



REIMAGINING THE TEA INDUSTRY IN INDIA

AUGUST 2023



FOREWORD FROM THE BENGAL CHAMBER

Tea is the second most consumed beverage globally after water and thus the importance of this industry in India cannot be undermined given the country produces around 1350 mn kgs of tea annually contributing to 21% of global production. Over 80% of this production is consumed within the domestic market. India originally was not a tea drinking nation. Most of the tea produced within the country used to be exported in the pre independence era and used to be a major foreign exchange earning crop for the country.

With passage of time the industry has seen a marked change over the last seven decades as the production went up by almost 4 times and along with that the domestic consumption also grew in tandem aided by various initiatives taken by the Tea Board in making tea a popular beverage, innovative marketing campaigns by leading packeteers, and a host of favorable demographic factors. The large domestic consumption market and its growth prospects led several producers to focus on increasing production to cater to the growing local market. This also led to a skew in the product mix. While India predominantly used to be a producer of orthodox tea in 1950-60s, currently more than 90% of the production of the CTC variant.

This consistent growth in production from the organized segment has been possible largely due to the various plantation development activities carried out by the organized segment supplemented by favorable government policies and schemes. However, post 90s the industry witnessed a sudden spurt of growth from small tea growers' segment (STG), many of whom converted from paddy and other agricultural crops to tea because of the relatively higher profitability, availability of harvest almost throughout the year. This accelerated the production supply of tea in India in a short span of time while the offtake in exports did not happen at a commensurate pace, leading to the dependence on the Indian tea industry overtly on the domestic consumption market.

Rapid growth of STGs brought with it a fair share of challenges. Many of them lack access to good agriculture practices which affect the quality of tea produced. Moreover, the STGs, being mostly small and marginal in nature, have fragmented land holdings and hence lack scale. They overtly rely on transporters or leaf agents for carrying green leaves to factories. In the absence of a regulated leaf collection mechanism traceability is a challenge in Indian tea industry. The emergence of STGs also led to the establishment of bought leaf factories (who do not have their estates or gardens). There is wide divergence in the cost of production of the organized segment vis- vis that of STGs and BLFs combined, as the former has to comply with a host of regulations and oblige with various social welfare norms. However, this is not reflected in the sale price average realization in the auction. So, this has put the viability of several tea estates at stake. Lot of plantation owners who relied on auction and exports of bulk tea are re-inventing the business model in the form of forward integration either by creating their own brands, value addition, innovation or moving into services.

As the industry celebrates 200 years, it is high time to take cognizance of some of the structural issues which are affecting the industry. Given the capital-intensive nature of business it is imperative to focus on plantation development for both the organized segment and STGs, promote research and development to develop affordable machines and farm equipment which would help address the labor shortage issues, climate change and adoption of digital interventions that can potentially provide the much-needed boost to improve productivity across the supply chain. Being a widely consumed drink with high penetration, it is important to ensure the quality of tea produced. Upgradation of infrastructure of existing laboratories might be the need of the hour. Last but not the least there has to be a consistent effort to promote Indian tea in the global markets and create some champion brands and at the same time a concerted effort by the industry and the Government in doing a generic promotion would give a boost to tea consumption in the country and maintain a healthy supply demand semblance which can elevate the tea prices, and pave the way for a sustainable tea industry in the future.



Mr. Jayanta Chakraborty

Chairperson - Agriculture & Rural Development Committee,
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FOREWORD FROM BDO INDIA LLP

The Indian tea industry plays a pivotal role from a socio-economic standpoint in some of the remotest parts of the country where there are limited alternate opportunities for economic development. The history of the tea industry in India dates back to 1823 when it was discovered in Assam by a British planter named Robert Bruce. Since then, the industry has evolved significantly, impacting the livelihoods of over five million people directly and indirectly.

While tea traditionally had been the forte of the big estates and plantation owners (the organised segment), over time, the industry witnessed a steady growth of the Small Tea Growers (STG) segment (typically having landholding sizes less than 10.12 ha). Typically, the green tea leaves from the estate gardens are processed in the estate factories and subsequently packeted and sold through auction and private channels in the domestic and export markets. However, the advent of the STGs resulted in a parallel supply chain in addition to the one which existed for the organised segment. This led to the proliferation of leaf agents and Bought Leaf Factories (BLFs) that typically source leaves from STGs mostly through agents. There is a dual tea marketing system in India where 50% of made tea produced is required to be sold through auctions and the rest through private channels. Currently, the tea industry has close to 1600 gardens, 1600 factories out of which 850 belong to the estates and 750 to the BLFs. There are close to 2.3 lakh small growers, 6000+ registered brokers and seven auction centres.

While India is the second largest producer of tea, and in fact the largest producer of black tea in the world, it is the fourth largest exporter globally. There are various reasons which have led to the stagnation of exports of tea from India such as limited value addition, skew in the product mix, limited efforts to diversify the export markets, among others. There are various other structural issues which have adversely affected the competitiveness of the tea industry such as the declining productivity from the organised segment primarily because of the ageing bushes, non-availability of skilled manpower which affects quality and results in loss in production, incommensurate growth in the auction prices as compared to that of the cost of production which has put a question mark on the financial viability of the gardens, limited access to training around Good Agricultural Practices (GAPs) and limited product innovation.

The consumption patterns of tea have witnessed a marked change over the years. While India used to export around 60% of the tea produced in the country in the 1950s and 1960s, currently around 85% of the country's production is consumed in the domestic markets. India enjoys its position as the second-largest tea-consuming market globally with an estimated annual consumption of 1100 million kgs. However, the per capita consumption of the country is quite low compared to some of the traditional tea-drinking nations globally. There has been a marked shift towards the consumption of packet tea which has led to the emergence of several regional brands. With the rise in the middle-class group and disposable income in the hands of the consumers, the preference for packets, various forms of premium, health and value-added products are on the rise. To tap into this opportunity, packeteers are also expanding their portfolio in tea and focusing on new models to reach customers more effectively.

The Indian tea industry is at a cusp as both the production and consumption landscape are evolving. The BCC&I-BDO India report "Reimagining the Tea Industry in India @ 100: Strategic Initiatives for the AMRIT Kaal" is aimed at addressing this change, as it focuses on the issues that affect the sector and comes up with pragmatic implementable solutions that can make the industry future-ready and maintain its competitiveness in the global context. The suggestions encompass specific solutions for addressing plantation development, given the declining productivity, shrinking investments, issues of skilled labour, restoration of soil health, need for climate change management and technology adoption. It also covers requirements around research and modernisation to make the industry more competitive and resilient. Most importantly, the report covers initiatives to support market promotion both in domestic and export markets.

I express my sincere thanks to The Bengal Chamber of Commerce & Industry for creating this platform and to the industry stakeholders for their contributions to formulating this report. I hope this Knowledge Paper will aid in developing a sustainable tea industry in India.



Mr. Soumyak Biswas

Partner, Management Consulting
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ACRONYMS & ABBREVIATIONS

%	Percentage
BCC&I	Bengal Chamber of Commerce
BLF	Bought Leaf Factory
CAGR	Compounded Annual Growth Rate
CTC	Crush Tear Curl (type of black tea, as well as a machine used for its manufacture)
EF	Estate Factory
FO	Farmers' Organisation
FPC	Farmers' Producer Company
FPO	Farmers' Producer Organisation
FY	Financial Year
GAP	Good Agricultural Practice
GDP	Gross Domestic Product
GoI	Government of India
Ha	Hectare
INR	Indian Rupees
Kg	Kilogram
KVK	Krishi Vigyan Kendra
MoC	Ministry of Commerce
MT	Metric Tonne
NABARD	National Bank for Agriculture and Rural Development
NER	North-Eastern Region
NGO	Non-Governmental Organisation
NOC	No Objection Certificate
PSF	Price Sharing Formula
RTG	Regulated Tea Growers
SHG	Self Help Group
STG	Smallholder Tea Growers
TBI	Tea Board of India
US\$	United States Dollar

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OVERVIEW OF THE INDIAN TEA INDUSTRY



1. OVERVIEW OF THE INDIAN TEA INDUSTRY

1.1 OVERVIEW

Tea industry in India has immense significance in the national economy and it plays a pivotal role in directly providing livelihood opportunities to more than 1.5 million people and indirectly to over five million people who are by and large concentrated in some of the remotest parts of rural India where there are lack of suitable alternative opportunities of livelihood and income generation. The tea industry in India has a rich legacy as it completes 200 years (since its discovery in 1823) with commercial planting starting way back in 1834. The industry has witnessed a paradigm shift over the decades; however, the inherent strengths of the industry has enabled it to maintain its legacy and remain a formidable force in the global tea scenario.

The country is currently the second largest producer of tea in the world (only behind China) and accounts for 20% of global tea production. It is pertinent to mention that the country is the leading producer of black tea globally. The country is also the second largest consumer of tea globally, accounting for nearly 20% of global consumption. However, the tea exports from the country have remained stagnant over the years. Currently, India is the fourth largest exporter of tea globally, accounting for 10% of global tea exports. Despite this, the volume of tea exported annually from India averages around 220-240mn Kg, which makes it a significant foreign exchange earner for the country to the tune of INR 7000-8000 Cr.



Largest producer of Black Tea and 2nd Largest Producer of tea after China



4th Largest Exporter of Tea
~197 Mn kgs of tea exported in 2021-22



88% of the total households in India consume tea



1.5 million people employed directly in the industry



World's biggest packaged tea market

>85% of tea produced in India is consumed domestically

> 50% woman workforce involved in tea plantation



1567 tea estates produce 49% of tea in India

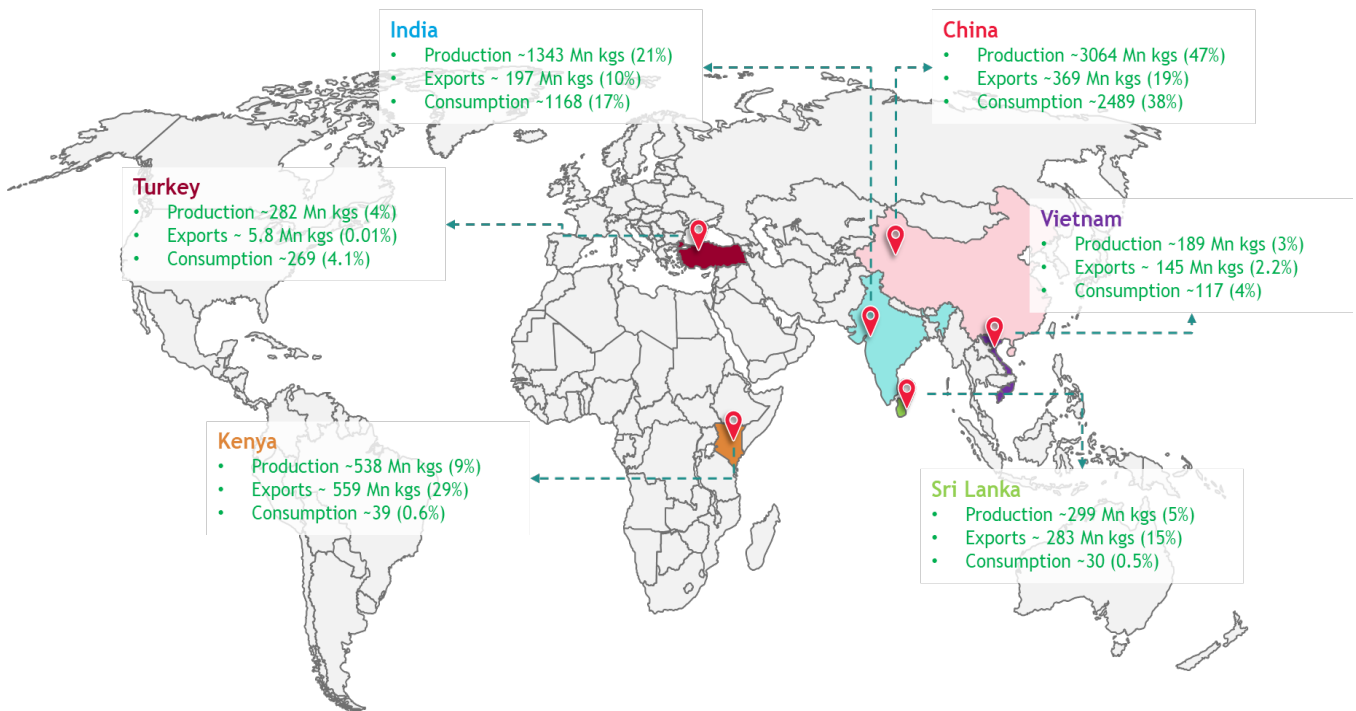


>50% of the annual tea production in India by STG (2.30 lakh Small Tea Growers associated)



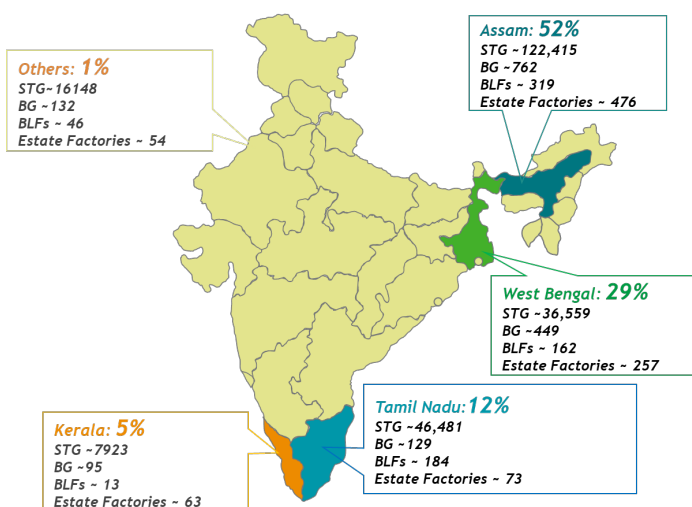
Relative position of India with respect to global counterparts is depicted below:

Figure 1: Annual tea production, exports and consumption by major tea producing countries (2021) | Source: ITC Bulletin, Tea Board Annual Report 2021-22



It is apparent from the above figures that the Indian tea industry is heavily dependent on the domestic market. While India's share in global tea exports is sizeable (10% of total global exports), there is a significant scope to improve the quantum (as it has remained largely stagnant) and value through suitable value addition which has been discussed in the subsequent sections.

Figure 2: Tea production landscape in India - Major states with percentage share of production | Source: Tea Board of India



Stakeholders in the Tea industry

- Around 1600 large tea garden/ estates
- Around 750+ Bought Leaf Factories (BLFs)
- Over 2 lakh Small Tea Growers (STGs)
- Tea auction centres at West Bengal (Kolkata, Jalpaiguri, Siliguri), Assam (Guwahati, Jorhat), South India (Cochin, Coonoor, Coimbatore)
- 3 Tea Research Institutions (TRA, UPASI & DTR&DC)
- More than 2000 tea exporters
- More than 6000 registered tea buyers

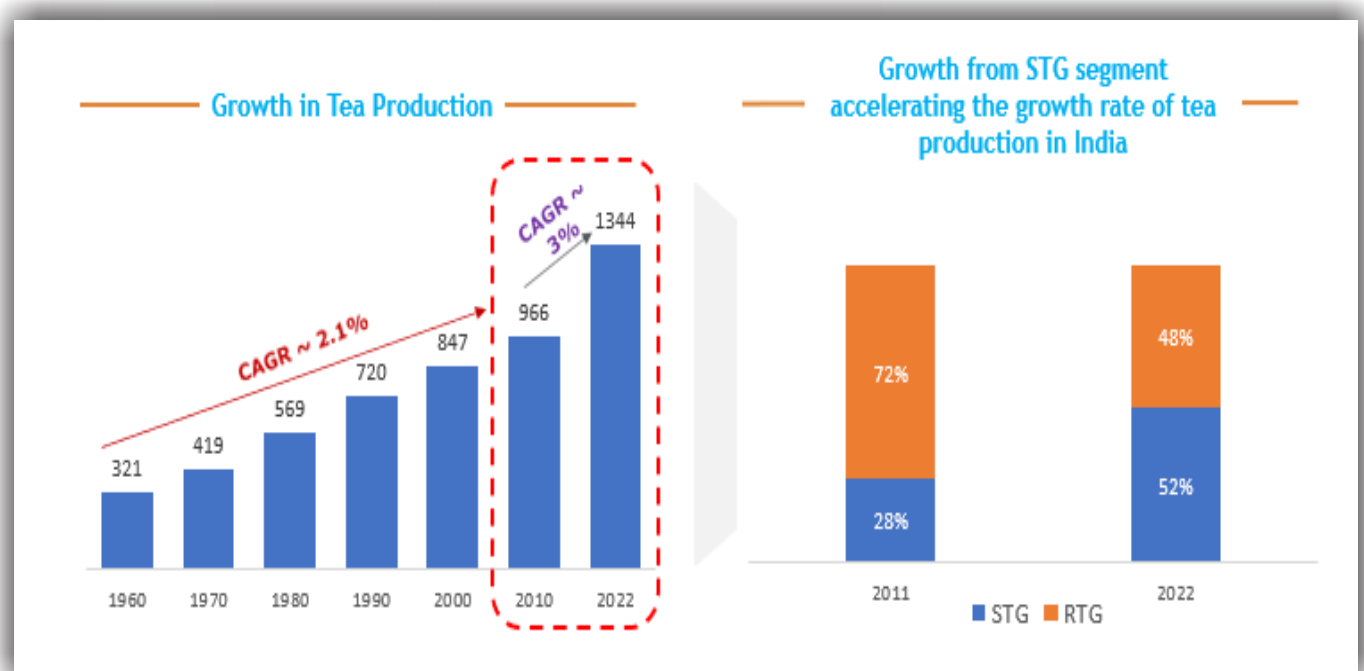
The Tea Board of India (TBI) under the aegis of the Ministry of Commerce (MoC), Government of India is the nodal body responsible for development, quality production, tea marketing and regulation of the tea industry.

Tea accounts for 0.3% of country's gross cropped area. Since tea cultivation needs specific agro climatic conditions, it is confined to certain parts of the country where such conducive conditions prevail. Assam, West Bengal, Tamil Nadu and Kerala are four major states which account for close to 98% of the total production in the country. Other states where tea is grown to a small extent include Karnataka, Tripura, Himachal Pradesh, Uttarakhand, Arunachal Pradesh, Manipur, Sikkim, Nagaland, Meghalaya, Mizoram, Bihar.

1.2. Transformation in the Tea Industry – Production

Tea industry in India has traditionally been under the organised sector, i.e., tea estates with or without factories and having area of more than 10-12 Ha. This segment is subsequently referred to as Regulated Tea Growers (RTGs) as they are required to comply with various regulations and are monitored by the TBI and other statutory bodies. However, with the passage of time (especially over the last two decades), the industry has witnessed a paradigm shift due to growth in production from STGs. As a result, the overall growth rate of 3% (in the last decade) in Indian tea production has been faster compared to the longer term decadal compounded annual growth rate of 2.1% from 1950-2010.

Figure 3: Growth in Tea production of India share of STGs production²



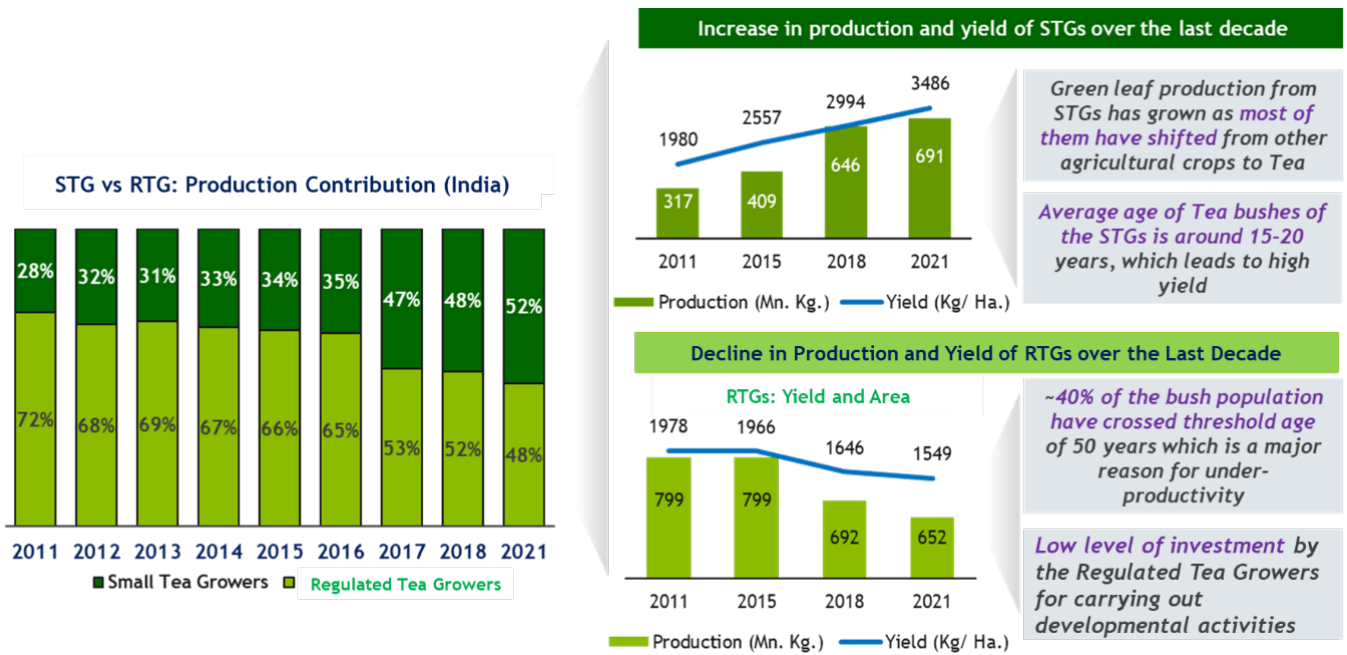
This is primarily attributable to the increase in the number of STGs in the tea industry and the subsequent expansion due to new tea areas coming under cultivation of STGs. One of the prime reasons for the emergence of STGs in India is the relatively higher margin in tea compared to other crops such as paddy. Moreover, unlike other crops, tea can be produced almost throughout the year (around 8-9 months in North India, and almost throughout the year in South India). This acted as a catalyst in shift towards tea from other crops as it does not require efforts for multiple cropping. These were supplemented by favourable Government Policies that encouraged STGs to plant trees especially in non-traditional areas which led to a spurt in growth from the segment.

¹Ministry of Agriculture Annual Report 21-22, Tea Board of India, BDO India Analysis

²Tea Board of India

While the new area under tea production played a role in increased production, there had been a significant improvement in productivity, i.e. yields from both RTGs and STGs. The average yield of tea in India has progressively increased from 1195 kg/ha (decadal average during 1965–74) to 2169 kg/ha during 2022. This has been achieved due to increased focus in plantation development activities like replantation, replacement planting, rejuvenation, etc. along with the use of modern equipment, inputs and productive climate resilient clones developed by TRA, UPASI and other tea focused research institutions. The TBI through its planned schemes has played a pivotal role in not only encouraging the growers to regularly undertake such development activities but also supporting research institutions in coming up with innovation to improve productivity and quality of tea.

Figure 4: Production and Productivity of RTGs vs STGs⁴



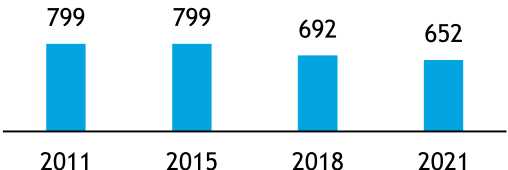
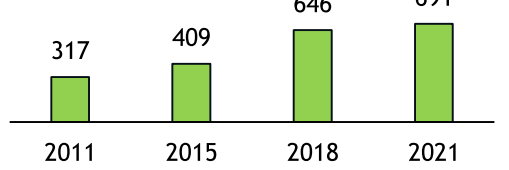
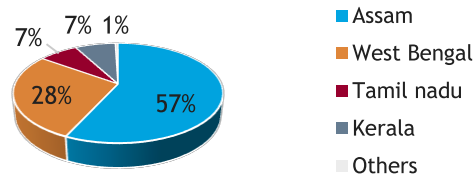
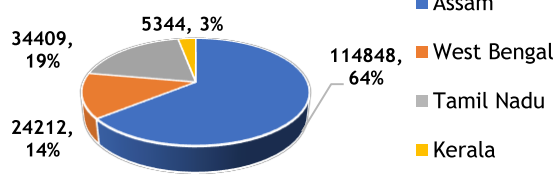
One of the primary reasons for higher productivity of STGs is the relatively younger tea bushes as compared to that of RTGs where close to 40% of the bush population has crossed the threshold productive age of 50 years. Another pertinent point to note which may be a point of concern for sustainable development of the industry is the limited awareness among STGs by and large about Good Agricultural Practices (GAP) which leads to indiscriminate use of inputs, fertilisers etc. While these may boost the productivity in the short run, as reflected in the yield from STGs, its long-term repercussions on the soil and bush health.

It is apparent that the phenomenal growth of STGs has led to the evolution of Bought Leaf Factories (BLFs) who typically source leaves from STGs, process the raw materials into made tea and sell them through either auction or private channels. Those BLFs are typical standalone leaf processing units without any captive tea gardens. Currently, there are over 750 BLFs with a combined installed capacity of ~650mn Kgs of made tea annually. Unlike STGs and BLFs, RTGs have their own factories which produce their own tea leaves. At times RTGs procure leaves from STGs in lean season, for optimal utilisation. Currently there are around 960 Estate Factories with an installed capacity of (1066mn Kg) annually. A comparative snapshot of production pattern between RTGs and STGs is shown in the next page.

³Tea Board of India, BDO India Analysis

⁴BDO Analysis

Table 1: Comparative snapshot in production pattern between RTGs & STGs

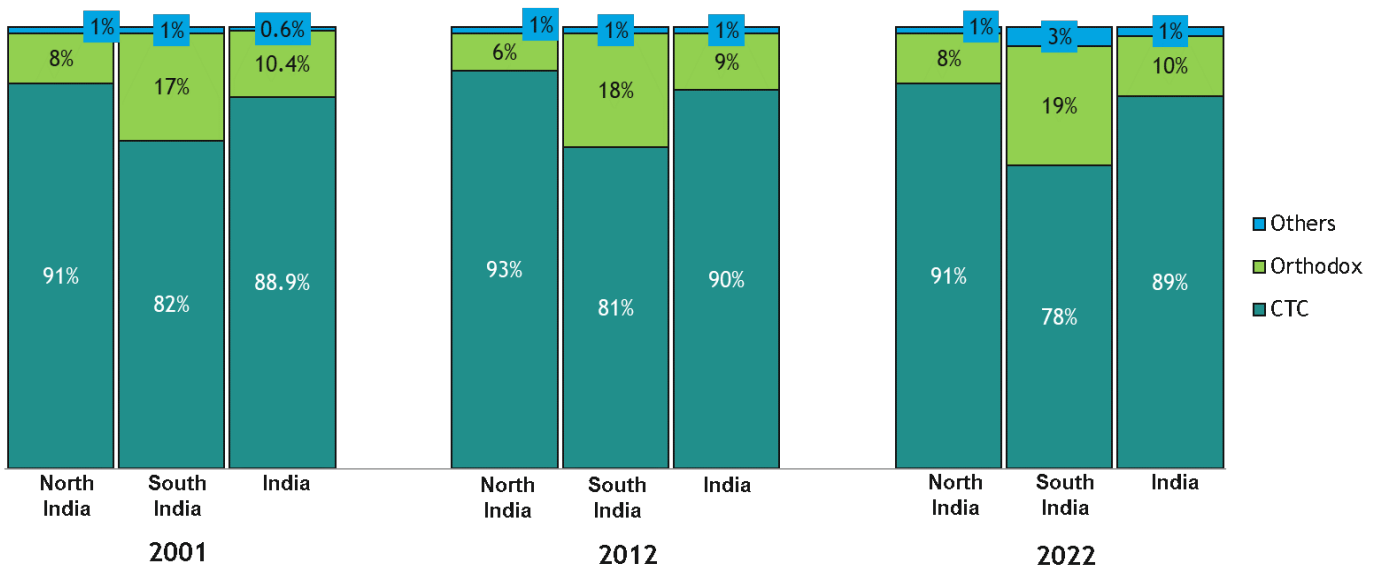
Category	Organised Segment (RTGs)	Small Tea Growers (STGs)								
Total Production (~1343mn Kg) of Made Tea	652mn Kgs (~48% of total production)	691mn Kgs (~52% of total production)								
Decadal Growth Rates (2011-21)	<p>Tea Production of Big growers (Mn Kg)</p> <p>CAGR ~ -2.01%</p> 	<p>Tea production by STG (Mn. Kg.)</p> <p>CAGR ~ 8.1%</p> 								
Area under Cultivation	<p>State-wise area under tea cultivation of RTGs</p> 	<p>Statewise area under Tea cultivation of STGs (Ha.)</p> 								
Age profile of bushes	<table border="1"> <thead> <tr> <th>Bush age</th> <th>% of bushes</th> </tr> </thead> <tbody> <tr> <td><10 years</td> <td>14%</td> </tr> <tr> <td>10-50 years</td> <td>48%</td> </tr> <tr> <td>>50%</td> <td>38%</td> </tr> </tbody> </table>	Bush age	% of bushes	<10 years	14%	10-50 years	48%	>50%	38%	Large majority of bushes will be in 20-25 years range
Bush age	% of bushes									
<10 years	14%									
10-50 years	48%									
>50%	38%									
Average holding size	~270 Hectares	~0.87 Hectares								
Number of gardens / factories	<ul style="list-style-type: none"> • 1600 Tea Estates (Production 652mn kgs) • 900+ Factories • Average output of factories – 7.20 lakh. Kg. 	<ul style="list-style-type: none"> • 200,000+ STGs • 750+ factories • Average output of BLFs – 8.5 lakh kg. 								

Overview of Product Mix

With increase in tea production in India, product mix has undergone a massive skew. In the 1960s, India was predominantly an orthodox producer with close to 65% of the total production in the country being orthodox, most of which was exported. However, with the passage of time,

more than 90% of the total production is of the Crush Tear Curl (CTC) variety, with orthodox comprising around 8%, and the rest comprising green tea and other speciality (niche teas) teas.

Figure 5: Region-wise tea production in India⁵



- It is evident from the above table, that South India (~19% of tea produced is orthodox) has a higher share of orthodox tea production compared to North India (~8% of tea produced is orthodox).
- Introduction of TBI orthodox subsidy scheme in XI-th Plan Period (2007-12) led to an increment in the orthodox tea production.
- Currently, orthodox production is at 130.6mn Kgs (2022) out of which 34% comes from South India, despite only 17% of overall production happening in the region. However, in recent years the orthodox subsidy support available from the Government of Assam may accelerate the orthodox tea production in North India.
- Darjeeling Tea, which is purely orthodox in nature, is produced in limited quantities, accounting for less than 1% of the total tea production (~ 8-10mn kgs) and is cultivated in 87 tea estates located in West Bengal. Darjeeling Tea is often referred to as the "Champagne" of tea due to its premium quality and distinctive characteristics and it fetches premium in export markets. However, declining productivity, ineffective marketing and increased competition from neighbouring countries has impacted the prospects of Darjeeling Tea.

India has a rich heritage and a wide diversity in terms of origin of tea. Along with Darjeeling tea, TBI has played a key role in establishing geographic indicators (GI) for Indian Tea from Assam, Nilgiris, Tamil Nadu, Himachal Pradesh.

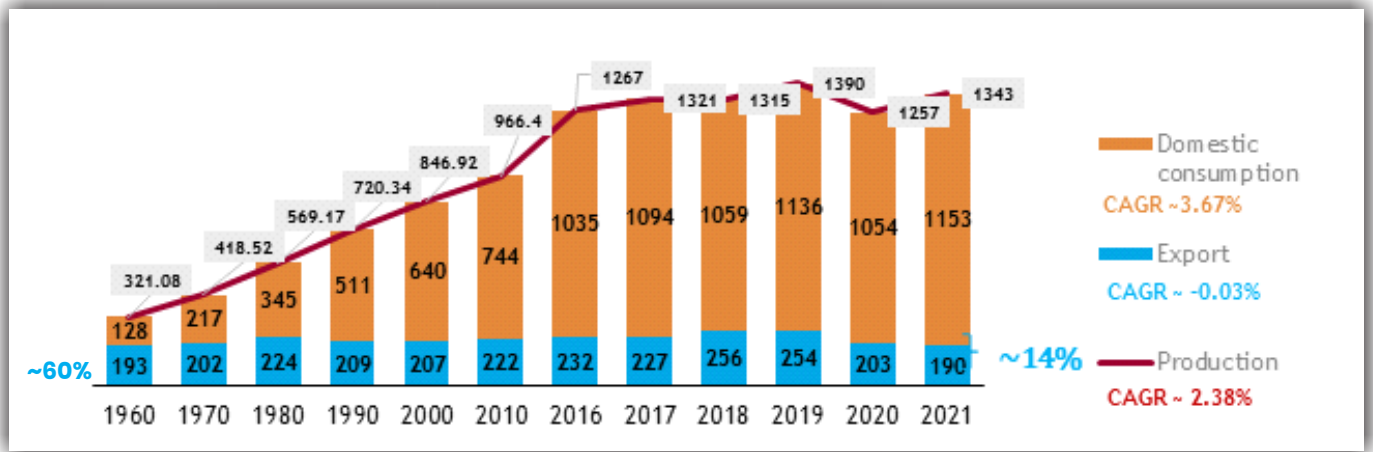


⁵ITC Bulletin, Tea Board of India, BDO India Analysis O Analysis

1.3 Overview of Tea Consumption

In the early 1960s, tea was primarily an export focus product in India with majority of the produce exported and domestic consumption being extremely low. This is reflected in the consumption pattern over the decades which highlights that almost 60% of the tea produced within the country was getting exported during 1960s.

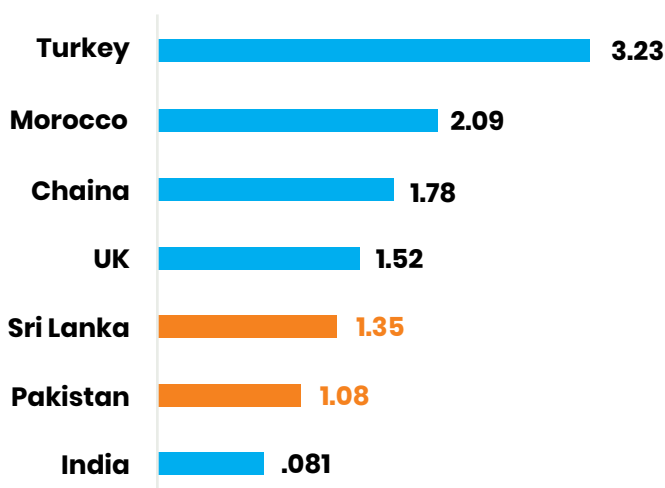
Table 1: Comparative snapshot in production pattern between RTGs & STGs



Since then, domestic tea consumption in India has grown at a phenomenal pace of @3.7% CAGR. Even though tea is not an essential commodity, it is now an integral component of the average Indian household consumption. This is reflected in the high penetration levels of tea in Indian households.

Tea is in fact the second most consumed beverage in the country after water. While the TBI played a key role in popularising tea consumption in India, leading tea packeteers have sustained the momentum through various innovative campaigns and advertisements at different points in time to make tea popular. Consumption levels of tea in developing countries has a direct relationship with the per capita income levels. This has been reflected through analysis of tea consumption pattern in other developing countries which are witnessing fast growth and has similarity with India.

Figure 7: Per capita consumption for Tea in major countries (Annual in kg – Average 2018-21) – Source ITC Bulletin

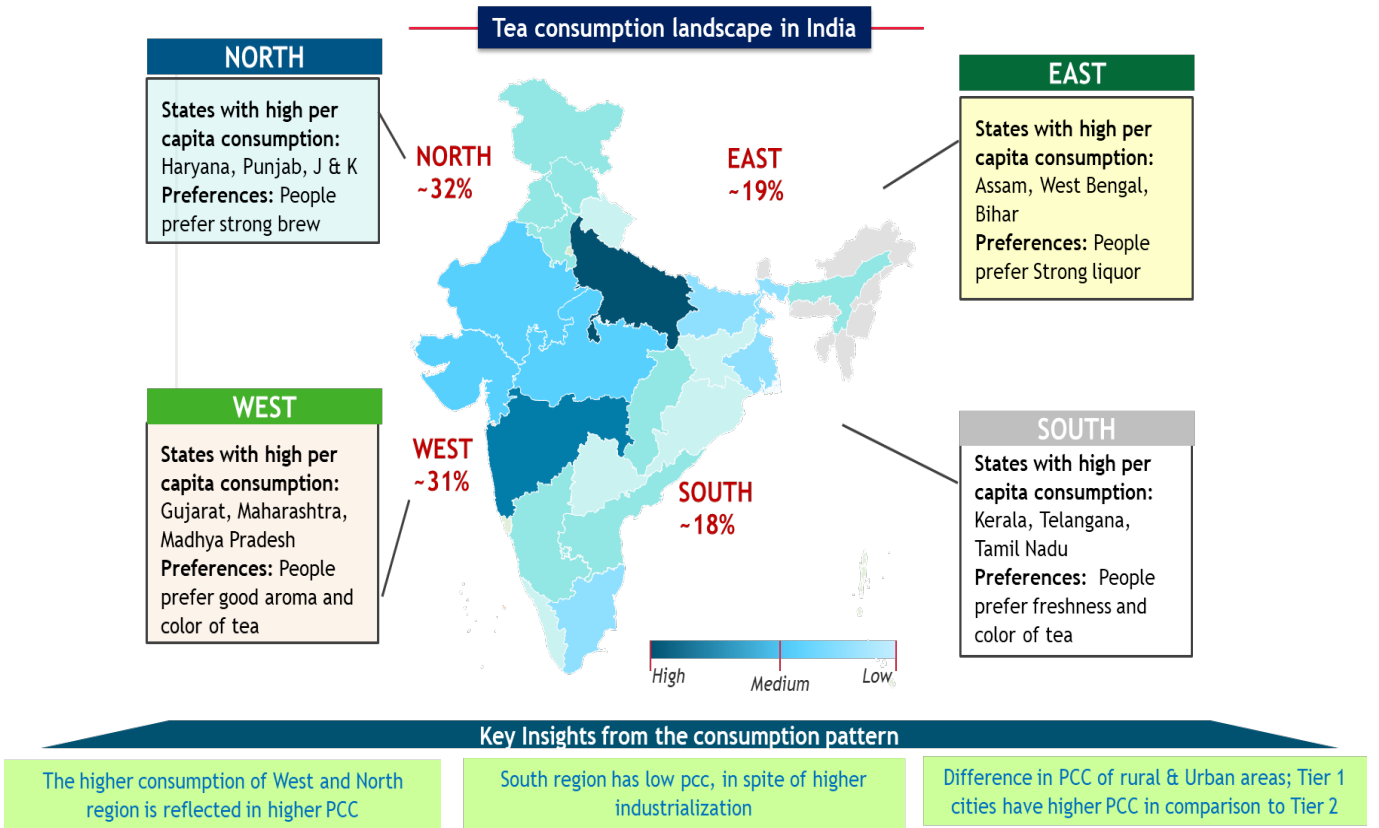


However, in spite of the massive increase in consumption of tea over the last six to seven decades, per capita consumption of tea (PCC) in India is still around 800gms which is significantly lower than that in other major tea drinking nations. In fact, PCC level of tea in India is lower than that of some neighbouring countries such as Pakistan, UAE, etc. and its growth is not commensurate with that of production. Even the PCC growth rate of tea in Bangladesh which is a fast-growing economy is considerably higher than that of India. The growth in demand for tea due to a large domestic market plays a key role in offsetting the supply side growth in the industry.

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. There is a wide divergence in tea consumption pattern across the country. Western and northern parts of the country constitute over 63% of the total consumption, which is reflected in the higher per capita consumption level.

Figure 8: Divergent characteristics observed w.r.t Tea Consumption in India⁸



The above graph shows consumption level and preference of tea consumption across the country. A study on the domestic consumption of tea conducted by the TBI reveals that the wallet share of tea in consumer spend on groceries is quite low and it is applicable for a large majority of Indian households. This points to the potential of having increased consumption through higher PCC Levels as well as possibility of promoting value added and specialty teas in the domestic market.

There has been a gradual shift towards consumption of packet tea with close to ~65% of the total market comprising packet tea. While there are few leading brands with pan-India presence in tea, low entry barriers and relatively higher margins have led to the mushrooming of several regional or local packet tea brands. The shift from loose to packet tea is expected to continue, especially after the pandemic, due to the perceived benefits of quality and safety associated with packet tea, health benefits, ease of ordering, convenience of storage and the rising adoption of e-commerce.

1.4 Overview of Tea Exports from India

Tea has been an important foreign exchange earner for the country. While tea exports used to comprise about 60% of total production of tea in the country in the 1960s, the export share of tea production has plummeted to ~10% in 2021-2022.

Figure 10: Tea Production vs. Exports from India⁷

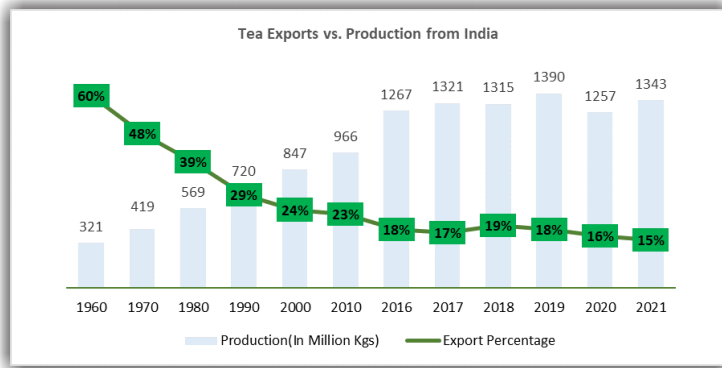
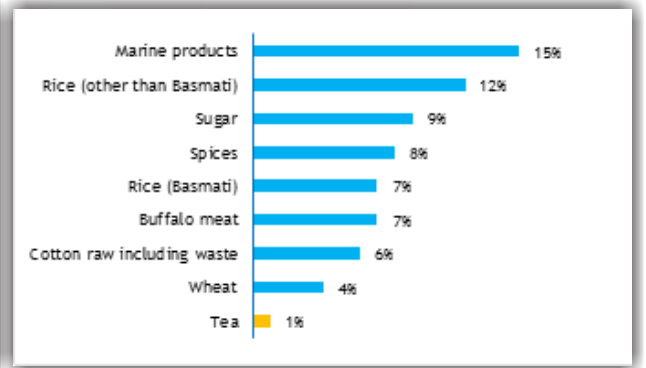


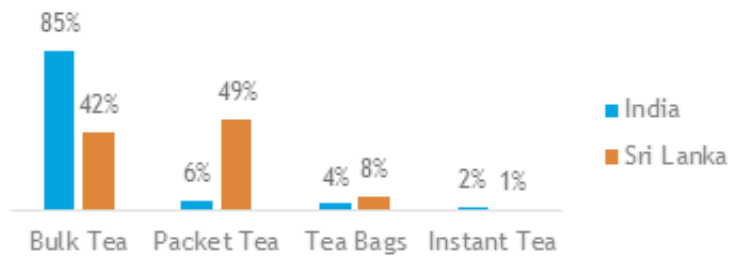
Figure : Share of tea exports in comparison to other major agricultural exports (2021-22) – Source APEDA



I. Limited focus on quality and value addition

The Indian tea industry has a rich legacy and heritage. However, focus on quality upgradation and value addition in tea in India has been limited, impacting the perception of Indian tea in global markets. This is reflected in the high percentage of tea exported from India in bulk format without value addition. It has led to low incremental price realisation from tea exports over the years.

Figure 11: Format of tea exports from India vs. Sri Lanka



It is pertinent to mention that Sri Lanka exports almost 60% of its tea in value added forms such as packet tea, tea bags, instant teas. This is shown through a comparative analysis of tea exports from Sri Lanka and India.

ii. Muted foreign exchange earnings from tea

Quantum of tea exports from India have largely remained stagnant, which, coupled with low value addition and focus on bulk tea exports, have led to muted price realisation from tea exports.

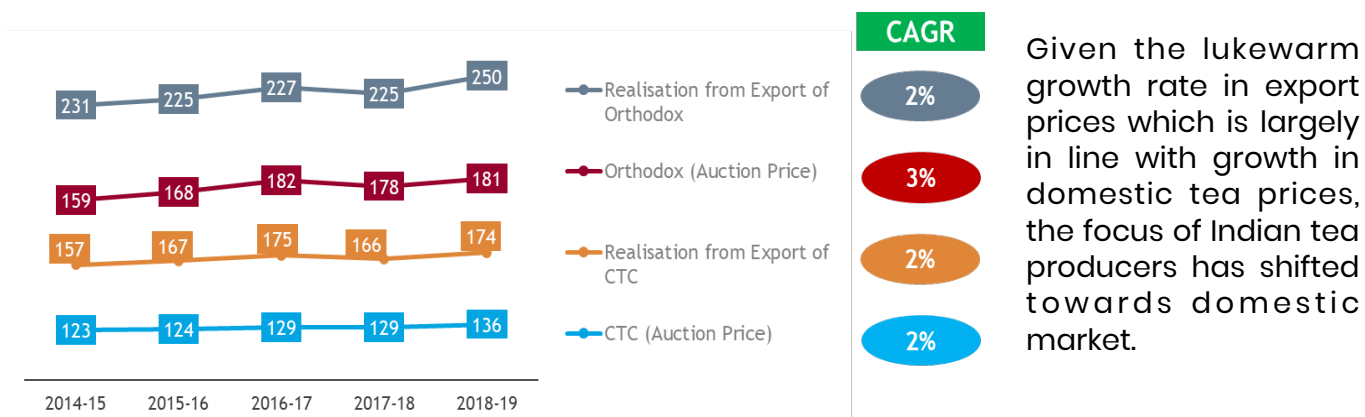
Table 2: Export Movement - Country-wise⁸

Year	2014			2017			2021		
	Value	Volume	Price	Value	Volume	Price	Value	Volume	Price
Unit	Mn kgs	Mn \$	\$ per Kg	Mn kgs	Mn \$	\$ per Kg	Mn kgs	Mn \$	\$ per Kg
Japan	75.2	3.6	20.9	129.9	4.7	27.6	189.8	6.3	30.1
China	1273.5	301.5	4.2	1609.9	355.2	4.5	2299.2	369.3	6.2
Sri Lanka	1558.7	317.8	4.9	1458.7	271.7	5.4	1301.5	282.8	4.6
India	642.3	204.5	3.1	728.9	251.3	2.9	675.8	190.8	3.5
Kenya	1150.1	499.4	2.3	1250.3	415.7	3.0	1245.8	558.9	2.2

⁷Tea Board of India, BDO India Analysis

This has affected foreign exchange earnings for the country. An interesting trend is observed while carrying out the trend analysis between export prices and average price realisation in auctions over the last decade.

Figure : Auction Price and Realisation from Exports of CTC & Orthodox Tea (INR/KG)⁹

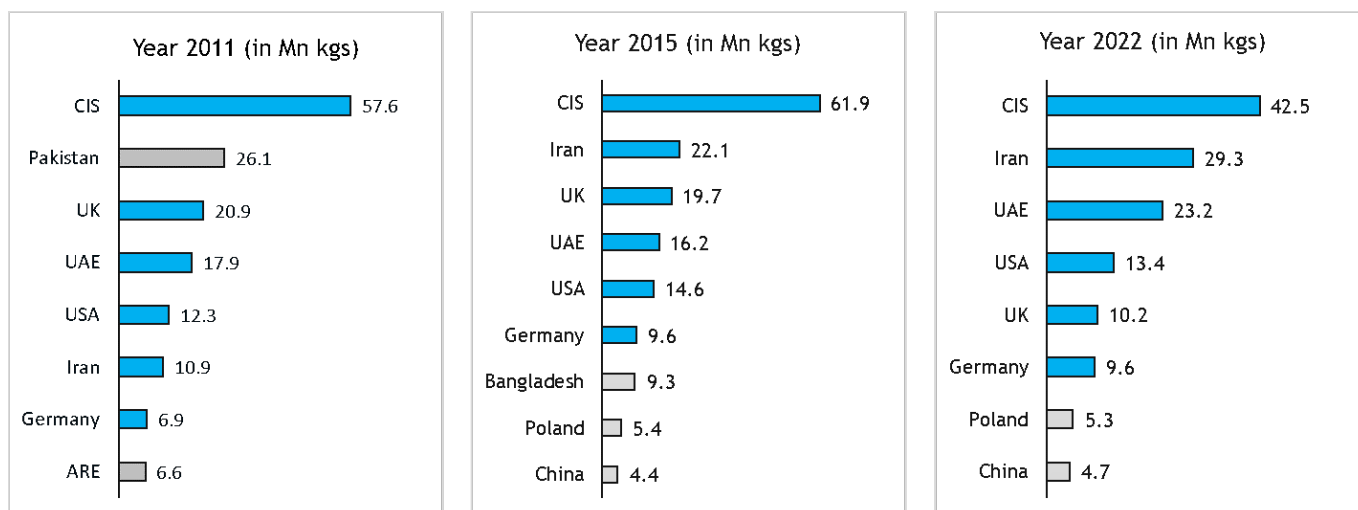


Given the lukewarm growth rate in export prices which is largely in line with growth in domestic tea prices, the focus of Indian tea producers has shifted towards domestic market.

iii. Concentration of exports to a few countries leading to stagnation in export volume

Decadal trend analysis reveals that the top five-six importing markets contribute to around 50-60% of the total tea exports from India.

Table 3: Major tea export destinations from India (2011-21) in MT¹⁰



Further, over the years, India's Relative Market Share (RMS) in some of these traditionally strong markets has declined due to aggressive marketing campaigns by a few other leading exporting nations and due to imposition of stringent regulations around quality. Geo-political issues also play a big role in this process.

Countries like Sri Lanka have developed a focussed program for substantially increasing tea exports over the next few years through a dedicated expert promotion program. It is imperative for India to relook at its tea export strategy with an objective of improving RMS in traditional markets and expanding coverage in new markets.

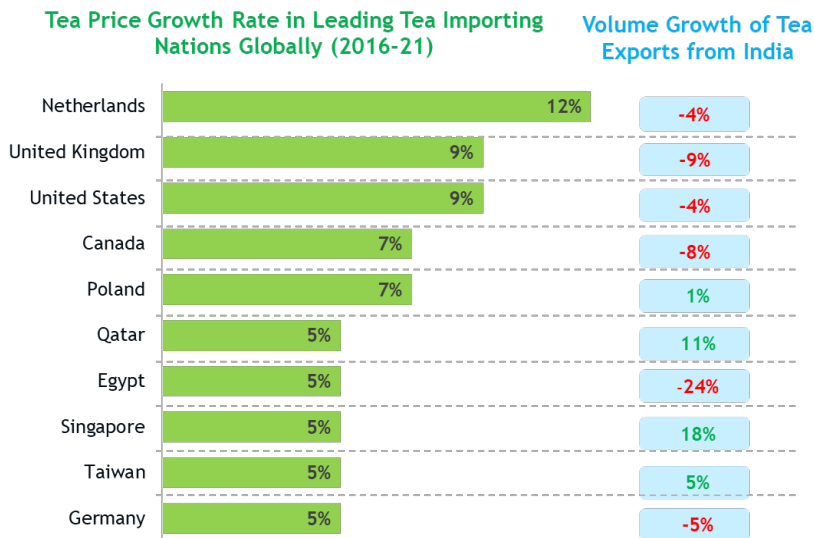
iv. Low focus on countries with potential for better price realisation

There are select importing countries where prices of Indian tea have grown well above 7% CAGR over the last five to seven years; these countries also exhibit increasing demand trends along with potential of higher realisation.

⁹ ITC Bulletin

¹⁰ In FY20, due to the pandemic, prices had firstly declined, and then in FY21, there was a sharp growth in prices. This was followed by moderation of prices in FY22. Given the extreme fluctuation in prices induced by external factors, these years have not been included in above chart

Figure 13: Tea Price Growth in Leading Importing countries vs. Export Volume Growth from India in such countries (source)¹¹



v. Decline in India's export competitiveness in tea sector

- **Rising Costs of Production:** Along with stagnation in prices, rise in cost of production is further adding to the challenges the tea industry faces. Wages, social welfare costs, cost of inputs are some of the major components in the cost of production and have risen sharply affecting export competitiveness of the sector. Given the increasing costs, many players are not able to focus on the quality of production or moving away from plantation activities.
- **Outdated infrastructure:** There is lack of a dedicated facility which is a one-stop shop for tea processing, storage, packing, etc. in India. Industry players who are already stretched due to the rising costs and stagnating prices are unable to invest in improved infrastructure.
- **Inadequate quality testing labs:** Leading importing countries (especially Europe) have stringent importing norms based on maximum residue levels (MRL) which makes compliance difficult. Currently, testing norms in India and the number of tests need to improve drastically to support exports.
- **High lead time and costs of logistics:** Despite significant efforts to address last mile connectivity, it continues to be a challenge in India. India's logistics cost as a percentage of its GDP is ~14%, compared to similar costs in the US (9.5%), Germany (8%) and Japan (11%). Despite having a long coastline, it continues to remain relatively untapped. With most tea produced in remote regions, even connectivity from production centres to main roads is often an issue. All these add to logistics costs for exporting tea and the time required for it.

While India enjoys a favourable position in terms of competitive advantage (Revealed comparative advantage, $RCA > 1$), an analysis of RCA of India in tea vis-à-vis other exporting tea countries are shown below.

Country	RCA
India	4.6
Sri Lanka	253.2
China	1.9
Japan	0.7
Kenya	480.1

¹¹ ITC Bulletin, BDO India Analysis

It is thus needless to say that the industry holds immense potential to unleash its inherent strengths. Over the years, the TBI, operating under the Ministry of Commerce, Government of India, has been instrumental in fostering the holistic development of the industry since its establishment in 1954. Through its dedicated efforts, the Board has not only contributed to a significant increase in tea production, surpassing fourfold growth, but also witnessed a steady rise in domestic consumption. The production of tea in the country has gone up by over 4x times which not only helped meet the steady growth in domestic demand in full but also helped maintain a reasonable share in the global exports.

However, given the emerging trends and challenges in the sector, there is a pressing need for a concerted effort to propel the industry towards a future-ready and sustainable path. To achieve this, it is imperative to foster collaboration between industry stakeholders, government bodies, and research institutions. By encouraging innovation, promoting sustainable practices, and embracing new technologies, the tea industry can enhance its competitiveness and adaptability in the global market. Moreover, emphasis on diversification, exploring value-added products, and tapping into the potential of specialty teas to cater to evolving consumer preferences have emerged as the pressing needs of the Indian tea industry.



CHALLENGES IN TEA INDUSTRY **PERSPECTIVES FROM THE VALUE CHAIN**



2. Challenges in Tea Industry: Perspectives from the value chain

It is important to analyse the Bush to Cup value chain, as depicted below, for RTGs and STGs.

Figure 14: Schematic representation of tea value chain in India for RTGs

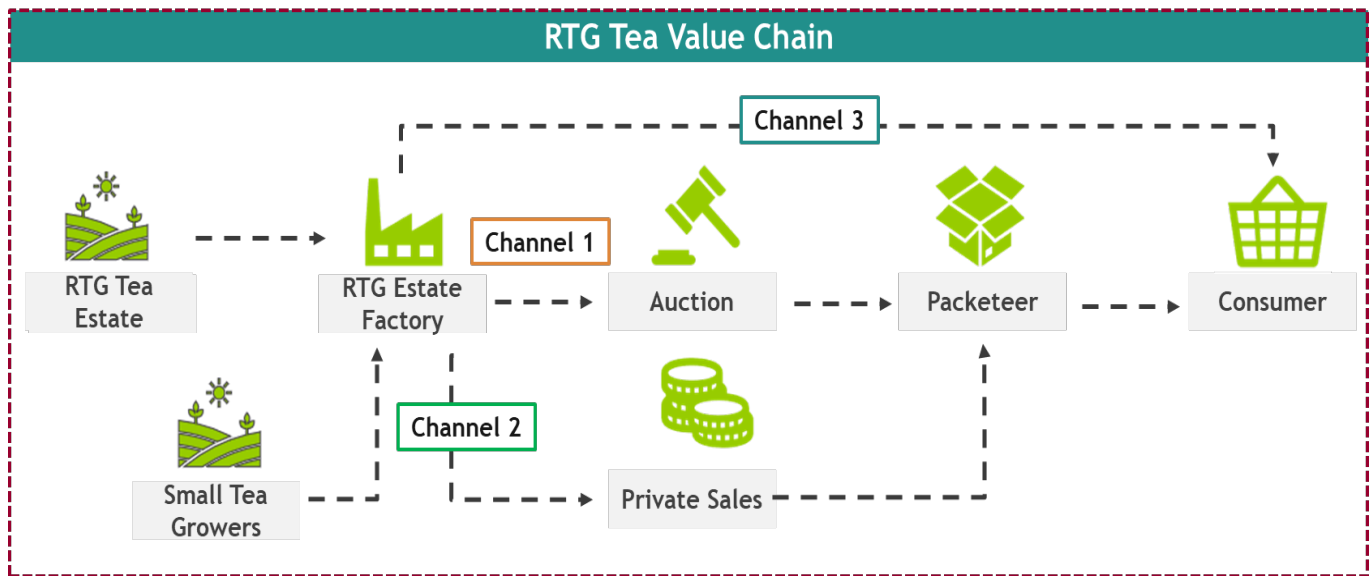
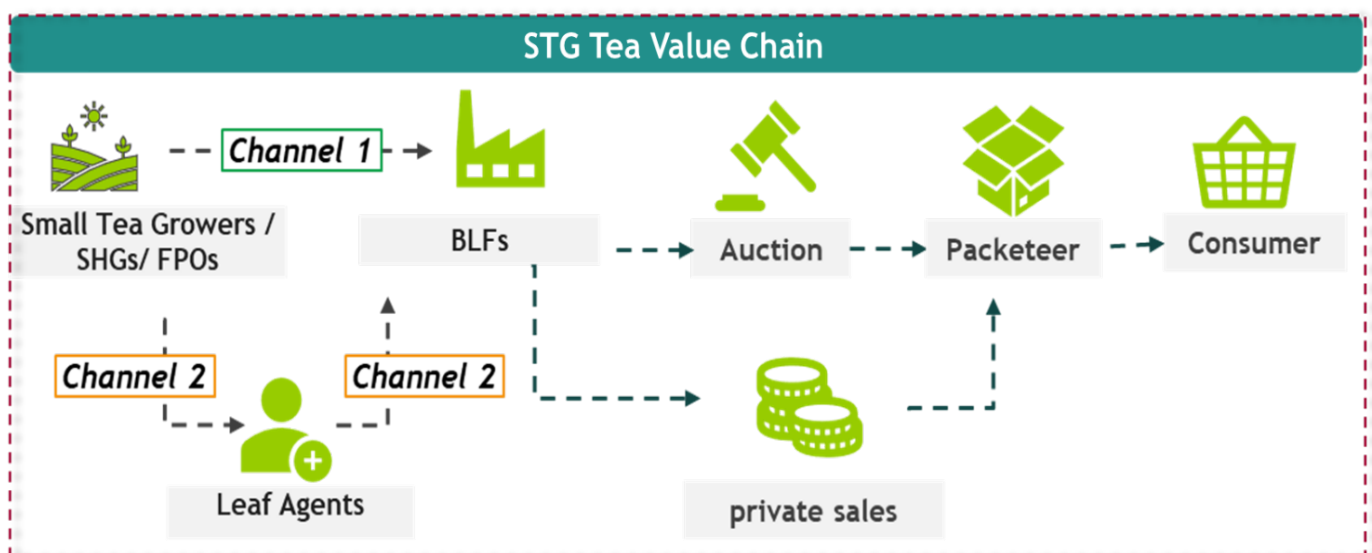


Figure 15: Schematic representation of tea value chain in India for STGs

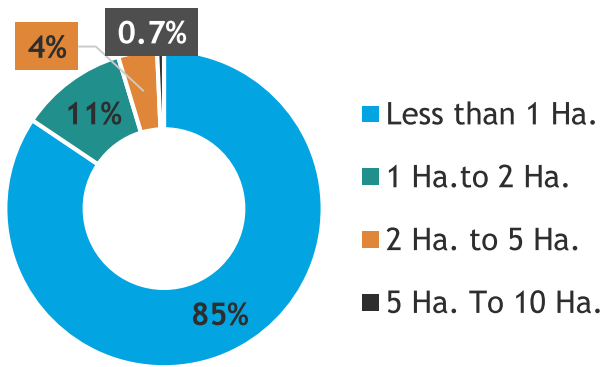


Tea traditionally has been grown in estates with typical landholding size (>10 Ha). Many of the tea estates are concentrated across four major tea producing states – Assam, West Bengal, Tamil Nadu, Kerala. Currently there are 1567 tea estates in India. The green leaves produced in tea estates are mostly processed in the Estate Factories (EFs) and the made tea produced is sold either through auctions or through private sales either in domestic markets or through exports.

As per the TMCO Act, 50% of the total made tea produced is mandated to be sold through auctions. Currently there are eight auction centres located at Kolkata, Siliguri, Guwahati, Coimbatore, Coonoor, Cochin, Himachal Pradesh and a new one has been set up by M-Junction in Jorhat, Assam.

The striking difference here is that 85% of the small tea growers (STGs) typically have land holdings less than 1.0 Ha (~7.5 bighas), while the rest have landholdings of 1-5Ha, and a lesser percentage has more than 5Ha.

Figure 16: Land holding mix of STGs in India



Because of smaller landholdings majority of STGs do not have scale and resources to set up factories. In India STGs typically sell their produce, i.e. green leaves, to Bought Leaf Factories (BLFs) and Estate Factories (EFs), mostly through agents. While sometimes they sell directly to BLFs (a small percentage around 7-8% of the overall STG Population), a large majority of them sell through agents.

Agents play a vital role in the tea value chain as they collect the leaves from various STGs, aggregate and transport to the factories. The emergence of agents has accelerated in the last decade mostly due to the rapid rise of STGs, limited scale of STGs necessitating aggregation and limited financial capability of STGs to develop leaf collection, storage infrastructure and transportation facilities. Various socio-economic factors play a critical role in making STGs overly dependent on the agents as well.

BLFs process the leaves supplied by the agents. Their growth has been synonymous with STGs as highlighted earlier. The BLFs and the EFs typically sell their produce of made tea through private sales or auctions.

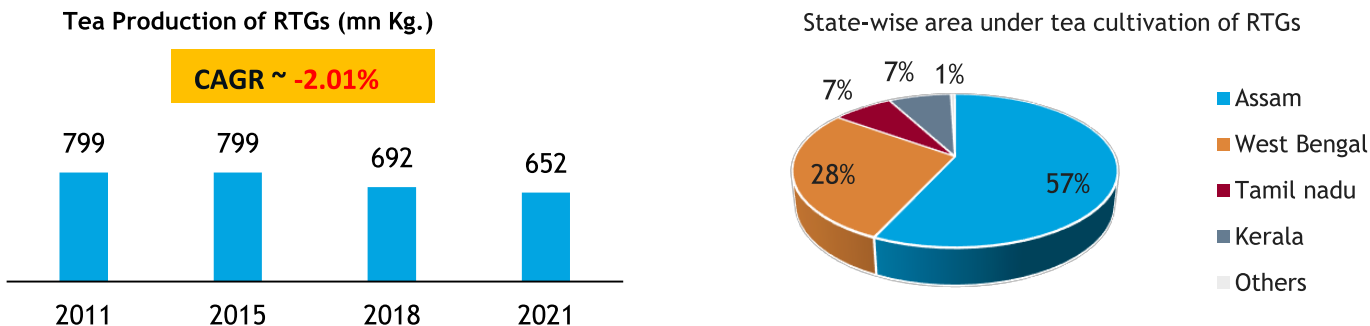
The above tea value chain (comprising supply from RTGs and STGs) is plagued with multiple challenges ranging across plantation development, quality upgradation, product diversification, market promotion, research & development and various regulatory aspects.



2.1. Issues Related To Plantation Development

1. Gradual decline in productivity from the RTGs due to aging bushes and low investment

The RTGs have close to four lakh Ha under tea cultivation and this has remained static over the years. Further, the contribution from this segment has declined marginally as shown in the chart below.



On the contrary, the STGs are producing as much quantity from around two lakh Ha, which clearly points to the wide divergence in yields between these two segments. This can be primarily attributed to productivity levels of RTG plantations where the age of around 40% of the bushes is more than 50 years.

Ideally, to maintain the bushes in proper productive conditions, periodic plantation development activities such as uprooting and replanting, rejuvenation in case of hilly areas, are required. As a thumb rule, 2% of the total area is required to be uprooted or replanted every year so that the entire estate can be replanted over a productive life of 50 years. Tea being a long gestation crop (ideally three to four years are required to get the first crop) and due to the influence of external factors which are beyond control such as weather fluctuations, climate change, etc., there is a declining interest in tea plantations. This has led to limited investments in developmental activities, which has adversely affected the productivity and production from the RTG segment.



Vikram Singh Gulia

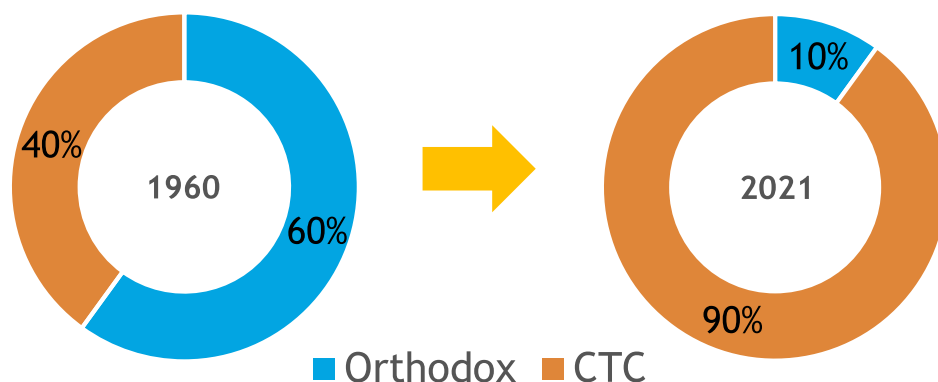
Managing Director & CEO
Amalgamated Plantations Pvt. Ltd.
(A Tata Group Company)

“ At APPL, we are focusing on increasing our yields to add to field productivity and introducing innovative ways to incentivize workers for higher productivity. However, the cycle of investment & return in tea is minimum 7 years, unless there is supply & demand mismatch that can inflate the price.”

2. Skew in the Product Mix

As highlighted in the earlier section, the Indian Tea Industry is heavily skewed towards CTC variety which comprises roughly 90% of the total production in the country. The Government of India introduced orthodox subsidy scheme with an objective of encouraging orthodox variety which will not only help address this skew but also fetch higher realisation. This has led to moderate growth in orthodox production. However, given the significant differential between the cost of production of CTC and orthodox variants, there has been a continued dominance in production of CTC tea.

Figure 17: Production Mix shift seen from 1960s to 2021 for tea in India



Orthodox tea also has good export potential as testified by the success of Sri Lankan tea exports. In view of the same, the Government of Assam has recently revised the orthodox subsidy to INR 12/Kg as part of Assam tea industry celebrating its 200 years. However, for other states, a similar subsidy is not available.

While there is demand of organic tea in export markets, there has been limited traction in organic tea production in the country. Less than 1% of the total tea produced in the country is done in an organic manner. There are multiple challenges which has led to low adoption of organic cultivation in the tea sector:

- Higher cost of cultivation compared to non-organic
- Potential crop loss (up to 50%) and its associated opportunity cost due to conversion from non-organic to organic in the initial two to three years
- Availability of inputs and lack of assistance for procuring these inputs
- Low yield from organic compounds compared to non-organic ones

Even STGs in select pockets of the country produce organic teas but the prohibitive cost of certification, lack of scale and constraints around market access and linkage do not encourage them to take up organic tea cultivation on a large scale, even though the potential realisation is lucrative compared to conventional tea.

3. Impact of climate change

Tea plantation requires specific agro-climatic conditions to thrive. Extreme weather such as prolonged dry spells or insistent rain is not conducive for bushes. Due to climate change, tea producing regions in the country are witnessing erratic patterns which is affecting the crops. Several tea estates are grappling with the challenge of water shortage for irrigation. While there are schemes such as Pradhan Mantri Krishi Sinchayee Yojana for farmers in the agricultural sector, the tea estates have limited assistance. There is a growing need for conservation of water bodies especially in the areas which are drought prone or where there is a rapid depletion in water levels.

On the other hand, excessive rainfall not only impacts the bushes but also the soil. Erosion of soil causes degradation of soil organic carbon which is not conducive for environmental sustainability. While tea plantations are by and large carbon neutral, there is a potential for carbon sequestration (either tree-based or soil-based) in tea estates. Gol has recently announced its guidelines for carbon trading in the domestic market. Encouraging tea estates to take up carbon farming can not only address the environmental tones but also double up as an additional income generation avenue for the estates.



Shreedharan Chandran

Director - Woodbriar Group
Vice President, UPASI

“ Climate change affects tea plantations through irregular rainfall patterns, increased pests and diseases, extreme weather events causing damage, reduced crop yields due to heat and water stress. Mitigating strategies are needed to address these impacts and ensure sustainability.

Mechanisation is essential for tea plantation as it improves efficiency, mitigates labour shortages, and increases productivity. With climate change impacts and labour shortages, mechanisation can help ensure sustainable agricultural practices and economic viability for tea plantations.”

4. Impact of Field Mechanisation

Tea continues to be a labour-intensive industry in the country and labour shortage is a critical concern. This is fuelled by several socio-economic factors such as low pay in the sector, migration of young workforce from agriculture to more remunerative service sectors, opportunities available under several Gol initiatives, rising aspiration levels among youth for a better life and uncertainty associated with agriculture, among others.

Along with labour shortage, absenteeism is another challenge the tea industry is grappling with. These factors lead to loss in productivity. The importance of field mechanisation cannot be undermined for raising the overall productivity, but it poses serious challenges to the quality, if not executed properly. The STGs also increasingly face labour issues as they depend on labour to carry out most activities. Mechanisation continues to be a challenge for STGs as they do not have adequate resources for procuring machines, nor do they have proper know-how and training to manoeuvre it. This has a profound impact on the production, productivity and quality of tea produced.

“The key concerns facing tea plantations besides, grappling with the climate change is to improve land and employee productivity. As a part of the radical change initiative, KDHP has successfully introduced more than 2500 battery operated shears to significantly improve employee productivity and their earnings. KDHP also continues to invest in new planting with high quality and high yielding clonal tea. Sustainable agriculture practices and soil conservation efforts to mitigate climate change have also enabled us to get “Carbon Neutral and Climate Positive” certifications.”

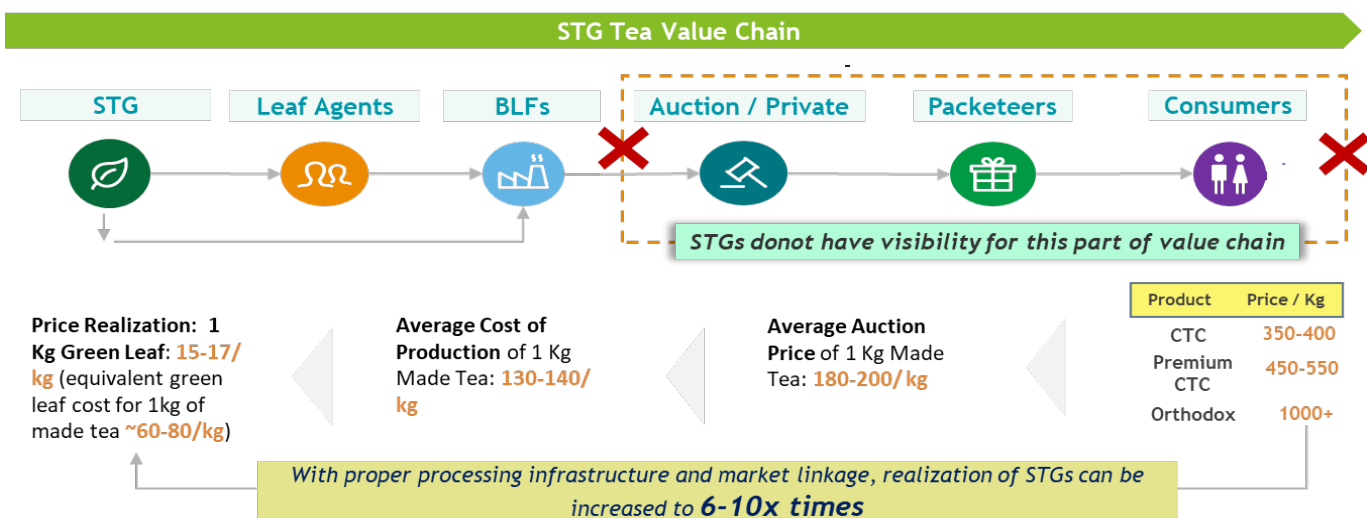


K Mathew Abraham

Managing Director & CEO -
Kanan Devan Hills Plantations
Company Pvt Ltd (KDHP)

5. Rapid Growth of STGs

Building scale is a constraint for the STGs who currently produce more than 50% of the total tea in the country. Since there is an over-dependence on agents for selling green leaves, they do not have any bargaining power, and more often, they are not price takers.



It is evident from the above figure that the STGs command less than 15% of the overall consumer wallet. This is fuelled by the fact that STGs also do not receive adequate prices for the green leaves produced by them.

o Sub-optimal price realisation and price distortion

As highlighted earlier, the agents and the factories play a critical role in price realisation to the STGs. As per the price sharing formula (PSF) of the TBI, the price in the auction is to be shared in the ratio 65:35, where 65% of the proceeds is to go to STGs and 35% to factories. Given that the auction prices are not the right indicators due to multiple factors, the price decided on the basis of the above formula leads to sub-optimal price realisation to the growers. Further, there are issues in the supply chain which further compounds the problem of price realisation to growers.

- **Subjective evaluation of tea leaves at factory gate/BLFs:** Currently, the factories procure leaves from the agents (aggregators) who collect leaves from multiple STGs. Thus, it is not possible to segregate the leaves on the basis of their quality. Specially during monsoon flushes when the supply peaks, the factory managers use their discretion in evaluating the prices of the green leaves. Ideally, the leaves should be evaluated on the basis of their fine leaf count (FLC) and the price should be fixed accordingly. Tea Research Association (TRA) has come up with an FLC machine which can determine the bolometric count, but it is not used in factories.
- **Role of Agents:** Over ~90% of the STGs supply their green leaves to factories through agents. Agents typically charge around ~15%-20% as commission for assisting in transportation and other activities. As agents often load higher weights than prescribed in vehicles, the leaf quality is impacted in transit which in turn impacts the prices. Further, unlike other stakeholders in the tea value chain, agents do not need to have any license/card.
- **Skew in geographic spread of factories:** Currently there are ~750 BLFs spread across the country; while the BLFs are mandated to accept green leaf from STGs within a 10 km of radius to ensure that green leaves are transported to factories within a reasonable time of five to six hours, this is mostly not followed. It has been found, based on interactions with growers, that leaves are often transported over long distances (above 80-90 kms.) to the nearby processing centres.

o Limited resources to set up infrastructure for value addition

As mentioned earlier, STGs typically have low land holdings. Further, they have limited resources to establish processing infrastructure which makes them dependent on BLFs/ estate factories. As a result, they have limited value addition potential and are unable to establish adequate market linkage to move up the value chain. Current TBI schemes to promote infrastructure creation are directed towards collectives of STGs. However, the formation of collectives and its continuance has been low in the industry.

o Limited access to and lack of training (GAP)

STGs shifted to tea production primarily due to the remunerative and perennial nature of the crop. Most of them do not have adequate knowledge and training on tea cultivation practices (unlike the RTGs). This has severely impacted their ability to maintain bushes and plan for future activities by undertaking timely pruning and other practices. Further, this also leads to improper usage of pesticides, which is compounded by their inability to undertake soil testing on an ongoing basis. While the current age of the bushes for STGs is low and has helped them achieve high productivity, limited knowledge of good agriculture practices is expected to impact them in the future.

o Access to finance/ credit schemes from Government

While the Government has introduced several schemes to provide financial aid to STGs, they continue to face a lot of hurdles in accessing finance from financial institutions. The key reasons among others, include:

- **Credit worthiness:** Lack of previous financial history, non-availability of agricultural land ownership deeds and other important documents required for application to financial institutions.
- **Risk profile:** The tea sector in India is prone to risk and vulnerabilities with volatile green leaf prices which fluctuate every month. This impacts the risk profiles, and institutions are reluctant to give them credit.
- **Lack of collaterals:** Inability of farmers to provide collaterals as they often do not have the title deed of the agricultural land.

The above financial access issue creates a vicious cycle for STGs who must depend on leaf agents for meeting financing requirements and compel them to engage and sell their produce to the agents.



Bijoy Gopal Chakraborty

President

Confederation of Indian Small Tea Growers Associations (CISTA)

“ One of the critical constraints for the small tea growers (STG) in India is lack of scale which acts as a deterrent in moving up the value chain. Collectivisation of STGs may help address this issue. Growers also need support on training around good agriculture practices which will enable production of quality leaves and made tea. Given the sector produces more than 50% of the total tea production in the country and involves more than 2.5 lakh growers, it would be helpful if the assistance given to small holder farmers in agriculture sector can be extended to the small tea growers.”

2.2. Issues Related To Quality Upgradation And Maintenance

1. Need for upgradation/ creation of infrastructure for value addition

The existing processing facilities in the Indian tea sector are often outdated and inadequate to meet the evolving demands of the market.

o Speciality tea units for STGs

STGs often lack the necessary infrastructure, processing facilities, and quality control measures to produce high-quality specialty teas due to limited resources and access to technology. Some STGs in remote parts are engaged in producing specialty teas/ ethnic teas/ hand-made teas which have immense potential. Specialty units can assist in scaling up these and are missing at present.

o Upgradation of infrastructure for RTGs

Investments by RTGs in factories and infrastructure have been made much earlier and lack the modernisation required to meet the quality norms, efficiency and other aspects. TBI under its planned schemes provide subsidy towards modernisation for value addition by way of creating infrastructure for cleaning, blending, colour sorting, packaging, etc. However, more allocation and utilisation of the same is required by the industry.

o Modernisation of warehouse

Many tea warehouses in India are not adequately equipped with modern facilities and technologies to ensure the optimal storage and preservation of tea. This can lead to several issues that affect the quality and marketability of the tea due to inadequate temperature and humidity-control measures.

2. Absence of Dedicated Tea Export Zones

Despite the large scale of tea production in India and concentration of production in four states of Assam, West Bengal, Tamil Nadu and Kerala, there are no dedicated agriculture export zones/ parks for the same. These zones can provide much needed cost-effectiveness, market linkage, quality testing, research and scale which is required to promote tea exports from both RTGs and STGs in India.

3. Lack of traceability

Due to the increasing focus on health and the rising awareness around it, consumers are demanding products which are traceable and packeteers are building up on this theme. The theme is still at a nascent stage in the tea industry, both for RTGs and STGs. Most of the RTGs in India are not engaged in packet tea production, which impacts the traceability of their made tea, as packeteers mix multiple tea varieties to get the right blend. The problem is more acute for STGs where the agents procure leaves from multiple STGs, mix the same and supply to BLFs, leaving no trace. TBI has launched the Chai Sahyog app which can be leveraged to promote traceability. However, its adoption has been limited.

4. Limited Testing and Certification Facility

Despite the wide presence of STGs and RTGs, there are 15 testing centres which are located across 10 districts in India. This makes soil testing from other tea-growing districts costly and time-consuming, which dissuades many STGs from it. Mobile soil testing equipment which can have reach to farmers easily is missing in the current system. Even at a retail level, sample testing of packets is limited, which could have been leveraged to promote the overall quality and traceability in the value chain.

2.3. Issues Related To Market Promotion

1. Export Promotion

Despite being the second largest producer of tea, India ranks fourth in overall tea exports, which have grown marginally over the last few decades. These can be attributed to multiple factors such as:

o Focus on traditional tea markets

Indian tea exports are currently concentrated in six to seven countries which contribute to 55-60% of exports. Further, even in these markets (Iran and Russia), India is facing strong competition from other exporting nations. As was depicted earlier in the report, there are markets where tea prices have grown sharply over the years and India needs to focus on such new markets to improve the quantum and value of exports.

o Poor planning of export promotion events and driving participation

Currently, the promotion activities calendar is not planned well in advance which impacts participation of RTGs and STGs. It is important to have a clearly laid out promotion plan for the next few years, which provides visibility to industry on upcoming events to improve participation levels in events. Sri Lanka has a clearly laid out trade promotion calendar with high number of events round the year to cater to export promotion.

o Limited price realisation due to low value-added products

Indian teas are mostly exported in the bulk format with little or limited value addition (close to 90% of Indian tea exported are in bulk form, while in Sri Lanka close to 65% of tea is exported in value-added variants such as packets, tea bags, instant teas, etc.).

Effective marketing and innovation, and product diversification by competing producers such as China, Sri Lanka have posed threats to the stagnating exports of the Indian tea industry. India even loses out to Kenya which enjoys a price advantage due to the lower cost of the product. Orthodox variants like the Darjeeling tea and the Assam Tea have been protected under the Geographical Indication (GI) tag. However, stringent enforcement of the same and proliferation of counterfeit products from neighbouring countries are adversely affecting the image of Indian teas which have detrimental effects on tea exports from India.

The above factors have led to stagnation in the volume of exports and a decline in tea price realisations. India realises only USD 2.5 – USD 3 per Kg, compared to Sri Lanka or Japan where realisations are much higher (Kenya is the only country with lower price realisation than India).



2. Domestic Promotion

As highlighted earlier, the domestic tea market has been the key factor in balancing the growing supply of tea in India. Despite that, the overall PCC in India continues to be low compared to other nations.

o Lack of dedicated generic promotion in domestic market

While the Government has schemes to support domestic promotion via assistance towards the establishment of tea boutiques, dedicated support to boost PCC levels of tea in the country requires enhanced focus.

o Lack of incentives for STGs who are trying to move into packeting for promotional activities

STGs that are taking efforts to move into the production of value-added tea, tea packeting and marketing require incentives to carry out promotional activities. Currently, given they are in remote regions, the costs of packaging and transportation are quite high. Further, they lack expertise in conducting branding and marketing activities.

o Support to start-ups

Mushrooming of startups in tea is expected to gather pace because of the immense scope in the industry. Select start-ups which started in the past have already become household names because of their huge repertoire of innovative offerings based on tea recipes and their extensive leverage of e-commerce. Start-ups need to be supported via schemes to further support domestic consumption.



Nayantara Pal Chaudhuri

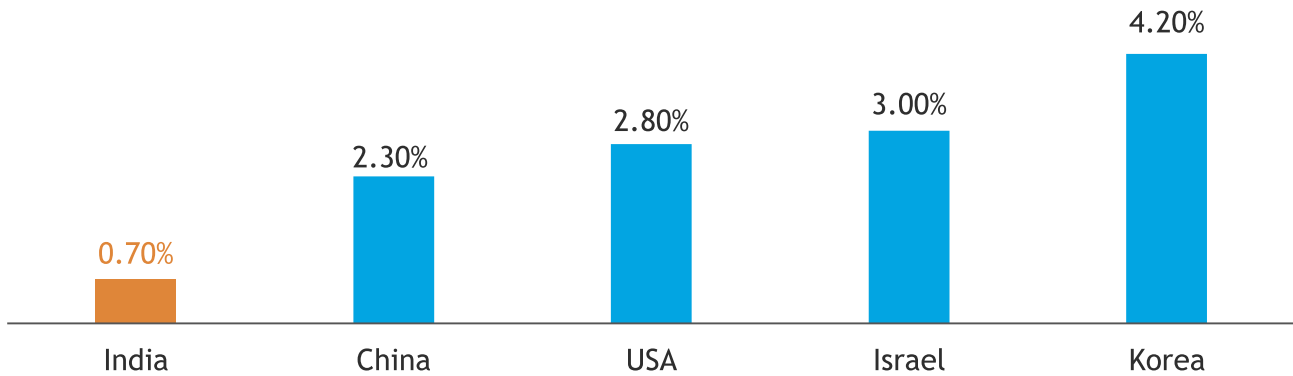
Chairperson
Indian Tea Association
Tea Research Association

“ If a generic promotion is conducted by the industry and Tea Board, it can give a boost to the per capita consumption of tea in India which will help in offsetting the excess supply scenario in the country. This in turn will have a positive impact on tea price which will benefit the industry in the long run.”

2.4. Issues Related To Research And Development

India spends ~0.7% of its GDP on research and development activities while other countries (depicted below) spend a higher percentage on research and development.

Figure 29: Percentage of GDP spent on R&D



There has been a continuous decline in the funds allocated research and development in the tea sector in India. There are primarily three organizations - Tea Research Association (TRA), United Planters Association of South India (UPASI) Tea Research Foundation, Darjeeling Tea Research and Development Centre (DTR&DC) for conducting R&D related to the development of the tea industry in India.

While these organizations played a pivotal role in increasing production, productivity and quality of the tea in India, it is important to focus more on R&D related to the crucial aspects which affect the overall competitiveness of tea Industry.

“The tea industry in India is finding it challenging to sustain itself due to cost pressures and stagnant prices not keeping pace with even inflation. So rationalising labour costs through intensive mechanisation and working on innovative new product categories to be economically viable is the need of the hour for the Indian tea industry.”



Joydeep Phukan

Principal Officer & Secretary
Tea Research Association

Tea industry faces multiple challenges, as discussed above, and a robust plan which factors in emerging trends in the industry that need to be formulated to support the tea industry in India.

EMERGING TRENDS IN THE TEA SECTOR








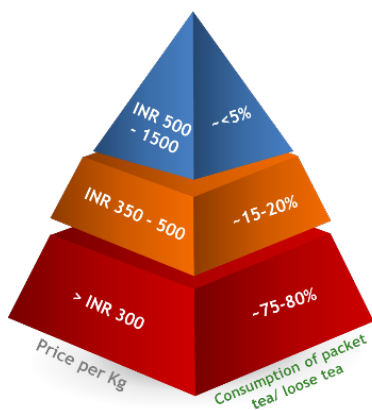
3. EMERGING TRENDS IN THE TEA SECTOR

It is important to analyse the trends in the tea sector in India and globally which will play a crucial role in identification of intervention areas to make a sustainable future-ready tea industry. The trends have been bucketed broadly from supply and demand perspectives and taking cognisance from some of the other leading tea producers in the world.

Trend 1: Shift From Loose To Packet Tea

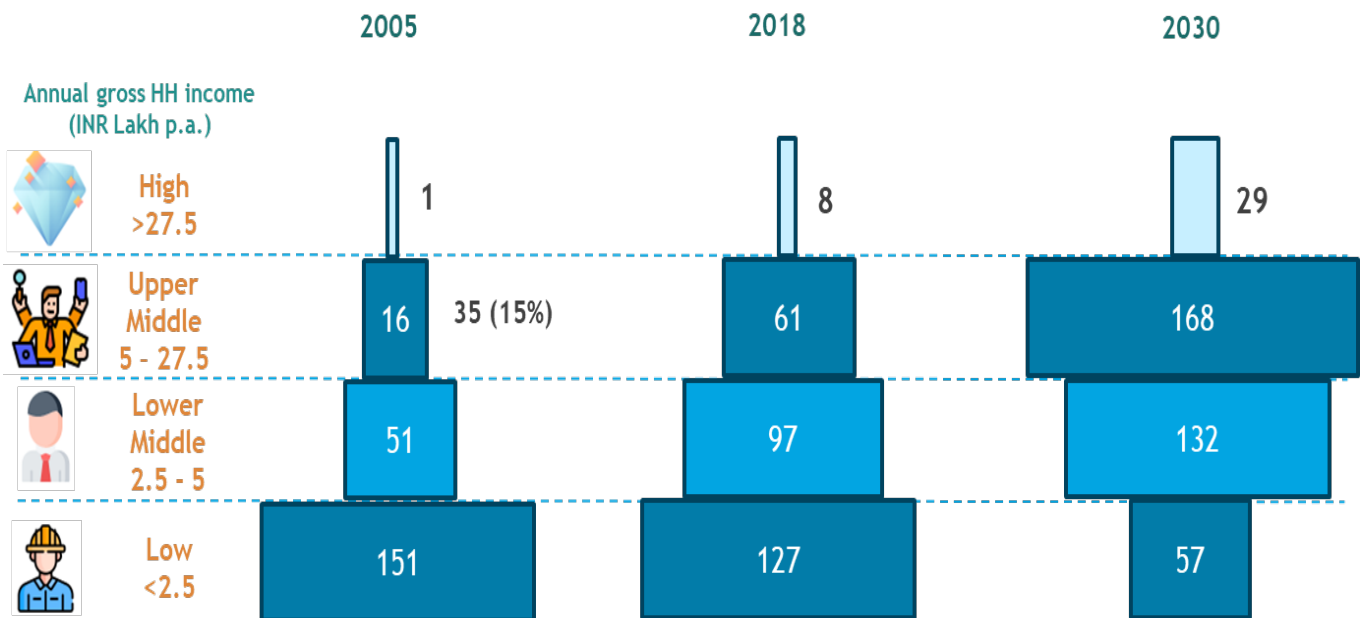
This is a phenomenon happening globally and India is no exception. This shift has been accelerated by a host of supply and demand side factors as depicted below:

	Growing Middle Class Population	<ul style="list-style-type: none"> Growth in middle class population and in turn the disposable income available has led to higher demand for packaged products across most retail categories
	Evolving Consumer Perception	<ul style="list-style-type: none"> Perception of packaged product being safe when compared to loose products have accelerated the shift towards packet products (especially post COVID)
	Preference For Convenience	<ul style="list-style-type: none"> Evolving family structures have necessitated convenience requirement for storage Packaged are generally moisture and dust proof, helping maintaining quality of tea for longer periods and area also readily available allowing for ease in purchase
	Emergence of Phyigital Retail	<ul style="list-style-type: none"> Convergence of online and traditional modes due to digital enablement, penetration of mobiles phones and affordable data in the country Advent of pandemic has accelerated omni-channel adoption by retailers
	Proliferation of Brands	<ul style="list-style-type: none"> Number of regional and local brands across products (incl. tea) has grown over the years Many tea garden owners / startups are tapping direct to customer route using own brands



The packet tea market in India is expected to grow at a fast pace and this presents a large opportunity for tea retailers. An analysis of packet tea segments based on price reveals that a large majority of purchase happens in mass segment which typically is based in the sub INR 300/kg tea category. This will typically be of CTC variant. This pyramid is expected to shift in the future due to the changing patterns of Indian households as depicted in the chart below. As more households move into the aspirer (26% expected in 2030 from 21% in 2019) and affluent (16%

expected in 2030 from 9% in 2019) category, it is expected to drive commensurate change in the consumption pattern and improve demand for premium tea varieties.

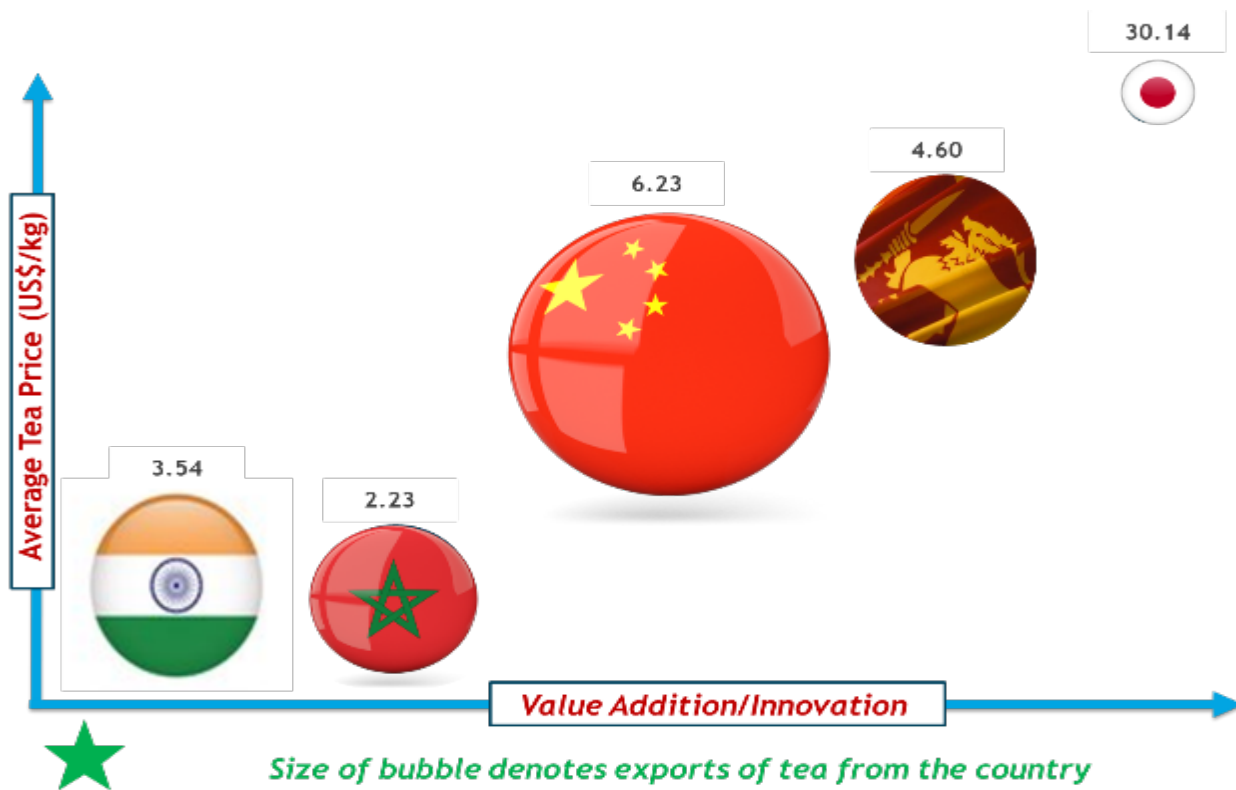


Trend 2: Increasing Customer Preference For Premiumisation

With the advent of globalisation and availability of products and information, there has been a substantial increase in consumer demand, sparking new trends in tea industry. As several tea variants and formats started becoming available to consumers, especially due to the boom in e-commerce, discerning consumers started looking for innovation in products offered by tea players. There are various kinds of innovation that are currently in trend, such as speciality teas, immunity boosting teas and premixes, infusions, flavoured tea, alternate formats such as RTD, Iced Tea among others.

- In the USA, demand for sustainability in tea supply chain and products has high focus. Speciality tea has high penetration in the country. It is also witnessing growing demand for wellness teas, loose green and white tea. Riding on the theme of convenience, the Ready-to-drink (RTD) tea segment is expected to grow fast in the country as well.
- In Japan, there is a growing demand for tea components in the personal care sector driven by increasing demand for healthy consumables and changes in customer preferences wherein increasingly they are opting for a healthier lifestyle. Japanese tea producers are constantly innovating and moving beyond just beverage to develop new products for meeting changing consumer preferences. In terms of packaging, the tea bags segment is expected to grow fast in the Japanese tea market. The popularity for tea bags can be attributed to the convenience and ease of use that tea bags offer, making them a popular choice for busy consumers who want a quick and easy tea experience.
- The tea market in China is the largest in the world and there is enhanced focus on premiumisation in the tea industry. Chinese consumers prefer higher quality tea and products with organic and sustainable certifications.

²ITWeforum - Mega-trends-for-india-in-2030-the-future-of-consumption-in-one-of-the-fastestgrowing-consumer-markets



Product innovation has been a critical factor in driving value addition and premiumisation in tea, as is evident from the chart.

Given the rising middle class in India, a sizeable segment being youth, and growing disposable income, there is an opportunity for the Indian tea industry to move up the value chain. Currently tea in India is by and large looked upon as a 'commodity'. Initiatives towards product diversification and encouraging product innovation can help change the positioning of tea as an 'aspirational' drink, thereby attracting segments like youth, which in turn will boost tea consumption in the country. This also has the potential to address the skew in exports where India exports tea mostly in bulk format.

Trend 3: Emergence Of Tea As “Wellness Superfood”

The onset of the pandemic led to a resurgence of tea consumption with proven health benefits. Positioning of tea as a wellness and lifestyle beverage got reinforced in the consumer psyche which led packeteers to explore new launches in this segment. Immunity boosting teas and superfoods with Ayurvedic ingredients such as Turmeric, Ashwagandha, Tulsi, Moringa, etc. saw increased traction among consumers.

Government of India's (GOI) role in facilitating private sector investment in the wellness sector under the flagship 'Make in India' scheme and the establishment of the 'Ministry of Aayush' is an indicator of the thriving health and wellness market in the country.

In the past few years, changes in work-life balance have led to enhanced focus on health among customers. Further, advent of social media and evolving family structures has led to increased isolation concerns. Taking cognisance of this, consumers are now willing to focus on changes that can drive wellness. The entire ecosystem is evolving accordingly, and industry players are promoting adoption of healthy, natural and organic products which is also driving premiumisation.

Tea is often considered a wellness and lifestyle beverage with new varieties and blends entering the market. The global herbal tea market is expected to grow at CAGR 7.1% from 2022-2032 and is valued at

USD 7.3 bn. Asia Pacific is expected to be the most lucrative market for herbal tea followed by North America.

It is apparent that the trend which started during the pandemic is expected to continue in the long run with growing awareness among consumers regarding health benefits, and it is expected to translate into higher purchases of healthy foods and beverages.

“ Tea has been around for almost 4,600 years. Today, it is making a smart comeback as a health and wellness beverage. With organic and sustainable farming, tea is not only good for you, but good for the earth and environment. Recently, the trend of tea-based infusions - Masala Chai (spiced teas), Herbal Tea (tea with herbs), Chai Lattes, and fruit/floral tisanes are endearing tea to the new-age consumers (GenZ and the millennials). VAHDAM has pioneered innovative blends that are curated to multiply the benefits of tea with herb and spices, that are both delicious and delightful! ”



Bala Sarda
Founder and CEO
Vahdam Teas

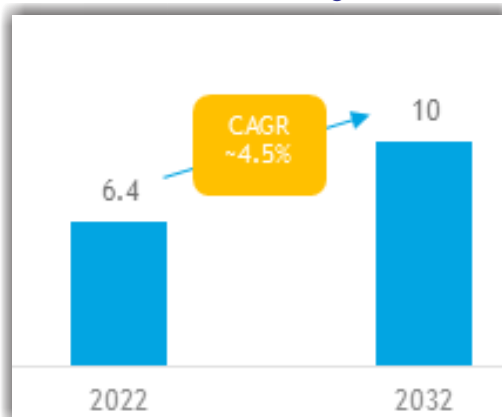
Trend 4: Focus On Sustainable And Eco-Friendly Production And Packaging

Consumers are increasingly becoming aware of food safety and potential pesticide residues in tea, and its associated health risks. Tea being grown as a monoculture plantation is host to a variety of pests and diseases which result in significant yield loss. Pest management typically involves usage of pesticides (7.35-16.75 Kg/Ha) which is especially higher for STGs who have little knowledge about GAP.

Gol has recently introduced the PM-PRANAM Scheme (Promotion of Alternative Nutrition and Agriculture Management) which aims to control soil degradation due to excessive use of chemical soil nutrients. Integrated Pest Management (IPM) practices are currently practiced in a few tea estates which focus on sustainable production. Such practices have a host of benefits such as reduction in pest management costs, keeping the production level intact, managing ecological balance and ensuring food safety. These is expected to witness widespread adoption in the coming years.

Traceability is another aspect which is a focal point of concern for tea players who do not procure from gardens or do not have their own estates. As consumers tend to prefer items from known sources, there will be a pressing need to establish chain of custody right from 'Bush to Cup'.

Figure 19: Eco-friendly tea packaging market
Source-Future Market Insights



There is a marked shift in the way teas are packed, with focus shifting to eco-friendly packaging that helps keep the freshness and scent of leaves for longer periods. Paper packaging is in trend primarily due to low costs and its impact on environment compared to other packaging material such as plastic. Recently, paperless tea bags have seen traction with select player highlighting concerns with plastic packaging of tea bags and it has seen good traction. Among the packaging formats, bags and sacks are expected to be the major ones, commanding one-third of the total market due to high preference among tea manufacturers and consumers.

Trend 5: Increasing Adoption in Technology in Production and Marketing

The possible impact of technology in the operations of tea industry is overwhelming. Areas where technology can play as an enabler include digitising tea farming, field level records maintenance, traceability and supply chain management. Leveraging technologies such as artificial intelligence has led to improvement in quality and enhancement of efficiency.

Even adoption of digital tools and techniques is discernible in the way tea is marketed today. While traditional marketing exists (such as television, papers, billboards, hoardings, various forms of BTL activities, etc.), digital marketing has evolved as a favoured approach. Not only is it cost effective, but also provides opportunities to brands regardless of their size to give real time and personalised experience to consumers. Digital media is emerging as an effective medium to understand customer needs, build interactions with customers and create recall through superior experience. This is reflected in several tea companies reaching out directly to consumers (D2C) through online channels (e-commerce) either through their own websites or marketplaces. Adoption of digital technologies is increasingly blurring geographical boundaries as producers are targeting overseas customers. Several new-age start-ups in this space are actively focussing on the export market.



K Mathew Abraham

Managing Director & CEO -
Kanan Devan Hills Plantations
Company Pvt Ltd (KDHP)

“ Technology has played a key role in driving efficiency across various stages of production. Even online channels (E-Commerce) have seen traction especially after the pandemic. KDHP has modernized and automated 16 factories which have secured FSSC 22000/ISO 22000 certification, thereby improving quality of teas, efficiency and value addition at the factory level. Using the technology, our e-commerce sales have seen significant growth over the past few years. ”

“ VAHDAM has brought in its DIRECT SOURCING model to cut across the layers of middlemen. We buy directly from large and small producers, ensuring they get a fair realisation for the teas they produce, as well as faster payouts. This results in higher yield for the producers, allowing them to invest in better wages and amenities for the tea workers, and in better farming practices - creating a long-term macro social impact. VAHDAM has leveraged the power of digital technology for its D2C (direct to consumers) connect with customers across 132+ countries. VAHDAM engages with its customers 'directly' through its numerous digital channels, ensuring it always feels the pulse of its customers.” ”



Bala Sarda

Founder and CEO
Vahdam Teas

Moreover, B2B trade in tea which was unthinkable even a few years back on online platforms is witnessing traction as it has the potential to reduce cost of trade and logistics and manage working capital efficiently.

The increasing influence of technology and the role of digital disruptions in unlocking value across the tea industry has been taken into cognizance by policymakers. This is evident from the new Tea Board Promotion Plan (2021-2026) where there has been a greater focus on technology adoption, especially that related to traceability, tea trade auction and strengthening of Chai Sahyog App for the benefit of STGs, factories and leaf agents.



Mihir Gandhi

Co-Founder
CuppaTrade

“Traditionally B2B buying and selling has been dominated by auctions, but more and more sellers and buyers are engaging in private sales for better price realization and overall turnaround time. Though it has its limitations as the small tea growers do not have access to either. Future trends will redefine how B2B tea is traded. Learnings from successful B2C, D2C e-marketplaces will get adopted in tea ecosystem with next gen being more tech savvy and looking for fast, convenient and efficient processes. Global e-marketplaces will digitize the supply chain addressing the needs of large and small tea stakeholders by expanding the market, bringing large variety under one roof, enable cross border sales, simplified payment solutions (like UPI, etc). The focus will be on reducing the cost of sales for sellers and cost of purchase for buyers, usage of AI & AR, Blockchain technology for improved traceability”

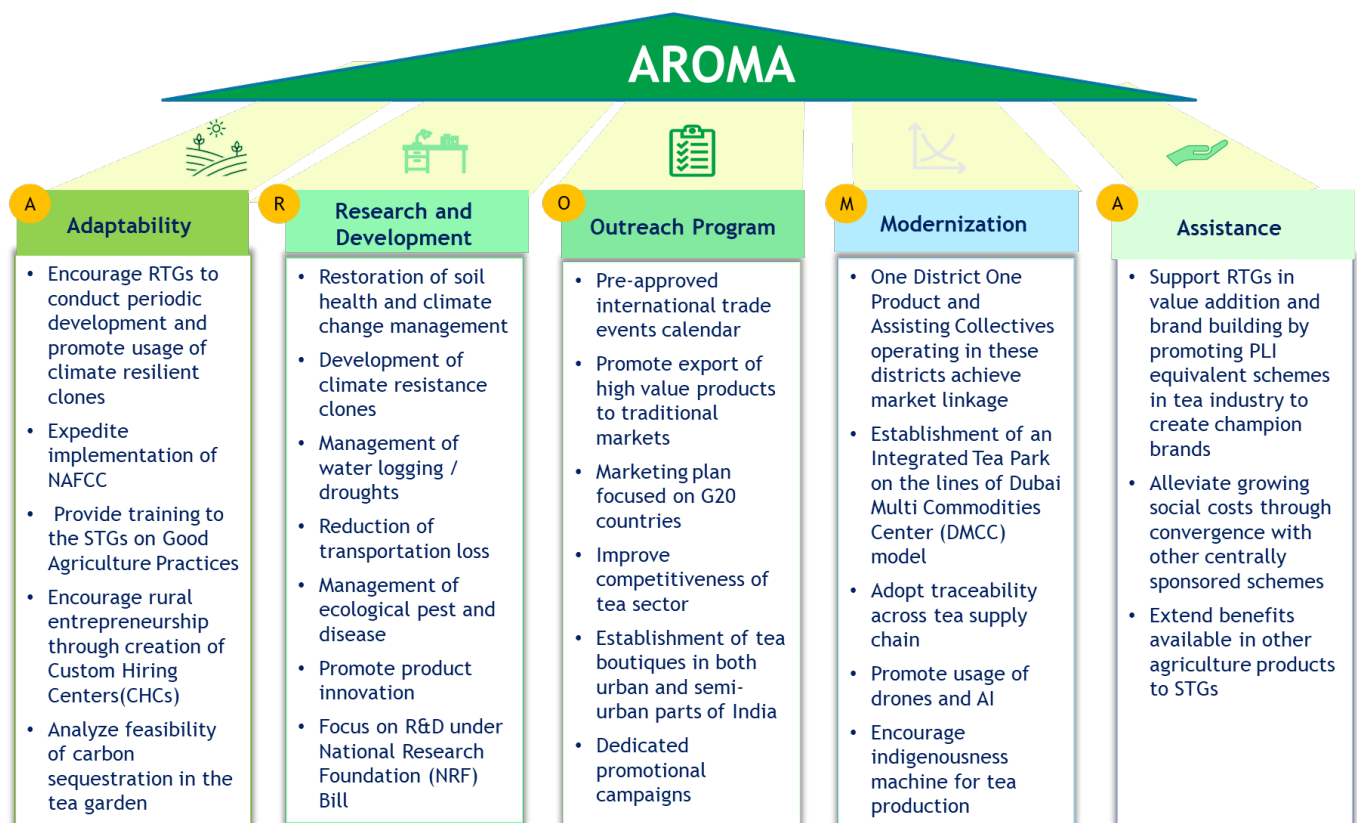


**SUGGESTIONS TO
CREATE A SUSTAINABLE
& FUTURE READY TEA INDUSTRY**



4. SUGGESTION TO ENHANCE THE AROMA AND CREATE A SUSTAINABLE TEA INDUSTRY FOR THE FUTURE

Indian tea industry had maintained its legacy, despite the transformation it has undergone over the decades. There are a plethora of challenges and structural problems which have plagued the sector. However, given its socio-economic importance, it is essential to reflect upon the intervention areas which would not only help shape up a resilient future-ready industry, but also enhance the AROMA of Indian tea industry globally. A five-pronged approach focused on enhancing the AROMA of the industry has been discussed subsequently:



4.1 Adaptability

It is important to focus on developing a sustainable ecosystem so that the plantations can withstand the challenges of climate change, labour shortage and changing market dynamics. The following suggestions may be explored to achieve the objectives:

- **Encourage RTGs to conduct periodic development and promote usage of climate resilient clones** which will help improve productivity and make plantations resilient against climate change, which has been an emerging concern.
- **Expedite implementation of the climate adoption project – National Adoption Fund for Climate Change (NAFCC)** – to support such activities in the tea producing regions that are vulnerable to the adverse effects of climate change.
- **Provide training to the STGs in each district** of the tea producing regions regarding GAP. The extension wing of KVKs under the aegis of ICAR or the state-run agricultural universities may be mandated to conduct such trainings to ensure good quality green leaf and made tea.

Focus can be made on maintaining the plucking cycle, soil management, input usage and replantation planning specifically.

- **Encourage rural entrepreneurship through creation of Custom Hiring Centers (CHCs)** which will help address the imminent challenges of tractor shortages and availability of machines. The CHCs may double as trainers specifically to the STGs in terms of usage/handling of such machines, so that the quality of crop and harvested output does not get affected.
- **Analyse the feasibility of carbon sequestration in the tea garden** which can be a potential enabler to mitigate climate change and generate alternative revenue streams for the tea estates. If feasible, land use patterns may be suitably amended in each of the tea growing states in India for facilitation.

4.2 Research & Development

To ensure the long-term sustainability and growth of the tea industry in India, it is crucial to prioritise and support research and development initiatives. The government should increase resource allocation towards it to address key challenges and tap the opportunities. The following thematic areas should be the focus of R&D efforts to improve tea quality, traceability, sustainability, and price realisation:

- **Restoration of soil health and climate change management:** Increasing threats from weather related variations and global warming is expected to impact tea cultivation. A key aspect associated with this is carbon management. Soil carbon has a definite role to play in the crop production as well managing soils. Efforts must be aimed at enhancing soil carbon pools. Research efforts can be directed towards it. Additionally focus needs to be on development of organic manures and climate resistant seed clones.
- **Development of climate resistance clones:** It has been observed that increase in CO₂ concentration in the atmosphere is expected to result in increase in biomass of crop and non-crop plants. Hence, weeds may continue to be a bigger problem. R&D studies to analyse behaviour of current tea clones and come up with climate resistance clones need to be encouraged.
- **Management of water logging/ droughts:** Over 50% of the tea area in Northeast India suffers from either water logging or drought, or both. The magnitude of moisture deficit varies from 8 mm to 300 mm in Upper Assam and Terai respectively. Improvement of drainage can result in significant growth in crop yield. With more areas becoming vulnerable to alternate flooding and droughts, emphasis has to be laid on R&D in drainage and water conservation practices across the major tea-producing states.
- **Reduction of transportation loss:** Loss during transportation is high as STGs depend on leaf agents, who tend to overload trucks for transportation and often use other items (e.g., rods, sticks, etc.) to push and store leaves in transportation vehicles which damages leaf during transport. Plastic-based crates or similar solutions can be researched and disseminated to agents to promote quality leaf transportation over long distances.
- **Management of ecological pest and disease:** Pesticides usage has increased to manage pests in tea plantation. Reduction of pesticide needs to be promoted by introducing eco-friendly practices for control of pests and diseases. As there is a global shift towards chemical-free food items, similar trends are expected in tea, and research to make the industry future-ready is needed.

- **Promote product innovation:** New innovations in other beverages have provided consumption thrust by appealing to the evolving behavioural aspects of consumers (e.g., coffee in portable format in airlines, fresh-pressed juices, potable coconut water, ready-to-drink tea sachets, etc.). R&D dedicated on innovation around tea products need to be made to promote the consumption of tea and improve price premium as well. Already many STGs have tried innovations such as bagless tea dip, flavoured tea, etc.
- **Focus on Research and Development (R&D) under National Research Foundation (NRF) Bill:** Govt has recently introduced the National Research Foundation (NRF) Bill 2023 to strengthen the research eco-system in the country, promote R&D and foster a culture of research and innovation throughout India's universities, colleges, research institutions, and R&D laboratories. This should have a provision for supporting R&D, specifically for the tea industry.

4.3 Outreach Program

This is a key component in establishing a semblance between supply and demand in the Indian tea industry. The Government should focus on a structured outreach program to promote exports as well as increase domestic consumption of tea in India.

Enhanced export promotion activities may include the below initiatives:

- **Export promotion by organising international trade events:**
 - **Participation in trade shows** has proven to be an effective strategy for building brand awareness and showcasing products. Sri Lankan tea industry's regular involvement in approximately 34 events per year highlights the importance of such events to improve global competitiveness. To improve participation in trade shows a pre-approved calendar of promotion events can be finalised at the start of the year.
 - **Identify target markets or countries and establish connections with relevant stakeholders** from those markets. Prior to organising the trade shows, the Government can facilitate impactful Business-to-Business (B2B) meetings between buyers and sellers, further enhancing networking and collaboration opportunities.
 - **Promote exports to high value markets and key traditional markets:** Higher assistance can be provided for promoting packet tea of Indian Origin in overseas countries. The government can plan to organise promotional campaigns in traditional markets and markets where there is a potential for better price realisation.
 - **Formulate a comprehensive marketing strategy specifically targeting G20 countries.** Under the G20 countries, Turkey is an emerging market of Indian tea. Therefore, under the G20 Presidency, the country should leverage the platform to showcase its tea industry. By engaging with key stakeholders and decision-makers from G20 countries, India can create awareness and generate interest in its tea products.
- **Increase Export Competitiveness of Indian Tea Sector:**
 - **Promote alternate energy sources in tea garden:** Installation of solar panels in the tea garden can reduce the energy cost of tea production and this will help the climate change initiatives taken by the Indian Government. The government should provide financial assistance to tea estates for the installation of solar panels. This can be done by convergence with the Green Credit Program launched.

- o **Strengthen logistics and supply chain:** The production cost of tea in India is comparatively high. The government should work towards improving logistics and supply chain infrastructure for tea exports. This involves streamlining export procedures, reducing transit times, and ensuring efficient handling and transportation of tea shipments.
- o **Support market entry assistance:** Given over 50% of India's tea production comes from Small Tea Growers and considering the presence of multiple MSME players in the domestic tea market, the government should extend market entry assistance to tea exporters, particularly small and medium-sized enterprises (SMEs).
- o **Revision of Remission of Duties and Taxes on Exported Products (RoDTEP) rates** – This has been introduced to offset the previous MEIS scheme which was formulated to incentivise exporters in the form of duty drawbacks; typical rates for MEIS schemes used to be in the range of 3%–5% depending on the product category exported. However, due to WTO norms, the MEIS scheme has been abolished and current RoDTEP rates are around 1% for the tea industry, which makes exports uncompetitive. A higher rate can be explored to offset the high CoP and make it competitive globally.

Focus on domestic promotion is equally important as exports, given that it accounts for a major share of the tea production in India and has the potential to further improve the given low PCC levels in India. Enhanced domestic promotion activities may include the below initiatives:

- **Establishment of tea boutiques in both urban and semi-urban parts of India**
 - o **The government and tea industry stakeholders should collaborate to establish tea boutiques in both urban and semi-urban parts of India.** These boutiques can serve as experiential spaces where consumers can sample and purchase a variety of Indian tea products. The boutiques should be strategically located in high-footfall areas and offer a diverse range of teas, including speciality and premium blends. The government can provide incentives, such as subsidised rent, to encourage the establishment and growth of tea boutiques.
 - o Moreover, the government should actively promote tea tourism by including tea boutiques in tourism initiatives and itineraries. This can involve showcasing tea boutiques as attractions in tourist guides, promoting tea tasting sessions and workshops as tourist activities, and integrating tea boutique visits into tea plantation tours.
- **Promotion through social media**

Leveraging social media platforms for promoting tea in India. The government, tea associations, and tea companies should develop engaging social media campaigns that highlight the culture, heritage, and health benefits associated with Indian tea. Encourage user-generated content by launching online contests, challenges, or campaigns that invite tea enthusiasts to share their experiences, recipes, or creative ways of enjoying Indian tea.

4.4 Modernisation

It is important to have a robust and competitive supply chain in place which meets the evolving demands of the industry and customer requirements of quality and convenience. For the same, it is important to focus on specific modernisation and supply chain initiatives which can make the value chain more sustainable:

- **One District One Product and Assisting Collectives operating in these districts achieve market linkage**

Due to specific agro-climatic conditions, tea is grown in select states of India – with top four states of Assam, West Bengal, Tamil Nadu and Kerala together accounting for ~98% of the total tea production in the country. Within these states, the **Government can choose a few aspirational districts for promoting the teas from the region**. These districts can be developed for quality production and subsequent brand building (both in domestic markets as well as exports). The objective of developing these clusters would be to:

- Improve the quality of tea produced by STGs in these clusters
- Branding of STG tea which can be marketed both in the domestic and export markets
- Showcase the rich heritage and legacy of Indian tea of various origins to the world

The clusters developed would focus on the following components:

- Creation of collectives (in the form of SHGs/ FPOs/ FPCs) by raising awareness levels about the potential benefits of formation of collectives and dissemination of information regarding incentives/ policies available to the collectives
- Creating core infrastructure for helping these collectives move up the value chain in the form of processing, sorting, grading and packaging
- Creation of allied infrastructure such as quality testing, blending, warehousing facilities, certifications, marketing activities, etc.
- Creation of enabling infrastructure such as roads, water supply, power supply, drainage, etc.

This will help create a one-stop facility for establishing a bush-to-cup operating model in a seamless manner.

- **Establishment of an Integrated Tea Park**

Dubai Multi Commodities Center (DMCC) was established in 2002 as a strategic initiative of the Government of Dubai with a mandate to provide the physical, market and financial infrastructure required to establish Dubai as a hub for global commodities trade (Diamonds, Gold, Tea, Coffee, etc.). The tea centre in DMCC offers a purpose-built infrastructure of processing facilities, market venues, business services and a growing community of producers, trading parties and entrepreneurs all under one roof. It also provides tea tasting and in-house expertise to the members along with limited free storage, access to tea blending, tea bag and loose tea packing facilities and networking opportunities. The centre also assists in re-export of tea.

Similarly, an integrated tea park is required in India which can provide multiple solutions under one roof, bring together various industry players, and provide opportunities for small/ new/ large players to collaborate and achieve efficiency at the same time. This integrated tea park can be set up in Public-Private Partnership mode.

- **Technology enablement**

- **Traceability across the tea value chain:** Traceability in the tea value chain has become a significant concern for consumers, and packeteers are increasingly responding to this demand. To ensure improved quality in the tea industry, it is important to support and promote traceability. The TBI can leverage its Chai Sahyog app to facilitate traceability throughout the value chain.
- **Usage of drones and AI:** There is growing adoption of drones in agriculture globally for its multiple uses and to promote precision farming. Drones can be utilised for soil and field analysis, planting of crops, crop spraying, monitoring, irrigation and health assessment of crops.

While currently select large tea estate players are exploring drone adoption in their estates, given the labour issues faced by STGs and RTGs, drones can be effectively leveraged to support them. In this regard, support towards promotion of pilot projects, infrastructure development for drone management, training and capacity development needs to be provided.

- **Promote indigenous machines for tea production:** Under the Atma Nirbhar Bharat program, the government should allocate funds for research and development initiatives focused on developing indigenous machinery for tea production. This will also help to reduce the production cost of Indian tea.

4.5 Other Assistance

- **Support RTGs in value addition and brand building by promoting PLI equivalent schemes to create champion brands in tea**

Production linked incentives (PLI) scheme introduced by the GoI has been a booster across multiple sectors in India (including food processing and FMCG sectors). The scheme promotes the creation of champion brands in respective sectors with a focus on improving the export potential of these products, value addition and rewarding investments by industry players. Similar initiatives can be explored in the tea industry, wherein support is required to revitalise many existing factories/infrastructures of RTGs as well as to support emerging startups in tea industry which have the potential to scale rapidly with the right support.

Support under the scheme can be made available for production/ exports of specific value-added tea products enlisted under the scheme, which would also assist in higher value realisation. Possibility to develop STGs and RTGs together by mandating specific minimum association/procurement from STGs under this scheme can lead to combined development of the industry.

- **Alleviate growing social costs through convergence with other centrally sponsored schemes**

Presently high social costs associated with labour such as residence, ration, medical, education of children, etc. add to the overall costs of RTGs and impact profitability. GoI has introduced numerous schemes for social welfare such as Ayushman Bharat, Pradhan Mantri Gramin Awas Yojana, Swajal Scheme, Beti Bachao Beti Padhao, and others. Tea garden workers can be facilitated to avail such schemes to reduce the social cost burden on RTGs

- **Extend benefits available in other agriculture products to STGs**

There are multiple benefits available to the agriculture sector in India, covering finance, insurance, marketing, minimum income, innovation funds, etc. which are either not present in tea or exist on a small scale. Select benefits available to agriculture can be gradually extended to tea farmers as well. This will not only reduce duplicity in select areas but also provide enhanced support to STG community across India.

The above initiatives need to be looked at for incremental measures and support over the ongoing schemes of the Central Government and State Governments to drive sustainable growth of the tea industry and revitalise it in the coming years.

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