul style="list-style-type: none"> Conclusion of special registration drives and provision of Smart ID cards (first two years) 	YES	YES	YES	STG Associations
<ul style="list-style-type: none"> Continuation of system of Implementing Agency and CBBOs for supporting recently formed SHGs and FPOs with activities carried out for address lacunae that may arise in these bodies 	YES	---	YES	Implementing Agency CBBO Training Agencies Consultants
<ul style="list-style-type: none"> Mid-Term Review of performance of SHGs and FPOs, as well as IA and CBBOs (if formed) by 3rd Party 	YES	---	YES	Implementing Agency CBBO Consultants
Theme: Establishment of Tea Processing Units				
Short term Action Points (FY 2024-25 & FY 2025-26)				
<ul style="list-style-type: none"> Survey of existing SHGs and FPOs to evaluate their readiness to establish mini-factories / tea factories for CTC tea and orthodox tea (small scale), based on assessment of existing managerial, operational, technical and financial readiness 	YES	---	YES	Implementing Agency CBBO
<ul style="list-style-type: none"> Short-list (at most 40) existing SHGs and FPOs for establishing mini-factories and factories 	YES	---	---	YES
<ul style="list-style-type: none"> Establish 4-5 mini tea factories under Agriculture Infrastructure Fund, with focus upon high quality tea 	YES	YES	YES	Banks Factory Consultants
<ul style="list-style-type: none"> Explore the readiness of new SHGs and FPOs to take up mini factories based on managerial, operational, technical and financial status of members 	YES	---	YES	Implementing Agency CBBO
<ul style="list-style-type: none"> Augmentation of support under the TBI scheme for development of mini- tea factories and support for individual STGs 	YES	---	---	---
<ul style="list-style-type: none"> Support towards enhancing capacity of local equipment manufacturers 	YES	YES	---	Banks
<ul style="list-style-type: none"> Exemption in customs duty for import of machinery 	YES	---	---	Central Government
Medium term Action Points (1st April 2026-31st March 2031)				

Action Point	Involved Stakeholders			
	Tea Board India	State Government	STGs / SHGs / FPOs	Others
<ul style="list-style-type: none"> Establish 15-20 mini-tea factories, with focus upon high quality tea (including orthodox tea and organic / 'nature grown' tea), apart from a few (2-3) larger factories (exceeding 500 kg of made tea per day) 	YES	YES	YES	Banks Factory Consultants
Theme: Value-added Teas & Tea Products				
Short Medium term Action Points				
<ul style="list-style-type: none"> Timely disbursement of support for organic tea conversion 	YES	YES	---	---
<ul style="list-style-type: none"> Include provision for bio-fertilizers under PM-PRANAM scheme 	YES	---	---	---
<ul style="list-style-type: none"> Approve addition of tea certification agency in Assam and make TRA nodal agency for certification in the region 	YES	---	---	Tea Research Association (TRA)
<ul style="list-style-type: none"> Engage with technical bodies (e.g. NECTAR - North East Center for Technology Application and Reach) for development of standardized technology for specialty tea manufacture and tea waste management 	YES	YES	YES	NECTAR, TRA
<ul style="list-style-type: none"> Establishment of State Specific TDCs (Technology Demonstration Centre) to develop awareness among local people about the know-how of various technologies for tea value addition and their useful applications 	YES	YES	YES	NECTAR, TRA
<ul style="list-style-type: none"> Define guidelines for tea waste management for end-user industries 	YES	---	YES	Tea Research Association (TRA)
<ul style="list-style-type: none"> Include state specific benefit to subsidize transport of tea waste and incentive to end-user industries in the region for procurement 	---	YES	YES	---
Theme: Capacity Building				
Short term Action Points (FY 2024-25 & FY 2025-26)				
<ul style="list-style-type: none"> Development of Master Trainer (MTs) module for training of trainers under the program and website for ready access of training material by all stakeholders 	YES	---	YES	Trainers / Training Agencies / Tea Research Association (TRA) / Various Consultants
<ul style="list-style-type: none"> Assess gap areas in the knowledge and practices of small tea growers and design 'hands-on' training programmes (field based) to address these – covering all categories of growers, factory hands, managerial persons etc. 	YES	---	YES	Trainers / Training Agencies / Tea Research Association (TRA) / Various Consultants
<ul style="list-style-type: none"> Conduct training of MTs (upto 10) and of Field Trainers (upto 80) for providing training of SHGs and FPOs 	YES	---	---	Training Agencies
<ul style="list-style-type: none"> Capacity Building of office bearers and members of SHGs and FPOs (especially formed during the above years) 	YES	---	YES	Trainers / Training Agencies
<ul style="list-style-type: none"> Capacity Building of FPO executives and factory operators, including in successful factory management and cost control (to supplement the support to establish tea factories) 	YES	---	YES	Trainers / Training Agencies Various Consultants
<ul style="list-style-type: none"> Mandatory training for issuance of QR cards and Mini-Tea Factory Setup 	YES	---	YES	
Medium term Action Points (1st April 2026-31st March 2031)				
<ul style="list-style-type: none"> Capacity building to be made an integral part of any revised or extended scheme for the development and promotion of tea, including value-added teas; and also for pertinent schemes of the State Government 	YES	YES	YES	Trainers / Training Agencies
<ul style="list-style-type: none"> Revise allocations for training and workshop programmes upwards from the present norms of the Tea Board India 	YES	YES	---	BG / STG Associations

Action Point	Involved Stakeholders			
	Tea Board India	State Government	STGs / SHGs / FPOs	Others
<ul style="list-style-type: none"> Devise need-based training and other capacity building exercises (hands-on and field based) that can be inter-woven into any exercise aimed at (i) federating small tea growers into SHGs and FPOs, (ii) establishing tea-processing units by FPOs and SHGs, and (iii) exploring value-addition through specialty and quality teas 	YES	---	YES	Trainers / Training Agencies
Theme: Formalization of Agents				
Short term Action Points (FY 2024-25 & FY 2025-26)				
<ul style="list-style-type: none"> Conduct awareness campaigns among STGs, SHGs/FPOs, agents and other stakeholders on the benefits of the program 	YES	---	YES	BG/ STG Associations / Implementing Agency CBBO
<ul style="list-style-type: none"> Design of benefits for agents onboarded in terms of support for vehicle, equipment, crates, working capital, etc. to be included in schemes of the TBI 	YES	---	YES	---
<ul style="list-style-type: none"> Conducting special registration drives for agent onboarding 	YES	YES	YES	BG/ STG Associations
Medium term Action Points (1st April 2026-31st March 2031)				
<ul style="list-style-type: none"> Conduct awareness campaigns among STGs, SHGs/FPOs, agents and other stakeholders on the benefits of the program 	YES	---	YES	BG/ STG Associations / Implementing Agency CBBO
<ul style="list-style-type: none"> Conducting special registration drives for agent onboarding 	YES	YES	YES	BG/ STG Associations
<ul style="list-style-type: none"> Limitation on non-registered agent movement 	YES	YES	YES	BG/ STG Associations
Theme: Appropriate Technologies				
Short term Action Points (FY 2024-25 & FY 2025-26)				
<ul style="list-style-type: none"> Identify appropriate technologies (including those of mechanical, electrical, chemical, electronic, biotechnological, and other origins) needed for the improved cultivation and processing of teas, and conversion to value-added forms 	YES	---	YES	TRA, NECTAR, Various Consultants BG / STG Associations
<ul style="list-style-type: none"> R&D towards development of such technologies 	YES	---	YES	TRA, NECTAR, Various Consultants BG / STG Associations
<ul style="list-style-type: none"> Identify reliable sources for such technologies 	YES	---	YES	TRA Various Consultants Machinery / Equipment Suppliers
<ul style="list-style-type: none"> Identify some gardens and factories to serve as 'demonstration gardens and factories' where appropriate technologies can be deployed and shown to growers and others for facilitating technology adoption 	YES	---	YES	Various Consultants Machinery / Equipment Suppliers
<ul style="list-style-type: none"> Explore technologies like precision farming, drone surveillance, traceability and use of block-chain etc. (prioritized by Govt. of India for support) regarding utility in local conditions and deploy if found feasible 	YES	---	YES	TRA Machinery / Equipment Suppliers
<ul style="list-style-type: none"> Design program for and support establishment of Custom Hiring Centers (CHCs) 	YES	---	---	Registered Leaf Agents
Medium term Action Points (1st April 2026-31st March 2031)				
<ul style="list-style-type: none"> Develop and deploy technologies internally with stakeholders, if reliable source is not available 	YES	---	YES	Various Consultants Machinery / Equipment Suppliers IITs / NITs etc.

Action Point	Involved Stakeholders			
	Tea Board India	State Government	STGs / SHGs / FPOs	Others
<ul style="list-style-type: none"> Establish some 'demonstration gardens and factories' to serve as show-cases for successful application of appropriate technologies 	YES	---	YES	Big Growers / EF Machinery / Equipment Suppliers
<ul style="list-style-type: none"> Support establishment of Custom Hiring Centers (CHCs) 	YES	---	---	Registered Leaf Agents
Theme: Market Development and Promotion				
Short term Action Points (FY 2024-25 & FY 2025-26)				
<ul style="list-style-type: none"> Establishment of an award program to identify STGs/ SHGs/FPOs/FPCs for round the year marketing support at high footfall locations in the state 	YES	YES	YES	Implementing Agency
<ul style="list-style-type: none"> Development of an online platform for SHGs/FPOs/FPCs to trade 	YES	---	YES	Implementing Agency
<ul style="list-style-type: none"> Establishment of a scheme to subsidize courier charges 	---	YES	YES	Implementing Agency
<ul style="list-style-type: none"> Launch of promotion scheme component in line with PLI scheme for food processing 	YES	YES	YES	Implementing Agency
<ul style="list-style-type: none"> Assess the market development activities needed to create market for value-added teas produced by SHGs and FPOs – both in domestic and select export markets 	YES	---	---	Consultants BG / STG Associations
<ul style="list-style-type: none"> Implement select market development activities with funding available from GoI under next two years for market development for increased exports and domestic consumption 	YES	---	YES	Consultants BG / STG Associations
Medium term Action Points (1st April 2026-31st March 2031)				
<ul style="list-style-type: none"> Evaluate the effectiveness of measures for market development activities taken up in 2024-26 for better designing of market development initiatives in 16th FC period 	YES	---	---	Consultants BG / STG Associations
<ul style="list-style-type: none"> Implement select market development activities addressed at domestic and export markets to benefit SHGs and FPOs established under tea development and promotion scheme of 2024-26 	YES	---	YES	Consultants BG / STG Associations
Theme: Convergence with Government Schemes				
Short term Action Points (FY 2024-25 & FY 2025-26)				
<ul style="list-style-type: none"> Awareness camps in districts and states with low awareness about benefits of Tea Board India and State Government schemes 	YES	YES	YES	IA / CBBOs STG Associations
<ul style="list-style-type: none"> Move the Government of India for extending benefits to tea growers as has been already granted to farmers cultivating other crops, including horticultural crops, through the Ministry of Agriculture and Farmers' Welfare. 	YES	YES	---	STG Associations
Medium term Action Points (1st April 2026-31st March 2031)				
<ul style="list-style-type: none"> Introduce Government scheme for extending crop insurance, credit scheme with subvented interest rates and credit guarantees, and minimum prices for small growers of tea and other plantation crops; if benefits under present schemes cannot be extended 	YES	YES	YES	Banks Insurance Agencies