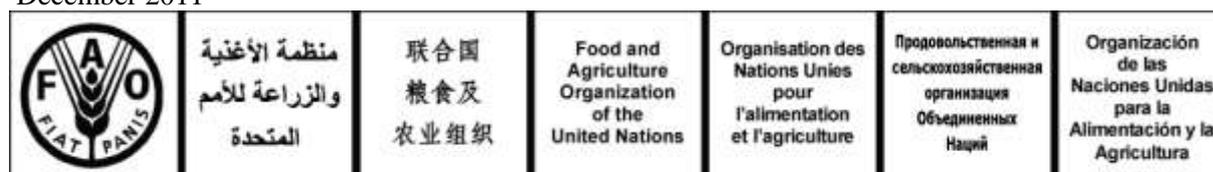


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# COMMITTEE ON COMMODITY PROBLEMS

## INTERGOVERNMENTAL GROUP ON TEA

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## CONTRIBUTION OF SMALLHOLDERS TO THE TEA SUB-SECTOR AND POLICIES REQUIRED TO ENHANCE THEIR LIVELIHOOD<sup>1</sup>

### I. INTRODUCTION AND REVIEW OF CONTRIBUTION OF THE SUB-SECTOR

1. While tea is produced in several countries across the world, the status and health of the tea sector for some countries has major macro-economic implications. For countries such as Sri Lanka and Kenya, as well as Vietnam, which export the majority of its production, it is a significant component of its export earnings. The value of tea exports comprises about 3 percent of the gross domestic product (GDP) of both Sri Lanka and Kenya. Tea exports comprise 16 percent of the total export income of Sri Lanka.

2. For China, India, Turkey and Iran which have large domestic markets (although China and India also exports large quantities in absolute terms), it is a labour-intensive industry providing jobs in remote rural areas to indigenous populations. In several producing countries, the sector also corrects the gender-imbalance in employment in rural areas by providing large-scale livelihood to women who are preferred in the plucking operations.

3. Within the tea sector in producing countries, the small-holders' sub-sector is an important segment world-wide. Consider first, the two leading black-tea exporting countries Sri Lanka and Kenya. In Sri Lanka, with more than 400 000 small-holders, the sub-sector constitutes about 64 percent of total area under tea and 76 percent of total production. In Kenya, with an estimated 560 000 small-holders, about 62 percent of the total production is derived from the sub-sector. The industry in China, the world's largest producer of tea (principally green tea) producing 1 475 million kilograms in 2010, is essentially small-holder-dominated as in the case of Vietnam. Small-holders account for 43 percent of the area under tea and 23 percent of production in Indonesia. In India, the world's second largest producer of

<sup>1</sup> This document was prepared by Mr Basudeb Banerjee, Former Chairperson, Tea Board of India.

tea and largest producer and consumer of black tea, an estimated 160 000 small-holders account for over 26 percent of its production of 966 million kilograms (2010).

4. Moreover, there has been an enormous growth in the small-holder sector as compared to the large-scale organized sector in the past decade. The area under small-holders between 2001 and 2010 has increased from 1,140,700 hectares to 1,970,200 in China (a 73 percent increase), from 85,511 hectares to 115,023 hectares in Kenya (a 34 percent increase) and from 101,884 hectares to 132 000 hectares in Vietnam (a 30 percent increase). Between 1994 and 2005, the area under this sub-sector increased by 48 percent in Sri Lanka. In India, the share of the small holdings in the total output in the last decade has gone up from 11 percent to 26 percent.

5. The smallholders are producers of green leaf, a perishable input that has to be processed in a tea factory to convert to “made tea”. The definition of smallholder or small grower varies across countries. In most countries, the definition is based on holding size. In Kenya, it means a grower cultivating tea in a small piece or pieces of land who does not possess his own tea processing factory. In Sri Lanka, “small-holding” means an area of land less than 50 acres (20.2 hectares). In India, a small-grower is one who cultivates 10.12 hectares or less and not possessing his own tea processing factory. In Indonesia, smallholders/small growers are those who grow tea on land size between 0.8 to 2 hectares and sell tea without processing. However, the average holding sizes in most countries, irrespective of the upper limit, tend to be on the lower side, for example, less than 0.4 hectares in Indonesia and between 0.7 to 4 hectares in different growing regions in India, with an average holding size of 1.6 hectares. More than 80 percent of small-holders in Sri Lanka hold less than 0.2 hectares.

6. From the point of view of the smallholder, tea cultivation provides work and income throughout the year in tea growing areas nearer to the equator and for at least 8 to 10 months in other regions. Apart from the initial capital for planting and land preparation, it does not require substantial investments subsequently and the risk of crop failure is limited to very occasional pest attacks and natural calamities, that too, only in some countries and regions.

7. However, the major risk factor in smallholder cultivation is price volatility and the occasional crash in the price of green leaf due to a sudden drop in primary prices of ‘made tea’. This may lead to distress sale of the perishable produce at below the cost of production. Moreover, when the primary prices continue to remain at non-economic levels over a long period of time as it happened between 2001 and 2008, the entire sector is adversely affected but it is the smallholder who is the hardest hit. Unlike other cash crops which can be substituted with others, tea being a perennial plantation, there is no short-term or medium term solution. Risk-management through crop diversification is a possibility and smallholders who grow compatible multiple crops are able to secure themselves. Other than in Kenya and Sri Lanka, in most countries proper contracts with tea processing factories are absent and the management of the supply chain from the collection centre, transportation and delivery system of the green leaf is in the hands of agents. Smallholders also have limited access to credit due to the small size of their land holding and often not holding clear land title deeds, especially in Assam in India.

8. The alternative plantation model is of the large-scale corporate-estate sub-sector with an integration of field and factory operations, which still is the major part of the sector in India (although its share has come down) and is also prevalent in Sri Lanka and Kenya. This is considered a high-cost model. However, the quality of their produce is considered superior in India. In Sri Lanka too, the corporate sector has a quality advantage since 90 percent of smallholder production is at medium and low-grown elevations, compared to 50 percent for

the organized-estate sector. However, the quality gap is far narrower than in India. The smallholders' sector in India is considered as a model of low-cost-low-quality production, catering largely to the lower-end of the domestic market. In Kenya, on the other hand, quality in terms of auction prices have been higher for the smallholders while productivity of the estate sector has always been above that of the KTDA/smallholders' production.

9. In countries that have a long history of organized large-scale corporate plantations such as India, Sri Lanka and Kenya, statutes exist for provision of welfare amenities for plantation labour. The plantation industry in India, for example, is regulated by the Plantations Labour Act, 1951 which has elaborate specifications for statutory benefits including housing, medical, drinking water, sanitation and conservancy, crèche and education facilities for workers.

10. Industry associations in India have long represented that for the estate-sector, the expenditure on the "social overhead costs" covering statutory benefits as well as non-statutory benefits that have been traditionally given (fuel for workers, food-rations at concessional prices) is burdensome for the industry. They have opined that this is seriously affecting its competitiveness. Various Committees appointed by the Government of India have quantified this "burden" and have expressed the view that expenditure of the plantation industry on account of the statutory provisions be partially reimbursed to the plantation estates through Government funding sourced from the Central and provincial Governments. However this is yet to be acted upon.

11. In many countries that have stringent labour legislations for the organized corporate sector, the smallholders' sub-sector is exempted and they do not have to bear the additional "social overhead costs". For instance the Plantations Labour Act in India is applicable to holdings of size 5 hectares and above and employing more than 15 workers. Smallholders employ mainly temporary or casual labour with weak unions and the cost of family labour is not accounted for. A recent study across different tea producing countries concludes that except for Vietnam, workers on smallholder tea gardens have lower wages and fewer benefits than those on large estates.

12. In this backdrop, the smallholder production is seen as increasingly viable, contrary to the concept of economies of scale. In India, in the past decade, the two largest blending and marketing companies (Unilever and Tata Tea) have exited the estate-sector primary production, preferring to turn buyers. There is also a trend towards some amongst the estate-sector who are investing in stand-alone factories but many are also increasingly sourcing their leaf from the smallholders and processing it either separately or together with leaf from their in-house plantation sections. While this symbiotic relationship would bring down the cost of production for the estate-sector, the flip side is that it affects the livelihood in the long-run of the employees of the organized estate-sector and also businesses of the stand-alone processing factories. However, such partnerships could be beneficial to the small-grower, especially if it leads to longer-term contracts which would decrease his price-risk. Additionally, if it provides him extension and advisory services and traceability of the produce, it opens up for him more remunerative markets. These partnerships could be B2B as well as involving major associations on either side. An example of the organized sector assisting the smallholders is the *Krishi Vigyan Kendra* (Farm Science Centre) set up in 1982 by the United Planters' Association of Southern India (UPASI), in collaboration with the Government of India and the Tea Board, which has served the smallholders well by providing capacity-building services to them.

## II. MAJOR ISSUES

### A. THE MARKET STRUCTURE FOR GREENLEAF

13. Smallholders as producers of green leaf are at the lowest level of the tea production eco-system. The first stage production component of one-time planting of bushes of the tea plant, *Camellia Sinensis*, maintenance of bushes, application of inputs such as fertilizer and pesticides, management of soil and drainage and regular production by plucking of green leaf constitutes the boundaries of this cycle.

14. This is undertaken, either by smallholders (who in some countries may be technically 'owners' of cooperative tea processing factories as in Kenya) or within an "estate" or "garden" or "plantation" that is part of an integrated unit inclusive of a processing factory. Tea is processed from freshly plucked green leaves and shoots of the tea plant, in a factory located as close as possible to where it is grown. The green leaf is converted to a ready-to-drink state of "made tea" at this stage itself. Thereafter, the primary marketing of "made tea" takes place either through auction or by private treaty.

15. The subsequent stages of the industry constituting front-end activities consist of blending, packing and marketing which are the most profitable. In countries which export the bulk of its production of tea, this value-addition mostly takes place by the importing companies in buyer countries. Thus there is an uneven value distribution along the entire supply chain, with the lowest value accretion to the smallholder.

16. The smallholders are producers of a perishable product, which is plucked from geographically dispersed areas and which is the major input for the processing unit, the tea factory. The green-leaf must be collected from far-flung areas, brought-in by the pluckers to collection centres and to prevent loss of quality of the made-tea, it must be ensured that it is transported appropriately and quickly despatched to the tea factory and processed as soon as possible.

17. Smallholders typically sell their green leaf through 4 possible avenues of primary sale. These are (a) indirect through middlemen/leaf agents/collectors, or direct through (b) stand-alone privately-owned processing units (known as Bought Leaf factories in India and usually a small/medium enterprise) (c) integrated plantation units (large tea gardens or tea estates plantations) (d) cooperative/collectively-owned units with smallholder participation.

18. In countries and regions where smallholders do not have collective ownership of factories and regulations and institutions do not intervene, they are left to the vagaries of an un-organized imperfect market for green leaf. The first-ever survey on small tea growers in Assam in North-East India, which is in this category, revealed that unregulated agents play an important role in the sector, selling 93 percent of the green leaf produced by small tea growers. There is an asymmetry in information leading to poor bargaining power of smallholders since they are not organized. Similarly, the smallholders are unable to negotiate with suppliers of inputs as their requirements are individually small. There is also often a mismatch between supply of green-leaf and processing capacity of private processing factories and their location, measured by the distance from the smallholders' plots, which affects the quality of the leaf and the consequent price fetched.

19. Many Governments have attempted to regulate the system of payments to the smallholders by private processing factories, against those that are collectively owned as in Kenya. An example of a successful system is that of Sri Lanka. India and Indonesia have also intervened with regulations that determine the relative shares of the smallholder and the

private processing factory of the revenue from the sale of the “made tea”, based on the market prices prevailing in the auction centre/primary market.

20. Sri Lanka had a system of support to smallholders even during the 1970s. Their present scheme, evolved over the years, has been formulated by taking into account the cost of production and the profit margin of growers as well as the private processing factories. Initially the share ratio between the smallholder and the factory was fixed at 75:25 was subsequently revised to 70:30 and subsequently to 68:32. However, when the actual price fetched by the factory exceeds the elevation average, the differential between the elevation average and the actual price is shared in the ratio of 50:50. Implementation is through a system of “tea inspectors” who closely monitor the tea factories regarding the green leaf purchased from the smallholders and the price paid to them, based on the actual realization for the tea sold in the auctions. Technical advice is also provided on the manufacturing practices particularly to the low-quality-producing or low-price-fetching factories. Persons acting as an intermediary between the small growers and the factories (called “leaf agents”) are legitimized and controlled through a system of registration and they are allowed commission on the total value of green leaf supplied to the factories plus the transport charges. There are stipulations for proper handling of the green leaf during the transit from the small holdings to the tea factory. Normally an advance is paid to the green leaf suppliers and the month’s final payment is settled by the following month. There are also arrangements by which the private factory enters into a short term agreement with the green leaf suppliers in order to get the required volume of green leaf without any interruption. Statutes in Sri Lanka provides for issuing specific directions for fixation of a reasonable price for green leaf and cancellation of the registration of tea factories failing to pay a reasonable price.

21. The Tea Board of India introduced in early 2004 a price-sharing formula based on the Sri Lankan model, under its powers under a delegated legislation. The costs accruing to the small growers for producing green leaf, the cost of manufacturing “made tea” by the processing factories and the ratio of conversion of ‘green leaf’ into ‘made tea’ was considered and studied by a independent professional body. The price-sharing formula envisaged that the sale proceeds was to be shared between the smallholder and the manufacturer-processor in the ratio of 60:40 when the average price realized by the manufacturer for all teas during the reporting month is either equal to or less than the monthly combined average auction price for teas of the said growing region. Where the price realized by the manufacturer exceeded the monthly average auction price, the differential between the auction average price and the price realized by the manufacturer was to be shared in the ratio 50:50 as in Sri Lanka. Pending finalization of tea leaf price for the reporting month, the manufacturers were required to pay an advance to the extent of 75 percent of the price paid during the previous month.

22. In Indonesia, there was a decree promulgated by the Minister of Forestry in 1998 regarding the setting of price of tea bought from smallholders, aimed at ensuring reasonable returns to the smallholder and to prevent unfair competition among tea processing factories. The decree requires that price setting should be carried out jointly by tea processing companies and smallholders or smallholder organizations with reference to a formula based on a conversion percentage of green leaf to made tea, weighed average export and local sale price of each company registered two weeks earlier.

23. However, the attempts by India and Indonesia to regulate the distortions in the market for green leaf have not been successful compared to Sri Lanka. Three major reasons include (a) the geographical compactness of the tea sector in Sri Lanka and the proximity of the grower to the factory (b) the efficiency and inclusiveness of the auction system at Colombo (accounting for 96 percent of all tea sold) and (c) the strength of manpower and the

institutional arrangements that have been put in place by the Tea Board and the Tea Small Holdings Development Authority (TSHDA) of Sri Lanka.

24. There is a need to strengthen cooperatives and collective ownership of processing factories by smallholders on the Kenyan model and at the same time to replicate and improve on the system that has evolved in Sri Lanka regulating the sharing of revenue between privately owned factories and the growers and enforcing quality through institutional means. There is need to introduce greater transparency and to leverage the use of information and communication technology (ICT) tools, especially mobile telephone technology, in dissemination to the growers, of market information, including auction prices and the dynamics of linkage of competing factories.

## **B. INSTITUTION BUILDING AND COLLECTIVE OWNERSHIP IN PROCESSING**

25. Smallholders usually face a high level of transaction cost and lack bargaining power in the green-leaf and input markets. However, the regulatory environment and more importantly, the institutional set-up which determines the level of transaction costs. There is a supporting institutional framework in Kenya and Sri Lanka which is presently lacking for example, in India and Indonesia.

26. In Kenya, small growers and the processing factories are integrated under one umbrella organization – Kenya Tea Development Agency (KTDA). The Kenya Tea Development Authority was formed after the independence of the country in 1963 with a view to promote the growing of tea in small farms by indigenous farmers. The KTDA supported this sector by providing high quality planting materials, supplying inputs on credit (including fertilizer), advisory services, arrangement for leaf collection, enforcement of strict plucking standards and a system of payment, including a yearly bonus based on market price to smallholders attached with specified factories within a geographical catchment area. The Kenya Tea Development Agency (continuing with the acronym KTDA), was formed on the privatization of Kenya Tea Development Authority in 2000. It took over the assets, liabilities and the mandate of the erstwhile Authority. KTDA has contractual agreements with the tea factory companies it serves as a management agent and caters to 560 000 small-scale tea growers attached with 63 factories.

27. In Sri Lanka, until the 1980s, the sub-sector suffered from inadequacies of advisory and technical support and there were poor facilities for leaf collection and transport. The sector made improvements with the establishment of Tea Small Holdings Development Authority (TSHDA) which was set up in 1977 under legislation. The TSHDA provides subsidy for new planting, replanting, extension and advisory services, support services such as distribution of fertilizer, planting material, implements and transport facilities and undertakes the supervision of prices being paid by tea processing factories to small holders.

28. In India, smallholders were initially confined to the Nilgiris district of the State of Tamil Nadu in Southern India, which has a history of cooperative ownership of processing factories. Today, seventeen such factories exist in different areas of the district under an apex organization, set up in 1965, known as INDCOSERVE. However, smallholders are not obliged to sell their green leaf compulsorily to any specified cooperative factory and many prefer to sell to privately-owned factories. These so-called “bought leaf factories” mushroomed in the 1990s but several faced closure during the recession period post-2001. The decision by several smallholders to move away from smallholder-owned cooperative factories is because of widespread under-cutting by private factories and the role played by leaf-buying agents. There is also no perception amongst the smallholders that they are “owners” of these factories, they are considered to be Government-run. There is also no

effective extension and advisory services provided by the apex cooperative organization INDCOSERVE compared to that provided by the KTDA.

29. In the States of Assam and West Bengal in North-East India, where three-quarters of the total Indian crop is produced, the phenomenon of smallholders is relatively new. This sub-sector has emerged over the past two decades, especially during periods when tea prices were remunerative and today produces an estimated 172 million kilograms. There is no institutional set-up comparable with that of KTDA or TSHDA or even the institutions in Southern India. Some help has been extended by the local agricultural university and by the Tea Research Association, which essentially caters to its members who are from the corporate estate sector. Since many of the smallholders particularly in the State of Assam do not possess proper land-ownership documents, they are yet to register themselves with the Tea Board of India and are denied individual incentives. The Tea Board of India has run a scheme for the past five years to organize them into self-help groups to provide to them working capital grants and collective infrastructure for leaf storage and transportation. In all instances where effective self-help groups have been formed, they have been able to reduce the transaction cost attributed to intermediaries, collective negotiation has helped them to bargain for better prices and the direct contact with the processing factories has sensitized them about the leaf quality parameters that the market required.

30. While countries such as Kenya and Sri Lanka have met with reasonable success with the KTDA and TSHDA, other countries have limited institutional arrangements. However, there is a feeling of lack of participation of stake-holders and in share of management even in those countries where the institutional mechanisms seem to work. Well established grass-roots organizations of smallholders either do not exist or have little say in the over-all scheme of things. Vietnam and China have State institutions that have a role in ensuring a better bargaining power for the smallholders and additionally, the availability of a social safety net.

31. There is a need to form organizations such as KTDA and TSHDA in all other countries, in accordance with the special needs of each country, but with strong representation from the smallholders who are the principal stake-holders. In India, attempts are being made to empower smallholders through the formation and strengthening of small tea growers associations and self-help groups which would have better bargaining power to intervene in price fixation and enabling a fairer terms of trade. A multi-tier set-up under the Tea Board is to be developed over the next five years, with Government funding of manpower at the grass-roots to monitor regulatory arrangements.

32. The role of Non-Governmental organizations (NGOs), both national and international, should be leveraged to assist smallholders into forming self-help groups especially in countries and areas which have no such existing organizations. A project in India was executed between 2006 and 2009, with funding from the Department for International Development (DFID) of the United Kingdom, by an international NGO, with a major thrust being on training on group formation. The project has assisted over 20 000 smallholders to organize into 306 societies (groups), form regional associations and a national level body. The success of this initiative has enabled this NGO to scale up its activities in North East India and Bangladesh with support from the European Union. It has set a target to organise 51 000 smallholders and 11 000 workers engaged in small holdings over a period of five years beginning from 2011.

33. The smallholders' self-help groups/associations must have adequate working capital and credit links with rural banks to build and manage leaf collection centres and transport linkage services to factories. Ultimately the market will efficiently throw up providers who

would offer leaf collection and transport as a service, rather than act as an agent for the sale of the leaf.

### C. QUALITY STANDARDS AND OPPORTUNITIES FOR VALUE ADDITION

34. Smallholders typically engage family labour and agricultural labour engaged on a casual basis. While this leads to a low-cost model (given that the major cost-component is on labour), there is no livelihood security to the workers who may be on the look out to drop-out for other opportunities such as Governmental labour-intensive welfare schemes. In, India, for example, the implementation of the National Rural Employment Guarantee Act (which guarantees one hundred days of wage-employment in a financial year to a rural household whose adult members volunteer to do unskilled manual work), has led to a shortage of casual labour in tea estates, hitting smallholders the most. There is also a danger of lower productivity and poorer quality of leaf plucking (“coarse plucking”), which has an impact on price realization. From the point of view of the workers in the smallholders’ sector, which is an informal sector, there is a need to organize themselves and for the Government to target specific policies towards them that would enhance their skills and bargaining power.

35. Most of the smallholders in India and many emerging countries were new to tea, having shifted from food-crops and cash crops such as potato and pineapple into cultivating tea. With no specialized training and only generic knowledge of agricultural practices, they have often started wrong with the choice of the planting material itself leading to the creation of poor field assets. The capacity levels of smallholders need to be enhanced with the introduction of modern farming methods to improve their farm productivity and quality of their produce. Skill enhancement workshops and modern extension and advisory services would lead to more efficient pruning and plucking cycles and maintenance of high plucking standards which have a major bearing on the quality and hence price of green leaf. There is a need for State funding on capacity building of the smallholders so that they could improve their agricultural practices, manage their businesses and organize themselves into producers’ organizations, beginning with self-help groups.

36. Such capacity building efforts must specifically incorporate inputs on general business management, marketing, input sourcing, materials management and sourcing of finance. In the past, most of the efforts directed at the smallholders have been on agricultural practices. Poor knowledge of business practices and trading causes smallholders to become vulnerable to leaf agents and to factories buying leaf.

37. Tea which is traded internationally ideally needs to be compliant with food safety and animal and plant health measures that are universally acceptable. International agreements exist in this regard which ensure this and at the same time do not distort trade. An agreement on how governments can apply food safety and animal and plant health measures (sanitary and phytosanitary or SPS measures) is set out under the framework of the World Trade Organization (WTO).

38. However, given the buyer-dominated structure of the international tea market, it is the standards of the importing countries, especially the European Union which are followed by most tea-exporting countries. The Maximum Residue Limits (MRLs) for pesticides that are set and often changed periodically need to be implemented in the field if the product has to access specific markets. In addition, private labels (*Rainforest Alliance, Fair Trade, Ethical Tea Partnership etc.*) and quality standards {*Hazard Analysis Critical Control Point (HACCP), Good Agricultural Practices(GAP)*} imposed by major buyers in key markets are followed by all exporters. There is also a strong demand for organic tea duly certified by an agency that is acceptable to the international buyer. This is often seen as a response to

consumer movements and demands for quality, safety and concerns for labour standards and the environment in producing countries. While in countries such as Kenya and Sri Lanka, institutions such as KTDA and TSHDA are in a position to collectively assist smallholders in reaching these standards and being duly certified, in areas where the smallholders are unorganized and institutions are weak, the cost and wherewithal for ensuring this is beyond the capability of many of them. There is a need to develop strong partnerships with quality tea processing factories and with international buyers so that the smallholder could also fit into a high-quality supply chain with full traceability of his product. There is also a need for improving upon or setting up institutions with smallholder participation, which could assist them in this regard.

39. At the same time, benefits of the intellectual property right, the Geographical Indication (GI), wherever applicable, can accrue to smallholders. A tea estate in Darjeeling, *Makaibari*, in collaboration with the global aid agency Mercy Corps, initiated a project called *Organic Ekta*, Nepali for "organic union". The programme involved about two hundred small organic farmers in 8 communities to supply green leaf to the organized estate-gardens in Darjeeling. Due to the Geographical Indication status of the industry, strict control of growing, plucking and processing is implemented and they were initially denied the right. However, on ensuring a strong system of traceability relating to the location of the sourcing of green leaf (that is, within the registered GI boundaries), permission was granted. The GI status of Darjeeling tea ensures that the primary price obtained is sufficiently remunerative for the established and registered processors (the corporate and organized estates) to give a good price to the small producers of green leaf.

40. The high economic growth rates in China and India which already have large internal markets, would translate in the medium to long-term to a sustained growth in the demand for better quality tea. Emerging international markets in the Middle East and Eastern Europe are also moving towards higher quality standards and food safety concerns that are prevalent today in economically advanced regions such as Western Europe, North America and Japan. Smallholders, in order to participate and compete in such markets have to develop capacities ensuring internationally acceptable and certified quality.

#### **D. ENVIRONMENTAL AND SUSTAINABILITY ISSUES**

41. The organized tea industry in India, Sri Lanka and Kenya was set up between the 19<sup>th</sup> century and upto the 1960s in replacement of tropical forests. Although there was significant loss in biodiversity due to this conversion for the cultivation of tea, which is a mono-crop, there was a lack of public awareness given the historical perspective, and indeed, the matter was not of any great concern to even the mainstream scientific community during this period.

42. However, the unbridled growth in the smallholders' sector in India took place from the 1990s and in countries such as Vietnam even later, twenty years after the Stockholm Conference of the United Nations in 1972 which marked the beginning of major international and national concern for the environment.

43. The environmental impact of the smallholders sector has not been separately assessed in any major study. However, clearing of forests, often illegally to plant tea and logging for firewood as fuel has led to extensive deforestation in countries such as Kenya, Malawi and India.

44. Energy consumption for tea processing is also high due to inefficiency in use and outdated equipment. Use of pesticides and chemical fertilizers by smallholders untrained in

good agricultural practices, often in also impacts the environment by causing water pollution and reducing the biodiversity of the soil.

45. Unilever, the largest tea buyer and the largest seller of packet tea in the world, aims to link 500 000 smallholder farmers into their supply network by 2020 through their “Sustainable Living Plan”. Part of this would be smallholders in the tea sector. Unilever had in the past between 2006 and 2008 set up a public–private partnership project in Kenya with KTDA and other partners to train smallholder farmers in sustainable tea cultivation. 720 farmers were trained at Farmer Field schools based at four factories on improving harvesting efficiency and on book-keeping, health and safety.

46. A project for energy conservation in small sector tea processing units in South India was initiated by the Tea Board of India in 2008, supported by the United Nations Development Programme (UNDP) - Global Environment Facility (GEF). The achievement of the objective of the project is through communication and awareness creation to the stakeholders for the procurement and adoption of energy efficient/renewable-energy equipments and their relation to their medium to long-term profitability. Similarly, to gain from the growing demand for organic products world-wide, a project on organic tea development was initiated 2008 supported by Common Fund for Commodities and FAO. This project also aims at encouraging small growers to take up the organic mode of cultivation.

47. The general conclusion is that there has been unacceptable deforestation over the past decades due to planned as well as illegal felling of trees across countries in Africa and Asia due to new plantations, mainly for smallholders. This phenomenon was a response to high primary prices for tea which prevailed from time to time. There is a need, world-wide, to prevent the further loss of forest cover to tea cultivation by framing suitable laws or by proper implementation of existing statutes. This measure would also correct the overall demand-supply mismatch which has persisted over decades and which is reflected in the trend of stagnant real primary prices of tea, during the period that real input costs have increased exponentially. Lastly, Governments need to provide fiscal incentives for the replacement of all energy inefficient devices in processing factories and for the extensive use of renewal-energy devices in the tea sector.

### **III. CONCLUSIONS AND POLICY ACTIONS TO ENHANCE AND SUSTAIN THE SUB-SECTOR**

48. The smallholders’ sub-sector, is the major part of the tea sector across producing countries with high growth in the past decade, even in countries where the corporate sector is still of significance.

49. However, due to the small size of their average holding, high level of transaction cost, limited opportunities of capacity building and varying institutional back-up in different countries, coupled with poor bargaining power in the green-leaf and input markets, small-growers have not been able to reach towards the full realization of their true worth.

50. The Governments in the growing countries needs to design appropriate public policy for the sub-sector that would enhance their skills and bargaining power. Policies have to be geared towards creating of an enabling environment in which smallholders could access and compete in fully functioning and efficient markets, both for internal consumption and export. Capacity building for the smallholders, either through Governmental or non-Governmental institutions, must not only include technical advice but also inputs on small enterprise management, finance and the wherewithal for them to set up self-help groups and other producers’ organizations.

51. Proper contracts and their enforcement between by smallholders and processing units that are not collectively owned by smallholders need close supervision and monitoring by regulators and small-growers' bodies or public institutions. Regulations relating to pricing of green leaf need to be strengthened so that distortions in the market due to the perishable nature of their produce (green leaf), presence of intermediaries and limited number of buying factories are to be ironed out. Use of information and communication technology (ICT) tools, especially mobile telephone technology, in dissemination of market information may also be encouraged.
52. Policies have to empower and not make smallholders dependent in the long run on the Government-sponsored institutions or Non-Governmental organizations that may be required to be set up (or existing institutions reformed) in many of the producing countries. The smallholders need to be well-represented in all institutions that are set up or are reformed.
53. An area of direct Government support could be in Research and Development and in extension services until there is sufficient capacity building in respect of private advisory services. Regulating these advisory services and encouraging private institutions by tax breaks and other means could be viable solutions to a felt-need. The Government could also incentivize the building of infrastructure for green-leaf storage and transportation.
54. In countries which still have a large corporate sector, the smallholders may be encouraged set themselves in a complementary role and enter into mutually beneficial partnerships. Similar partnerships with large international buyers and organizations encouraging socially and environmentally sustainable production of tea could also ultimately benefit the sub-sector.
55. Markets, including large national markets (such as India, China and Indonesia) and emerging international markets in the Middle East and Eastern Europe are converging towards higher quality standards and food safety concerns typified by importing countries in Western Europe, North America and Japan. Smallholders, in order to participate and compete in such emerging markets have to develop capacities ensuring quality and traceability of the product to the bush.
56. Smallholders need to add to the value of their produce by taking recourse to such intellectual property such as Geographical Indications, by converting their holdings to certified organic farms, by joining hands with organizations providing private labels and entering into marketing partnerships with large buyers and by leveraging sustainable tea cultivation.
57. The unbridled growth in the smallholders' sector has often had an adverse impact on the environment in most producing countries due to clearing of forests, often illegally, to plant tea and by the inefficient use of energy in the processing units. The Governments of these countries need to halt the conversion of forest land to tea cultivation by suitable legislation or by proper implementation of existing statutes. At the same time incentives should be provided for the conversion of all energy inefficient processing units to improved equipment and renewal-energy devices.

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