

Global Market Report: Tea

Vivek Voora, Steffany Bermúdez, Cristina Larrea
Series Editor: Sofia Baliño

Global Demand for Tea Is Growing Despite Sustainability Challenges

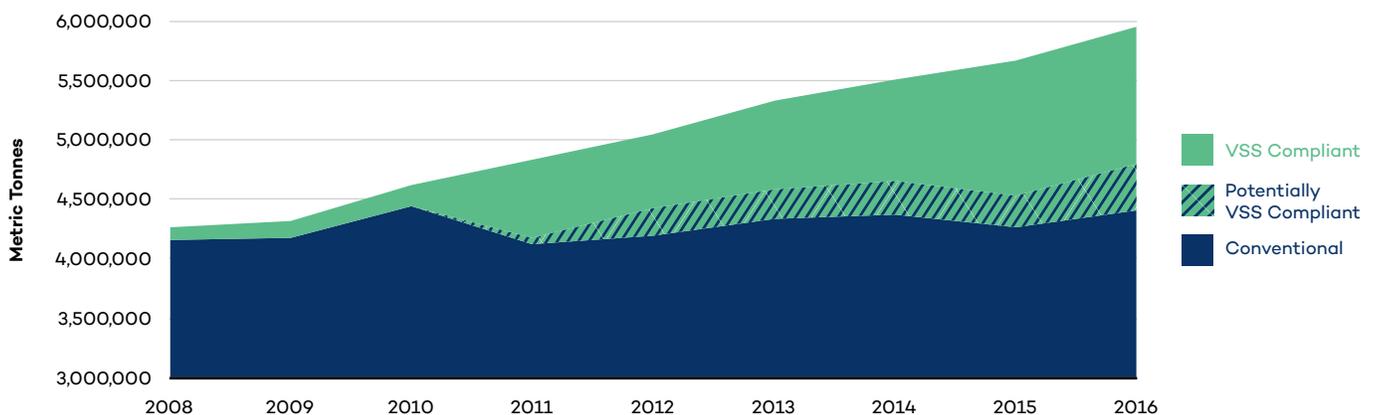
Tea, a dried leaf-infused beverage derived from the leaves of a small shrub originally from China, has become the world’s second most popular beverage after water, with 3 billion cups consumed every day across the world.^{1,2} In 2017, total tea production accounted for 5.98 million tonnes, of which approximately 35 per cent was exported, worth USD 8 billion.^{3,4,13} That same year, the sector had a retail value of approximately USD 50 billion.^{5,6} Tea was grown in 48 countries in 2016, including 12 Low Human Development Countries (LHDCs). Tea production employs 13 million people, 9 million of whom are smallholder farmers, while the remainder work in tea estates; in

China, Sri Lanka and Kenya, which account for half of the world’s tea production, the majority of tea is produced by smallholder farmers.^{7,8} Production is concentrated in a few countries, with the top seven growing countries accounting for 90 per cent of the global tea supply in 2015.⁹

The largest tea-exporting countries in 2017 were China (USD 1.6 billion), Sri Lanka (USD 1.5 billion) and Kenya (USD 1.4 billion), while the largest importing countries were Pakistan (USD 550 million), Russia (USD 525 million) and the United States (USD 487 million).^{10,11} A significant amount of tea is also consumed domestically. For instance, the amount of tea consumed in China, India and Turkey in 2015 was more than in all other tea-consuming nations combined.⁹

Standard-Compliant Tea Accounted for At Least 19.4% of Total Tea Production in 2016

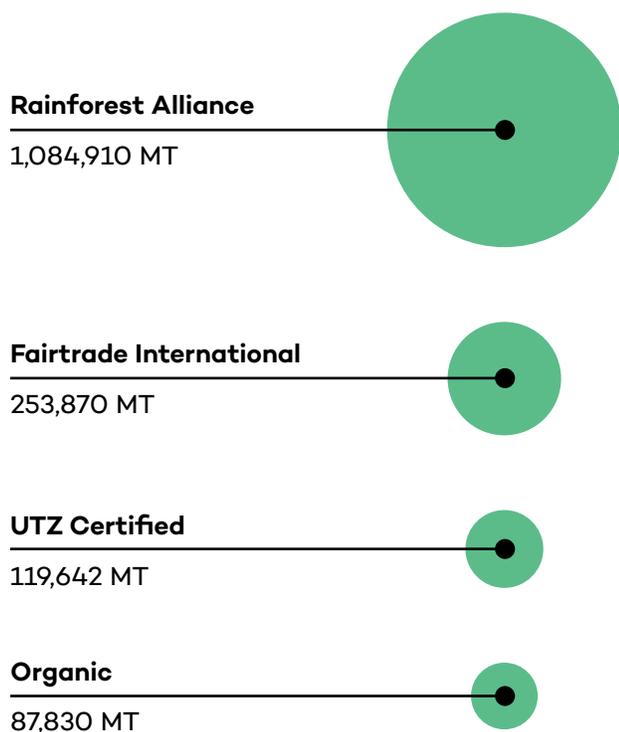
Figure 1. Global tea production trend, 2008–2016.⁴⁴



Note: VSS-compliant production volumes refer to tea produced in compliance with one or more VSSs. Conventional production volumes do not comply with any existing VSS. Production volumes that are defined as potentially VSS-compliant cannot be definitively listed in either category with the data currently available.

How Much Tea is Certified by Each Standard?

Figure 2. Standard-compliant tea production volumes in 2016.⁴⁴



Global tea supply growth outpaced demand growth in 2016 and 2017 at rates of 4.4 per cent and 4.3 per cent, respectively, resulting in a surplus of approximately 200,000 tonnes for both years.^{4,12,13} The global supply–demand balance of tea closed in 2018 with a small surplus and this trend is projected to continue until 2020.^{12,13} As tea-producing countries are also the largest consumers of tea, production and consumption are strongly correlated.¹⁴ The Food and Agriculture Organization of the United Nations (FAO) reports a balanced production and consumption growth of about 4.4 per cent between 2007 and 2016.¹⁴

The sector is projected to experience continued growth due to increasing demand primarily from Asian and Pacific countries, particularly those experiencing increasing incomes; a growing clientele among young urban consumers; interest in the health benefits of drinking tea; and the expansion of new products and flavourings, such as ready-to-drink tea, premium tea, and herbal and fruit fusions.^{15–19} In addition, demand for green tea is expected to outpace demand for black tea.^{4,12,19} The considerable expansion of sustainable tea products is also worth noting. In 2016, 19.4 per cent of

the market was made up of tea compliant with Voluntary Sustainability Standards (VSS), versus 2.4 per cent in 2008. However, only 6.6 per cent of tea production is potentially VSS-compliant, thus leaving 74 per cent of tea as conventional.

According to the FAO and a number of market research companies, the tea sector is expected to grow at a compound annual growth rate (CAGR) of about 4 to 5.5 per cent from 2017 to 2024 and is projected to reach USD 73 billion in retail value by 2024.^{15–19}

Despite this positive projection, the tea industry faces important challenges that are unique to the sector. Access to tea-processing facilities is essential for tea estates and smallholder tea farms to remain viable, as picked leaves need to be processed within 6 hours. Therefore, international tea manufacturers have established their processing plants close to the fields, which has created a vertically integrated value chain. In fact, the tea supply chain is controlled by a small number of companies, which has resulted in a high level of vertical and horizontal integration: approximately 85 per cent of tea is sold by a few multinational companies, and 20 per cent of the global market is controlled by the three largest tea companies.^{12,20} Consequently, it is necessary to establish a more equitable wealth distribution across tea supply chains to improve the sustainability of the sector. Furthermore, 70 per cent of global tea production is sold via auctions through anonymous transactions, in which intermediaries can easily switch between suppliers, pushing down prices and reducing margins for farmers.¹² Tea cultivation areas are also geographically limited, as tea is a sensitive crop that requires specific growing conditions to thrive.¹⁵ Climate change is also expected to affect temperature and rainfall patterns, which can significantly impact yields.²¹ Tea estates are already reporting heavier rains and longer dry seasons leading to increased soil erosion and further use of fertilizers, pesticides and irrigation to maintain productivity.²¹ Additional challenges facing the tea sector include forced and child labour, which are still rampant; poor tea plantation working conditions; low wages; and pesticide residues in the final product.^{15,22–24}

Demand for More Sustainably Produced Tea Is Growing and Could Help Address the Sector's Challenges

Voluntary Sustainability Standards^A (VSS) have been used in the tea sector for almost 40 years to address the various challenges facing the sector and to provide tea consumers with more sustainable options.²⁵ VSS-compliant tea is produced to meet consumer preferences while aiming to maintain the sector's long-term sustainability by requiring agricultural practices that enable climate resilience, prevent soil erosion, lower pesticide use, increase profitability for smallholders, and improve workers' conditions, such as providing the right to collective bargaining and access to sanitation and clean drinking water.²⁶

Demand for more sustainable tea historically came from outside producing countries, primarily from Europe and North America. Tea producers with the resources to become VSS-compliant saw an opportunity to access these potentially lucrative export markets while being able to fall back on the growing domestic demand.^{15,26} Considering their significance in meeting global demand for more sustainable tea, VSSs have had an important role in improving the working conditions of tea workers and the profitability of smallholders.²⁶ VSSs aim to create a virtuous cycle where demand for more sustainable tea results in better conditions for the producers and environments that support its production, which, in turn, should lead to greater investment in a more sustainable and profitable sector for producers.

On the supply side, VSS-compliant tea has grown significantly since the first tea plantation was certified organic in 1983.²⁵ From 2008 to 2016, VSS-compliant tea experienced a CAGR of about 35 per cent, accounting for at least 19 per cent of tea production overall. The Rainforest Alliance, Fairtrade, UTZ Certified and Organic are the main VSSs in the tea sector when ranked by production size. In 2016, 1.15 million tonnes of tea were VSS-compliant, and valued at USD 2 billion.^{27,28} This value is derived from average producer prices per country, as reported by the FAO, which were then applied to the volume of VSS-compliant tea produced by each country.^{27,28} The majority of

LIVELIHOODS

Over 13 million people employed in tea production
9 million smallholder farmers
70% of global production comes from 8 million smallholder farmers in Asia and Africa

MARKET VALUE

Over USD 2 Billion VSS-compliant tea based on 2016 tea producer prices

CAGR 2008–2016

Conventional production is up by 0.71% while VSS production is up by 35%
VSS production in LHDC Tanzania is up by 79%

TEA PRODUCTION IN LHDCS

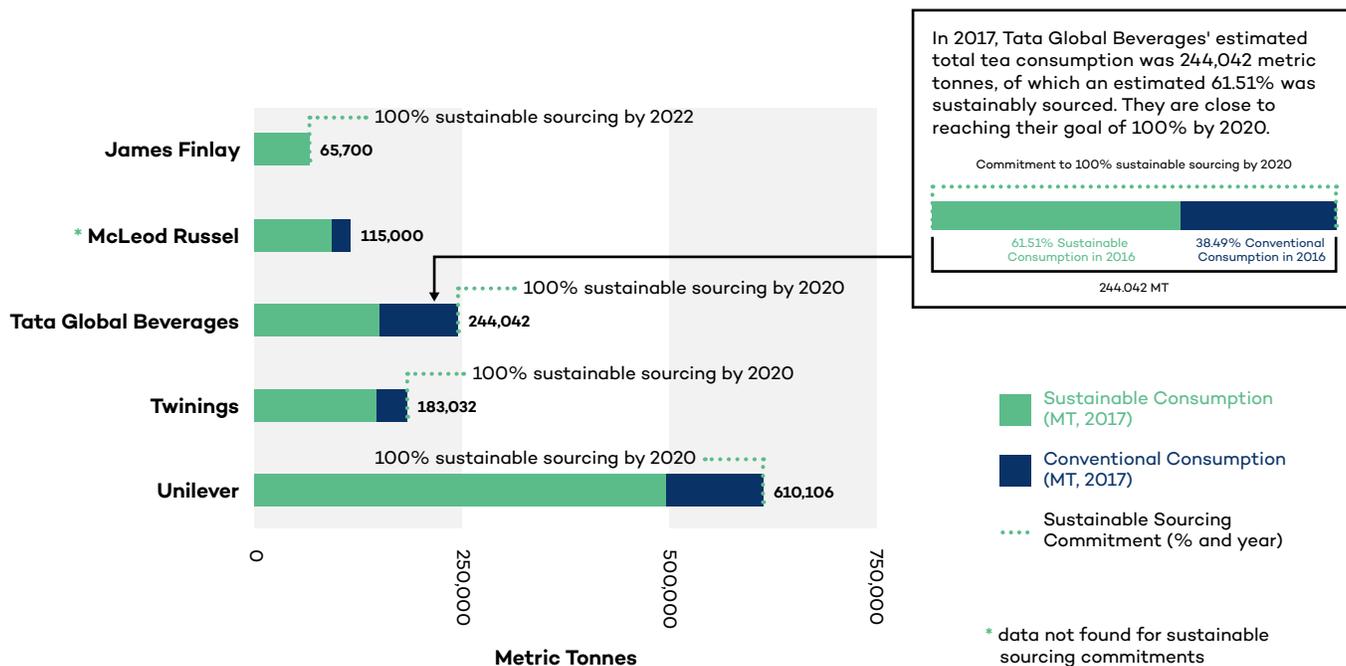
5% of total tea produced
12% of VSS-compliant tea produced based on 2016 data

VSS-compliant tea comes from Africa (Kenya, Malawi, Rwanda) and Asia (India, Turkey, Indonesia).

On the demand side, several important corporate sustainable sourcing commitments drive the demand for VSS-compliant tea. In 2017, the five largest tea-consuming companies purchased more than 1.2 million tonnes of tea, at least 900,000 tonnes of which were VSS-compliant. Based on the sourcing commitments of these five companies and current tea-sourcing information, an additional 245,000 tonnes of sustainable tea could be consumed by 2020. These leading buyers' sourcing commitments are driven mainly by final consumer preferences to purchase more sustainable and healthy products.¹² European and North American countries are the main destinations of VSS-compliant tea,²⁹ and they are expected to continue being the major consumers of sustainable tea in the coming years, and will likely develop increased demand as consumers

^A The United Nations Forum on Sustainability Standards (UNFSSs) defines VSSs as "standards specifying requirements that producers, traders, manufacturers, retailers or service providers may be asked to meet, relating to a wide range of sustainability metrics, including respect for basic human rights, worker health and safety, the environmental impacts of production, community relations, land use planning and others." To review the purpose of various VSSs and the set of requirements producers need to comply with under each scheme, please access State of Sustainability Initiatives Reviews in the following link: <https://www.iisd.org/ssi/>

Figure 3. Major tea-consuming companies and their estimated sustainable sourcing volumes and commitments**



** consult methodology for estimating sourcing volumes at the end of the document

become more willing to pay more for standard-compliant and premium tea.^{29,30}

Despite this positive outlook, growing demand for VSS-compliant tea remains a challenge as the largest tea-producing countries are also the largest consumers, and they tend toward consuming conventionally grown options over more costly sustainable versions.^{4,15,20} This situation influences the oversupply of VSS-compliant tea, which is another formidable challenge, as it leads to certified tea being sold as conventional.^{4,26} Nevertheless, recent efforts have been made to develop national VSSs, such as the Trustea standard in India and the Lestari standard in Indonesia, which have grown significantly to 400,000 tonnes of verified tea supporting livelihoods for 350,000 workers and 40,258 smallholders.⁴²⁻⁴⁴

Demand for VSS-compliant tea is expected to continue growing in some of the largest producing countries, such as China, India, Indonesia and Sri Lanka, with the growing middle classes developing a taste for specialty and more sustainable tea.^{15,29} Furthermore, there is

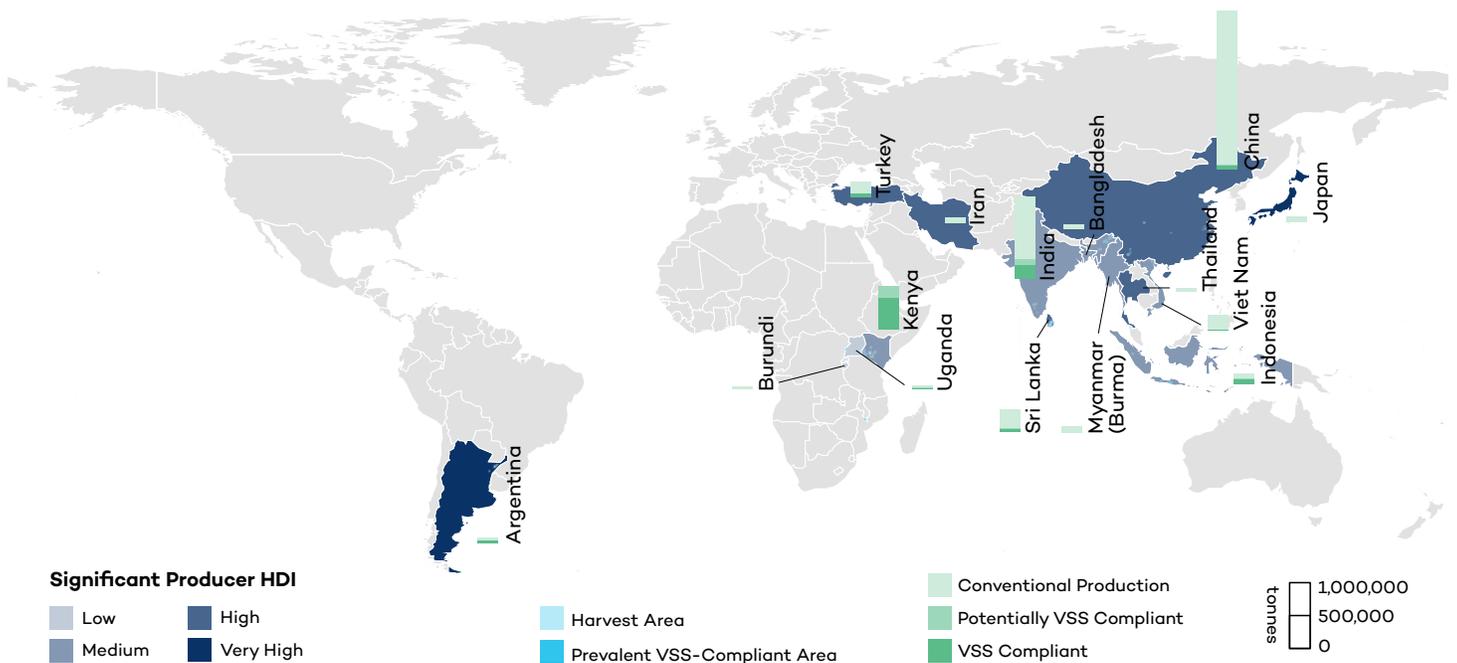
potential to develop demand for VSS-compliant tea over the next decade in the fastest-growing conventional tea markets, which are projected to be in East Africa: Rwanda, Uganda and Kenya have forecasted growth of 9 per cent, 5 per cent and 4.4 per cent, respectively. Consumers in these countries could develop tastes for more sustainable options over time, particularly in Kenya where almost all of the country's tea production is VSS-compliant, with an increasing interest from the government of this country to promote domestic consumption.⁴⁵ VSS-compliant tea production needs to translate into equivalent sales if it is to continue expanding over time.²⁶

Increasing VSS-Compliant Tea Production by Focusing on the Top Three Tea-Producing Asian Countries

Going forward, there is an opportunity to increase VSS-compliant tea production. Demand for more sustainable tea is expanding, primarily in Europe and

Tea-Growing Regions of the World

Figure 4. Distribution of tea production in the top 15 tea-producing countries in 2016



Sources: see endnotes 13, 56, 57

Download high resolution version of the map at <https://www.iisd.org/sites/default/files/publications/ssi-global-market-map-tea.pdf>

North America, which could potentially balance the existing oversupply.^{12,26,28,46} Consumption of organic tea is also expected to grow in the Asian-Pacific region due to a rise in consumer preferences for more natural products.^{30,47} To realize this potential, the industry must address the above-mentioned challenges, including more equitable wealth distribution across supply chains, increased profitability for smallholders, better labour conditions and wages for tea workers, and improved resilience to climate change impacts on yields.

As tea cultivation is confined to specific places around the world that offer suitable growing conditions, the greatest potential for expanding VSS-compliant tea lies in existing producing countries, especially considering their total tea output and the current presence of VSSs. China, India and Sri Lanka currently account for almost 70 per cent of total global tea production but only 26 per cent of total VSS-compliant tea production (2, 16 and 15 per cent, respectively), indicating that there are opportunities for expansion.⁴⁸ In contrast, and despite being the third-largest producer in the world, almost all

of Kenya's tea production (approximately 99 per cent) is already VSS-compliant. Other tea-producing countries such as Vietnam, Turkey and Myanmar also offer good prospects for increased sustainable tea production.

Another important consideration in assessing opportunities for expanding VSS-compliant tea production is the human development level of tea-producing countries, as measured by the Human Development Index (HDI). Out of 48 tea-growing countries in 2016, 12 were LHDCs according to the HDI, and 6 of them produced VSS-compliant tea (Burundi, Ethiopia, Malawi, Rwanda, Uganda and Tanzania). These LHDCs accounted for approximately 5 per cent of the total tea grown in 2016 and were responsible for 12 per cent of the total VSS-compliant tea produced worldwide that year.

According to our analysis, some of these LHDCs show promising signs of growth in VSS-compliant production. For instance, between 2008 and 2016, VSS-compliant tea production in Tanzania increased at a CAGR of

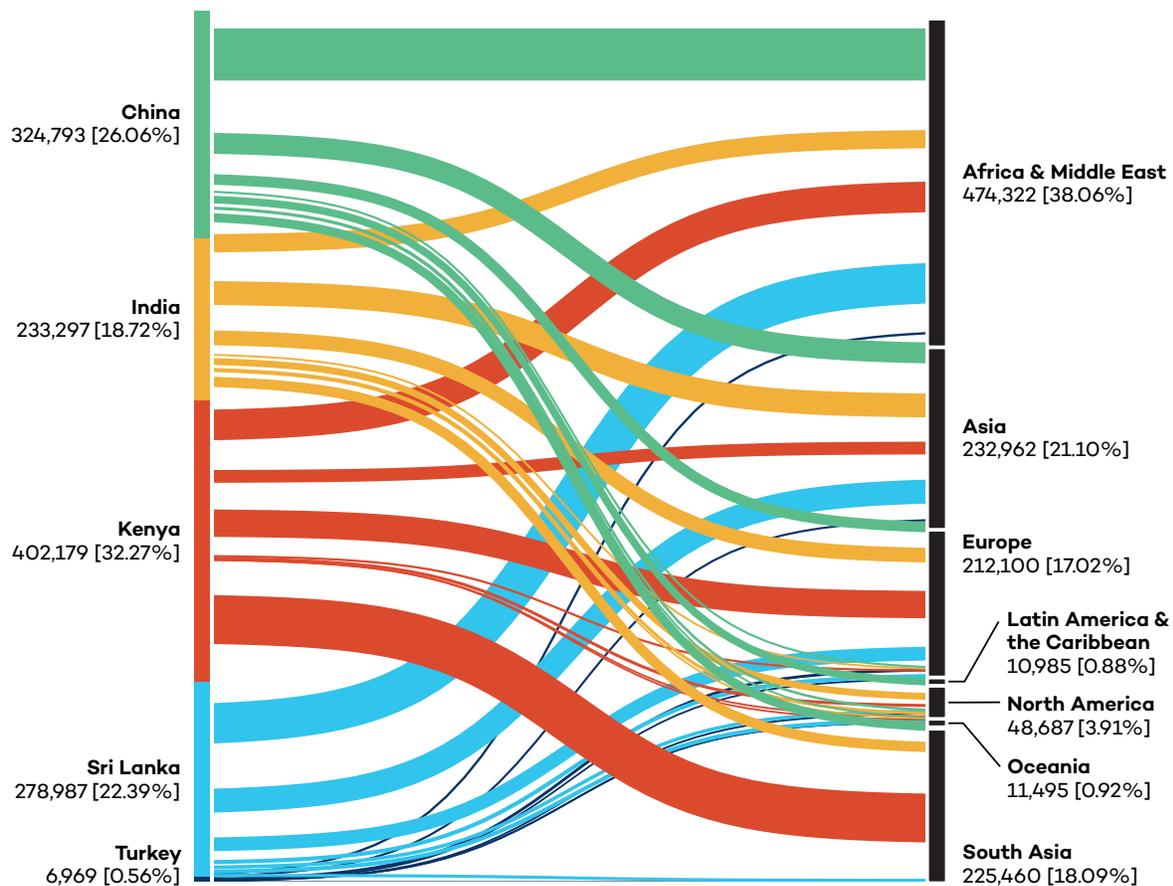
approximately 79 per cent to almost 27,000 tonnes, and five additional LHDCs started producing VSS-compliant tea during this same time period. The largest VSS-compliant production volumes from LHDCs came from Rainforest Alliance, Fairtrade, UTZ Certified and Organic in 2016. VSSs have also been shown to support more sustainable tea production compared to conventionally grown tea in some contexts. For instance, certified tea farmers and workers earned 5.3 million Euros in Fairtrade premiums in 2017, and almost all Rainforest Alliance-certified tea plantations in Kenya were found to provide their workers with clean drinking water while a little more than 50 per cent of conventional tea plantations do not.^{49,50}

If properly implemented as part of broader sustainable development strategies, the expansion of VSS-compliant tea production in LHDCs could result in important sustainable development benefits via improved agricultural practices that enable climate resilience and better working conditions for tea workers, and could potentially contribute to improved profitability for workers and smallholders. The expansion of VSSs can also lead to positive development outcomes in non-LHDCs where tea workers and smallholders continue to experience poverty.

In terms of the opportunities to expand VSS-compliant tea production in LHDCs and maximize their potential to deliver sustainable development outcomes, the

South-South Trade Dominated Tea Flows in 2016

Figure 5. Trade flows of the largest tea-producing countries in 2016, in tonnes



Sources: see endnotes 13, 58

These five countries represent 79 percent of total tea production in 2016. The percentage in brackets for each country represents the proportion of the total volume of green and black tea exported in 2016 by these countries. The percentage in brackets for each region represents the proportion of the total volume of green and black tea imported in 2016, from the five countries.

countries that show the most potential for growth in light of their share of total tea production, the presence of VSSs and their HDI value are Burundi and Uganda, followed by Mozambique, Tanzania and Papua New Guinea, according to our analysis based on 2016 figures. For the most part, VSS-compliant tea production is new in many LHDCs and its potential benefits are likely yet to be felt. The potential support that VSSs can bring in the form of training, extension services and access to markets should assist both tea farmers and plantation workers to improve their living conditions. For instance, Fairtrade reports that their 350,000 participating tea farmers and workers across 12 countries sold 12,100 tonnes of tea in 2016 and raised approximately USD 7.5 million in premiums used to pay for beneficial community projects such as access to clean water, schools and health centres.⁴⁹ Nevertheless, reports of instances where VSS requirements have not been respected on certified tea plantations range from exceeding maximum pesticide residues to continued incidences of forced and child labour.^{22,24,51} Expanding sustainable tea production in LHDCs may also become subject to more competition as labour shortages undermine the economic viability of tea

estates and plantations around the world, particularly in emerging economies, where more lucrative employment opportunities can be found.⁵²⁻⁵⁴

Clearly, VSSs must ensure that their interventions lead to a better tea sector where these sustainability challenges are addressed. Expanding VSS-compliant tea production in LHDCs and the largest tea-producing countries, China, India and Sri Lanka, offers the potential for tea to become a crop that empowers producers, restores natural environments and enables resilient value chains.⁵⁵

Despite the efforts of VSSs in the tea sector, more sustainable tea consumption and production will require dialogue and a determined and coordinated approach among all tea supply chain stakeholders, trade unions and the public sector to address some of these challenges. Examples of efforts to bring together stakeholders to grapple with challenges include Tea 2030 – Forum for the Future, the Ethical Tea Partnership and the Intergovernmental Group on Tea supported by the FAO. Along with VSSs, these multi-stakeholder initiatives and efforts are crucial for the sector to become sustainable in perpetuity.

FIGURE 3 NOTES: BRIEF EXPLANATION OF THE METHODOLOGY USED TO ESTIMATE SOURCING VOLUMES

Unilever:

- **Source (*) volume total, 2017 (610,106 MT):** This figure was estimated by multiplying the company's tea market share (10% of world's tea production in 2017)³¹ by the global tea production in 2017 (6,101,060 MT) as reported by the FAO Corporate Statistical Database (FAOSTAT)¹³
- **Source volume standard-compliant certified, 2017 (494,185 MT):** This figure was estimated by comparing the company's report of purchasing 81 per cent VSS-compliant tea³² to the total sourcing volume in 2017.

Tata Global Beverages (minimum values):

- **Source volume total, 2017 (244,042 MT):** This figure was estimated by multiplying the company's tea market share (4 per cent of the world's tea production in 2010, extrapolated to 2017)³⁹ by the global tea production in 2017 (6,101,060 MT), as reported by FAOSTAT¹³
- **Source volume standard-compliant certified, 2017 (150,119 MT):** This figure was obtained by estimating the consumed volumes in 2017 as a proxy for sourcing volumes of VSS-compliant tea for the brands Tetley (sold in Europe, Middle East and Africa [EMEA] and Canada, America and Australia [CAA] markets) and Tata Tea (sold in India).³³ Both brands represent approximately 75% of total sales for the company in 2017.³³

Tata Tea in India (total, 2017: 191,681 MT): This figure was estimated by multiplying the brand's market share in India (19.7% of India's tea consumption)³⁹ by the total volume of tea consumed in India in 2017 (973,000 MT), as reported by Statista.⁴¹

Tata Tea in India (VSS-compliant, 2017: 97,757.31 MT): This figure was obtained by multiplying the 51 per cent of VSS-compliant tea reported by the brand in India,³³ by the total tea sales volume estimated for the brand in 2017.

Tetley (EMEA and CAA, total, 2017: 41,062 MT): This figure was estimated by converting 45 million daily cups of Tetley tea consumed around the world, as reported by the company,³⁴ into the number of cups consumed annually. The resulting amount was converted into tonnes using the ratio of 2.5 grams of tea/cup⁶⁰ and 1 tonne = 1,000,000 grams

Tetley (EMEA and CAA, VSS-compliant, 2017: 41,062 MT): This figure was estimated by assuming that 100 per cent of Tetley tea consumed in 2017 was VSS-compliant, since the company reported that 100 per cent of their tea sold in EMEA and CAA markets (in which all Tetley Tea is sold) was VSS-compliant in 2017.³³

The total sourced volume of VSS-compliant tea for the company at the global level was estimated as follows:

Subtract the 49 per cent of Tata Tea sold in India as conventional (93,923 Mt) from the company's total sourced volume at the global level (India, EMEA and CAA) in 2017 (244,042 Mt), as calculated above, assuming that 100 per cent of Tetley tea and other brands sold in EMEA and CAA is 100 per cent sustainable, according to the company's reports.³³

James Finlay (sourcing volumes refer to their own plantations only, due to the absence of data)

- **Source volume total, 2017 (65,700 MT):** This figure was obtained by converting total tea production from the company's own plantations in 2017,³⁷ measured in kilograms, into tonnes (65,700,000 kg/1,000).
- **Source volume standard-compliant certified, 2017 (65,700 MT):** This figure was estimated by multiplying the 100 per cent of VSS-compliant tea reported by the company³⁷ by the total produced volume in 2017.

Twinings

- **Source volume total, 2017 (183,031 MT):** This figure was estimated by multiplying the company's tea market share (3 per cent of the world's tea production in 2010, extrapolated to 2017)³⁹ by the global tea production in 2017 (6,101,060 MT), as reported by FAOSTAT.¹³
- **Source volume standard-compliant certified, 2017 (146,425 MT):** This figure was estimated by multiplying the 80 per cent of VSS-compliant sourced tea reported by the company⁵⁹ by the total purchased volume in 2017.

McLeod Russel

- **Source volume total, 2017 (115,000 MT):** This figure was obtained by converting the total tea production from the company's own plantations in 2017, measured in kilograms, into tonnes (115,000,000 kg/1,000).³⁸
- **Source volume standard-compliant certified, 2017 (92,000 MT):** This figure was estimated by multiplying the 80 per cent of VSS-compliant sourced inputs (including tea) reported by the company³⁸ by the total produced volume in 2017.

(*): Source volume can refer to: produce, purchase or use volume of tea depending on where the company stands in the value chain.

ENDNOTES

1. Anderson, R. (2014). Tea industry's future depends on corporate collaboration. Retrieved from <https://www.bbc.com/news/business-26123944>
2. Tea. (n.d.) In *Merriam-Webster's online dictionary (11th ed.)*. Retrieved from <https://www.merriam-webster.com/dictionary/tea>
3. United Nations Department of Economics and Social Affairs. UN Comtrade Database: International Trade Statistics. Retrieved from <https://comtrade.un.org/data>
4. Intergovernmental Group on Tea. (2018). Current Market Situation and Medium Term Outlook. In *Committee on Commodity Problems (CCP:TE 18/CRS1; vol. CCP:TE 18/CRS1)*. Retrieved from Food and Agriculture Organization of the United Nations website: <http://www.fao.org/3/BU642en/bu642en.pdf>
5. Friend, E. (2013). Dual Opportunities for Tea in Retail and Foodservice. *Market Research Blog*. Retrieved from <https://blog.euromonitor.com/dual-opportunities-for-tea-in-retail-and-foodservice/>
6. Statista. (n.d.). Value of the global tea market from 2017 to 2024 (in billion U.S. dollars). Retrieved from <https://www.statista.com/statistics/326384/global-tea-beverage-market-size/>
7. Solidaridad Network. (2014). Tea. Retrieved from <https://www.solidaridadnetwork.org/supply-chains/tea>
8. Ethical Tea Partnership. (2019). Smallholder Tea Farmers Archives. Retrieved from <http://www.ethicalteapartnership.org/category/key-areas/smallholder-tea-farmers/>
9. Bolton, D. (2016). Global Tea Production 2015. *World Tea News*. Retrieved from <https://worldteanews.com/tea-industry-news-and-features/global-tea-production-2015>
10. Workman, D. (2019). Tea Exports by Country. *World's Top Exports*. Retrieved from <http://www.worldstopexports.com/tea-exports-by-country/>
11. Workman, D. (2019). Tea Imports by Country. *World's Top Exports*. Retrieved from <http://www.worldstopexports.com/tea-imports-by-country/>
12. Intergovernmental Group on Tea. (2018). Emerging Trends in Tea Consumption: Informing a Generic Promotion Process. In *Committee on Commodity Problems (CCP:TE 18/2; vol. CCP:TE 18/2)*. Retrieved from Food and Agriculture Organization of the United Nations website: <http://www.fao.org/3/MW522EN/mw522en.pdf>
13. Food and Agriculture Organization of the United Nations (FAO). (n.d.). FAOSTAT. Retrieved from <http://www.fao.org/faostat/en/#data/QC>
14. Bolton, D. (2019). Market Research Reflects and Predicts Growth. *World Tea News*. Retrieved from <https://worldteanews.com/market-trends-data-and-insights/market-research-reflects-and-predicts-growth>
15. FAO. (2018). Global tea consumption and production driven by robust demand in China and India. Retrieved from <http://www.fao.org/news/story/en/item/1136255/icode/>
16. Technavio Research. (2017). Global Tea Market - Drivers and Forecasts by Technavio. *BusinessWire*. Retrieved from <https://www.businesswire.com/news/home/20170623005637/en/Global-Tea-Market---Drivers-Forecasts-Technavio>
17. Kumar, S., & Deshmukh, R. (2019). *Tea Market by Type (Green Tea, Black Tea, Oolong Tea, Fruit/Herbal Tea, and Others), Packaging (Plastic Containers, Loose Tea, Paper Boards, Aluminum Tin, and Tea Bags), Distribution Channel (Supermarkets/Hypermarkets, Specialty Stores, Convenience Stores, Online Stores, and Others), and Application (Residential and Commercial): Global Opportunity Analysis and Industry Forecast, 2017-2023*. Allied Market Research. Retrieved from <https://www.alliedmarketresearch.com/tea-market>
18. Mordor Intelligence. (2018). Tea market growth, trends and forecasts (2019-2024). Retrieved from <https://www.mordorintelligence.com/industry-reports/tea-market>
19. Zion Market Research. (2018). Global Tea Market Will Reach USD 49,456.52 Million by 2024. *GlobeNewswire*. Retrieved from <http://www.globenewswire.com/news-release/2018/08/08/1549020/0/en/Global-Tea-Market-Will-Reach-USD-49-456-52-Million-by-2024-Zion-Market-Research.html>
20. Intergovernmental Group on Tea. (2018). Fostering Sustainability in Tea Production and Trade: Assessing the Impact of Certification Schemes on Farm Income, Inclusive Rural Development and Market Access. In *Committee on Commodity Problems (vol. CCP:TE 18/4)*. Retrieved from Food and Agriculture Organization of the United Nations website: <http://www.fao.org/3/MW523EN/mw523en.pdf>

21. Chang, K., & Brattlof, M. (2015). *Socio-economic implications of climate change for tea-producing countries*. Market and Policy Analyses of Raw Materials, Horticulture and Tropical (RAMHOT) Products Team, Food and Agriculture Organization of the United Nations, p. 11.
22. Verité. (2019). Tea Commodity Atlas Research Page with a Map. Retrieved from <https://www.verite.org/project/tea/>
23. Griffith-Greene, M. (2014). Pesticide traces in some tea exceed allowable limits. *CBC News*. Retrieved from <http://www.cbc.ca/news/canada/pesticide-traces-in-some-tea-exceed-allowable-limits-1.2564624>
24. Bolton, D. (2014). Calls to harmonize pesticide residue levels. *World Tea News*. Retrieved from <https://worldteanews.com/tea-industry-news-and-features/calls-harmonize-pesticide-residue-levels>
25. Intergovernmental Group on Tea. (2016). Report of the Working Group on Organic Tea. In *Committee on Commodity Problems* (vol. CCP:TE 16/CRS13). Food and Agriculture Organization of the United Nations, p. 1–5.
26. Potts, J., Lynch, M., Wilking, A., Huppe, G., Cunningham, M., & Voora, V. (2014). *State of Sustainability Initiatives Review 2014: Standards and the Green Economy*. Winnipeg, Canada: International Institute for Sustainable Development, International Institute for Environment and Development.
27. Willer, H., & Lernoud, J. (2018). *The World of Organic Agriculture - Statistics and Emerging Trends 2018*. Retrieved from Research Institute of Organic Agriculture website: <https://shop.fibl.org/CHde/mwdownloads/download/link/id/1093/?ref=1>
28. Food and Agricultural Organization of the United Nations. (2018). Value of Agriculture Production. FAOSTAT. Retrieved from <http://www.fao.org/faostat/en/#data/QV>
29. CBI - Centre for the Promotion of Imports from developing countries - Ministry of Foreign Affairs. (2017). Which trends offer opportunities on the European tea market? Retrieved from <https://www.cbi.eu/market-information/tea/trends/>
30. Rownan, A. (2017). Growth Opportunities in Fairtrade Tea. *Market Research Blog*. Retrieved from <https://blog.euromonitor.com/podcast/podcast-tea-fairtrade-growth-opportunities/>
31. Griffin, A. (2017). Unilever - Tea Saving Superhero?. *Harvard Business School - Technology and Operations Management*. Retrieved from <https://digital.hbs.edu/platform-rctom/submission/unilever-tea-saving-superhero/>
32. Unilever. (2019). *Unilever Sustainable Living Plan: 3-year summary of progress 2016-2018*. Retrieved from https://www.unilever.com/Images/uslp-3-year-performance-summary-2016-2018-final_tcm244-536744_en.pdf
33. Tata Global Beverages. (2018). *Milestone Moments (Annual Report)*. Retrieved from [http://www.tataglobalbeverages.com/docs/default-source/default-document-library/tgbl--ar-2018-for-web-\(1\).pdf?sfvrsn=0](http://www.tataglobalbeverages.com/docs/default-source/default-document-library/tgbl--ar-2018-for-web-(1).pdf?sfvrsn=0)
34. Tetley. (2018). *The Tea Report 2018 (Annual Report)*. Retrieved from http://tetleyfoodservice.co.uk/downloads/Tetley_Tea_Report18.pdf
35. Singh, N., & Zachariah, R. (2018). After 8 years, HUL brew beats Tata Tea. *The Times of India*. Retrieved from <https://timesofindia.indiatimes.com/business/india-business/after-8-years-hul-brew-beats-tata-tea/articleshow/63672253.cms>
36. Twinings. (2016). *Twinings Social Impact Report 2016*. Retrieved from <https://www.twinings.co.uk/TwiningsUKI/media/content/About%20Twinings/CSR/Twinings-Social-Impact-Report-2016.pdf>
37. James Finlay Limited. (2017). *Sustainability Report 2017*. Retrieved from <http://www.finlays.net/wp-content/uploads/2018/08/Sustainability-Report-2017-Single-Pages-2-Aug-2018.pdf>
38. McLeod Russel. (2017). *2016-17 Annual Report*. Retrieved from <https://www.mcleodrussel.com/pdf/investor/annual-report/ar-2016-17.pdf>
39. van Reenen, M., Panhuysen, S., & Weiligmann, B. (2010). Tea Barometer. *Tropical Commodity Coalition*.
40. Anantharaman, A. (2019). India's slow shift in domestic consumption. *World Tea News*. Retrieved from <https://worldteanews.com/market-trends-data-and-insights/indias-slow-shift-in-domestic-consumption%ef%bb%bf>
41. Statista. (2019). Consumption volume of tea in India from FY 2015 to FY 2019 (in million kilograms). Retrieved from <https://www.statista.com/statistics/870829/india-consumption-volume-of-tea/>

42. Bouckley, B. (2014). Tata Global Beverages: Greenpeace pesticide study 'confirms tea brands safe to drink'. *BeverageDaily*. Retrieved from <https://www.beveragedaily.com/Article/2014/08/19/Tata-Global-Beverages-Study-confirms-tea-brands-safe-to-drink>
43. Solidaridad. (2017). Lestari sets sustainability roadmap for Indonesian tea sector. Retrieved from <https://www.solidaridadnetwork.org/news/lestari-sets-sustainability-roadmap-for-indonesian-tea-sector>
44. Solidaridad. (2017). Asia. Retrieved from <https://www.solidaridadnetwork.org/regions/asia>
45. Gicobi, M. (2018). EAC tea intake to increase in the next decade. *The East African*. Retrieved from <https://www.theeastafrican.co.ke/business/EAC-tea-intake-poised-to-increase-in-the-next-decade-/2560-4595832-g98stq/index.html>
46. Telford, H. (2015). Growth opportunities in Fairtrade tea. *Market Research Blog*. Retrieved from <https://blog.euromonitor.com/podcast/podcast-tea-fairtrade-growth-opportunities/>
47. Mordor Intelligence. (2018). *Asia-Pacific Tea Market - Analysis of Growth, Trends and Progress (2018-2023)*. Retrieved from <https://www.mordorintelligence.com/industry-reports/asia-pacific-tea-market>
48. Lernoud, J., Potts, J., Sampson, G., Schlatter, B., Huppe, G., Voora, V., ... Dang, D. (2018). *The State of Sustainable Markets 2018 - Statistics and Emerging Trends*. Retrieved from International Trade Centre website: <http://www.intracen.org/uploadedFiles/intracenorg/Content/Publications/Sustainability%202018%20layout-FIN-web2.pdf>
49. Fairtrade Foundation. (2019). Tea farmers and workers. Retrieved from <http://www.fairtrade.org.uk/Farmers-and-Workers/Tea>
50. Ochieng, B. O., Hughey, K. F. D., & Bigsby, H. (2013). Rainforest Alliance Certification of Kenyan tea farms: A contribution to sustainability or tokenism? *Journal of Cleaner Production*, 39, 285–293.
51. Ahmmed, F., & Hossain, M. I. (2016). *A Study Report on Working Conditions of Tea Plantation Workers in Bangladesh*. Retrieved from International Labour Organization website: https://www.ilo.org/wcmsp5/groups/public/---asia/---ro-bangkok/---ilo-dhaka/documents/publication/wcms_563692.pdf
52. Foong, T. L. (2010). Labour shortage in tea industry. *The Star Online*. Retrieved from: <https://www.thestar.com.my/news/nation/2010/06/14/labour-shortage-in-tea-industry>
53. Sarkar, D. (2018). Diminishing interest on plantation job is emerging out as threat for tea industry. *The Economic Times*. Retrieved from <https://economictimes.indiatimes.com/news/economy/agriculture/diminishing-interest-on-plantation-job-is-emerging-out-as-threat-for-tea-industry/articleshow/63532244.cms>
54. Chandrabose, A. S. (2015). Outgoing labour and its impact on the tea plantation sector in Sri Lanka. In *5th International Symposium IntSym SEUSL*, Sri Lanka.
55. Brouder, A-M., Billing, S., & Uren, S. (n.d.). *The Future of Tea - A hero crop for 2030*. London, UK: Forum for the Future. Retrieved from <http://www.businessinsociety.eu/wp-content/uploads/2017/04/future-tea-report.pdf>
56. Monfreda, C., Ramankutty, N., & Foley, J. A. (2008, March). Farming the planet: 2. Geographic distribution of crop areas, yields, physiological types, and net primary production in the year 2000. *Global Biogeochemical Cycles*, 22, 1. doi: 10.1029/2007GB002947. Retrieved from <http://www.earthstat.org/harvested-area-yield-175-crops> 26.
57. Tayleur, C., Vickery, J., Butchart, S., Corlet W. C., Buchanan, G. ... Ducharme, H. (2017). GIS data for: Where are commodity crops certified, and what does it mean for conservation and poverty alleviation?, Mendeley Data, v2. Retrieved from <https://data.mendeley.com/datasets/mpdf6ytswm/2>
58. Chatham House. (2017). Resource Trade. Earth. Retrieved from <https://resourcetrade.earth/>
59. Twinings. (2018). Driving change. Retrieved from <https://sourcedwithcare.com/en/driving-change/>
60. Pioneer Thinking (2019). On tea weights: How much is a gram? an ounce? a pound? Retrieved from <https://pioneerthinking.com/on-tea-weights-how-much-is-a-gram-an-ounce-a-pound>
61. Dilma School of Tea. (2019). How to brew, present and serve a perfect cup of tea. Retrieved from <https://www.schooloftea.org/module/how-to-brew-a-perfect-cup-of-tea.html>

The Sustainable Commodities Marketplace Series provides a market performance overview and outlook for key agricultural commodities that comply with a number of voluntary sustainability standards (VSSs), focusing on global sustainable consumption and production. Each year, the series focuses on a different overarching theme, with individual reports for that year devoted to providing a market update for a chosen commodity. These reports are designed to be accessible and relevant for a range of audiences, including supply chain decision makers, procurement officers, policy-makers and producers. The series builds on *The State of Sustainable Markets 2018: Statistics and Emerging Trends*, a joint publication from IISD, the International Trade Center (ITC), and the Research Institute of Organic Agriculture (FiBL), which examines over a dozen sustainability standards for various commodities.

This *Global Market Report* analyzes recent trends in tea production, consumption, trade flows, and other relevant areas. The report also emphasizes the potential for expanding VSS-compliant production in Low Human Development Countries (LHDC), given factors such as share of global tea production, VSS presence and Human Development Index (HDI) value. It uses 2016 data across all three factors, given that this is the latest year with data available for VSS-compliant tea when conducting the analysis. By comparing the growth rates and patterns of standard-compliant versus conventional consumption and production of tea, this report provides insights on how sustainable and conventional markets are performing at a global level, along with highlighting which countries have the potential to produce more VSS-compliant tea.

The State of Sustainability Initiatives (SSI) is an international transparency and capacity-building project that aims to improve strategic planning and sustainable development outcomes related to VSSs. It does so by providing in-depth, credible and needs-based information on VSS characteristics, market performance and potential contributions to addressing development challenges.

External Peer Reviewer: Sjoerd Panhuysen, HIVOS

©2019 The International Institute for Sustainable Development
Published by the International Institute for Sustainable Development.

Head Office

111 Lombard Avenue, Suite 325
Winnipeg, Manitoba
Canada R3B 0T4

Tel: +1 (204) 958-7700
Website: www.iisd.org
Twitter: @IISD_news

In collaboration with ITC and FiBL



FiBL

With the support of the Swedish government



iisd.org

