

Assessing the poverty impact of sustainability standards: Indian tea

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Acronyms

CEO	Chief Executive Officer
CSR	Corporate Social Responsibility
CTC	Cut Tear Curl
FLO	Fairtrade Labelling Organisation
FS	Final Survey
FT	Fairtrade
LM	Light Monitoring
NPA	Nilgiris Planters Association
PLA	Plantation Labour Act
RA	Rainforest Alliance
UPASI	United Planters’ Association of Southern India

Exchange rates

Approximate Exchange Rate: \$1=Rs. 50

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Executive Summary

This report presents the findings of the Indian tea study – a component of a wider DFID-funded study of the poverty impact of voluntary social and environmental standards. In the Nilgiris, Tamil Nadu, a number of estates selling primarily through direct sales to international buyers have adopted certain sustainability standards – Rainforest Alliance (RA) and FLO Fairtrade - in order to maintain market access.

The standards

Rainforest Alliance (RA) uses the Sustainable Agriculture Network standards. Seven out of the ten RA principles emphasize protection of the environment and three deal directly with the workers and the community. These principles are as follows: i) social and environmental management system; ii) ecosystem conservation; iii) wildlife protection; iv) water conservation; v) fair treatment and good working conditions for workers; vi) occupational health and safety; vii) community relations; viii) integrated crop management; ix) soil management and conservation; x) integrated waste management. Rainforest Alliance impact pathways include training and growing markets. Fairtrade has producer standards which promote social and economic development (e.g. no forced or child labour, safe and healthy working conditions, fair treatment of workers and include environmental requirements, but also requires standards of traders. These include economic instruments such as the minimum price and a Fairtrade premium, but also indicate longer-term relationships etc. Impact pathways for Fairtrade also include networking, advocacy and growing the market. Utz certification standards focus on sustainable farming measures, and seek to identify better opportunities for farmers and their families. UTZ Certified ensures farmers grow better crops while ‘safeguarding the environment and securing the Earth’s natural resources’. UTZ certified farms are required to follow good agricultural practices and management, and ensure safe and healthy working conditions, no child labour and protection of the environment.

The study and methodology

Following country and commodity selection (see section 2.4), the team developed a sampling strategy, including both certified (covering different standards) and non-certified estates in the Nilgiris hills, which were exporting on international markets. The team then approached a number of estates drawing on this framework to seek their participation, but encountered some resistance from Rainforest Alliance and Fairtrade certified estates and particularly from non-certified estates. In our study sample we have seven estates which achieved Rainforest Alliance certification in 2008 (identified as RA 1-7), and one non-certified estate. The non-certified estate has decided to sell on the domestic market, (which limits comparisons to a certain extent) and withdrew from an earlier Ethical Tea Partnership certification. One of the Rainforest Alliance certified estates has also adopted Fairtrade and Utz certification during the study, with another preparing for Fairtrade.

A baseline survey was conducted in February 2010, followed by a light monitoring exercise in 2011 and the final survey was conducted in February 2012. Having developed *theories of change* for the two standards, a questionnaire was designed around the main dimensions and indicators of anticipated change. 304 workers were interviewed in 2010 and 278 in 2012. We devised a series of checklists to guide qualitative work, including management interviews, focus group discussions with women and men workers, individual household case studies and key informants.

As well as difficulties in obtaining agreement to participate, the team also encountered some difficulties in securing (random or any) access to workers for interview, so that at one estate in

the light monitoring and final surveys we were not able to meet with the workers, and in others they sometimes insisted on organizing the selection of workers themselves – although this was largely on the basis of finding workers who happened to be working in an area of the estate near to the office on that day, in order to reduce disruption to plucking, rather than an intentionally biased selection by management.

The context

The tea industry was established in India during the colonial era. Following independence worker unionization began, and the Plantation Labour Act was passed in 1952, ensuring workers had some level of housing and services. Tea plantations require a large labour force for tea plucking and daily management operations, but they are also vertically integrated in terms of tea processing and manufacture. Tea plucking is largely conducted by women. In the Nilgiris, 70% of the cultivable area is covered with tea. Tamil Nadu in South India has 48% of the tea plantations in India, the highest share. The estates are producing Cut twist curl leaf (CTC) and dust tea, as well as orthodox leaf and dust and one estate produces green tea. The overall production in January 2012 was 2.1 million metric tons.

Internationally, an increase in global production has outstripped demand creating a situation of oversupply and low prices for producers. A small number of multinationals dominate the buying and retailing of tea and they have a strong negotiating position, capturing a significant proportion of value in the chain. Until 1991 almost half of Indian tea was exported to the USSR, but by 2009 it had declined to 10-12 %. Productivity has been stagnating in India over the past 30 years, compared to significant rises in area and output in Kenya, China and Vietnam. The age of tea bushes in India is a concern, compared to the younger plantations in Kenya and Vietnam. A decline in the real prices for tea in India has put pressure on the sector; with prices governed by the auctions which themselves are controlled by a powerful group of traders. Labour costs represent approximately 50% of price realisation (net returns) on the plantations, but represent only 10 to 12% of the retail tea price. A key hindrance to raising wages across the sector through redistribution of profit margins is the control over tea prices exerted by these powerful traders in the auctions.

The majority of workers on Tamil Nadu estates are from the scheduled castes. In general, workers on tea estates are relatively well-off compared to the wider population, because they receive both monetary and non-monetary benefits and so are well above the poorest in India who do not have such safety nets. However, the monetary benefits (wages) are at the lowest level in comparison with other workers in the organized sector, the quality of the non-monetary services is also debatable, and the work is arduous and repetitive.

Worker's income

For tea estate workers, tea income is the major source of income for 80% of workers, who have little other time available for income generating activities. A small percentage of households have members engaged in unskilled wage labour and a few households receive remittances, but often both spouses are working on the estate, with the women plucking tea and the men working as a security person, driver, pruner or sprayer. A few households have a member doing unskilled work, and many send remittances to children/relatives working and studying elsewhere. It is widely reported that workers earn higher wages off the estate, e.g. in construction, of up to Rs300 to Rs 400 per day and absenteeism represents a major problem for the estates. An associated complaint from management is that these earnings are spent on alcohol.

Wages in the plantation sector are driven by the tripartite agreement, which involves the tea estates, trade unions and the government. Once agreed, the agreement prevails for a period of three years, after which a revision takes place. The agreement decides both wages and the incentives for the pluckers. Given the relatively widespread unionisation, the estates generally observe the agreement. Hence, there is no difference in the prevailing wages between different types of estates. However, the incentives earned by the workers as well as the bonuses paid by the estates vary according to the productivity of the workers, the yield patterns of the estate and the profitability of the estate. In the present study three of the estates (RA2, RA2 and RA4) have been paying a 20 per cent bonus (most likely the highest in the industry) to their workers, other estates have been paying in the range of 15- 18 %. Although there were differences in the income earned by the workers in the certified estates and the non-certified estate, the difference was not statistically significant. Besides the wage cost, the estates also bear the social cost of employees, as the Plantation Labour Act requires the estate to provide housing, drinking water, health, sanitation, school and crèche facilities. In 2010, workers at certified estates used to get paid 49 weeks a year, which decreased to 47 weeks per year in 2012; the same as the non-certified estate. In the non-certified estate, the number of weeks paid per year remained the same. Some workers mentioned that overtime had reduced, although managers gave different reasons for this change, with one stating that it was the result of lower yields. However, RA does stipulate restrictions on overtime hours to 12 hours per week, and so this may account for the change. Workers at the non-certified estate received a significantly lower payment for overtime than workers at certified estates. In the final survey, workers at the certified estates scored the improvement both in daily income and in the stability of income, significantly higher than workers at the non-certified estate.

Fair Treatment of Workers

In terms of the fair treatment of workers, there are several structural and institutional contextual factors which have lessened any obvious impacts of sustainability standards. The Plantation Labour Act and various labour legislations mean that workers' rights are relatively well protected. The workers are relatively unionized *and wages and incentives are agreed through a tripartite collective bargaining agreement*. All of these factors mean that workers are fairly well able to claim their rights. Further, the demographic profile of the labour force means that the average age of workers is rising. Educational opportunities and the processes of industrialization and urbanization have led to a shift in the workforce. Most of the presently employed workers were born on the estate and have not been educated beyond primary level. However, many of their children have been educated and are now employed off the estate, often far away in the lowlands. The shortage of labour is creating a real headache for the estate owners and managers, which again ensures that workers are able to exert their rights.

During the course of the study the number of migrant workers increased significantly at many of the estates. For example, one estate hired migrant workers for the first time four months prior to our final survey, at which point they represented 36% of the workforce. We conducted several interviews with migrant workers from the north of India, and they were all positive about their experiences to date, as were the workers who have lived on the estate for some time. This may be because the migrant workers do not threaten the jobs of the existing workers, given the acuity of the labour shortage. No particular impact of certification was ascertained on this issue, except for the fact that these workers are not discriminated against compared to other employees on the estate. The migrant workers enjoy the same rights as the existing workforce from Tamil Nadu, including the right to join a trade union. This is largely due to the shortage of labour on the estates, which means that once trained, the estates are keen to retain staff.

No significant difference was found between the workers in the certified and non-certified estate, in terms of employees with permanent contracts, number of respondents who mentioned that social security is included in the current contract, workers and employees contribution to social security, membership status with the trade union, and duration (no. of weeks) maternity/paternity leave and other income benefits.

However, a significantly smaller proportion of workers in the non-certified estates were entitled to paid annual leave, maternity leave and paid sick leave, compared with workers at certified estates. However, entitlement to these benefits is dependent on having a contract. A higher proportion of workers at the certified estates had contracts, while the non-certified estates had a significantly higher percentage of casual workers (temporary with no contract - 12 % in non-certified and 3 % in certified).

At most estates temporary workers will become permanent: Under the PLA, any worker who has worked for 440 days continuously (other than the list of holidays and Sundays) is eligible for a permanent position. This is not strictly followed in all the estates. RA5 and RA6 offer permanent positions within six months and RA3 does so within a year. At RA7 we encountered some casual female workers who were paid Rs.150 for a day's work and who do not receive any benefits. They were included in the free lunch scheme at the estate. These female workers were both young and old, and came from a neighbouring village, approximately 4 or 5 kilometres away. We did not find this situation at other estates. RA standard 5.3 states that the farm must directly hire its workforce, except when a contractor is able to provide specialized or temporary services under the same environmental, social and labour conditions required by this standard. RA7 provides lunch to these workers also and pays Ra.150 per day, but does not offer a contract or other benefits.

There are uniform wage levels for everyone, with incentives based on productivity. We found no influence of the standards over this, because this is a sector wide agreement between government, the estates and the unions. In terms of freedom from discrimination, the Equal Remuneration Act is in existence and so the sustainability standards have not made any difference. Freedom to associate and collective bargaining are also not shaped by the standards, because of the historical presence of trade unions and the tripartite agreement.

Worker-management relations are embedded in historical traditional paternalistic relationships. Many of the workers were born on the estate and life on the estate is all that they know. Despite this, most of the estates appear to have relatively cordial manager-employee relationships, except for the non-certified estate where the workers were unhappy at several issues. Most of the estates have worker committees, which meet with management at frequent intervals and the representatives inform the workers. These were not created because of certification, but at one estate it was reported that minutes are now kept as a result of certification.

On the estate which is Fairtrade certified it is still too soon to establish poverty impact. It is also clear that some of the changes being made at this estate predate involvement with Fairtrade. However, there has been investment of the Fairtrade Premium with the creation of a Joint Body involving management, the workers and also links to a local NGO. A number of investments have been made, such as expenditures to facilitate the educational attainment of children, physical asset building for workers, health support measures and the daily provision of a nutritious drink. Fairtrade currently pays a premium of 0.50\$ per kg of tea bought, which is spent on workers' development. In 2010-11 a sum of Rs3.34millions (\$66,800) was spent on various worker welfare activities.

Housing & Sanitation

All the tea estates involved in the study provide free housing for the workers which are uniform in size for all workers, except the supervisor who gets an extra room. All workers, including temporary workers, are provided with housing under the PLA. After Rainforest Alliance certification all the estates started renovation of worker housing, conducting this in a phased process to spread the costs and aiming to complete them by 2013. For example, one estate has 750 houses on the plantation, of which 60% are occupied, and 40 had been redone costing Rs.1500000 (USD 30,000).

The survey found significant differences between the certified and non-certified estate workers in terms of satisfaction with housing provision and improvements in housing, with the certified workers being more positive. Improvements made at some dwellings have included: i) changes to roofing to make it leak proof (e.g. using zinc roof tiles); ii) improvements in electrical wiring that have increased the capacity to run communications/entertainment gadgets; iii) more individual toilets – beyond the basic minimum requirements of the PLA – and soakpits to filter sewage; iv) improvements in flooring (e.g. providing a cement floor); v) re-plastering of the walls; vi) conversion of open verandas to rooms.

At the non-certified estate the manager reported having renovated a division of worker houses (changing the roof tiles, sewage repairs, and septic tanks). However, the workers were unhappy with the house renovations. The manager had upgraded the wiring, but told the workers to bear the cost as an additional deposit. Further, repairs took a long time, their flooring is uneven and the contractors' work quality was poor with roofs leaking the day after they had been supposedly repaired. The workers also complained about the sewage line which is close to the drinking water pipe and house and smells.

Sanitation improvements have been made as a result of RA certification, with certified workers significantly more satisfied than non-certified workers with the improvements made on their respective estates. Many of the estates have renovated toilets near/or inside the workers' houses, but one estate has also constructed toilets for them in the field as well.

Workers' knowledge of standards

Workers' knowledge of standards was explored to better understand whether workers are able to use the standards in order to claim their rights. Worker knowledge of the standards was relatively limited in the baseline survey: some workers had received training on environmental management issues at the estate and understood some of the reasons for improving ecosystem stewardship, but knew little of RA certification per se, despite signage around the estate. On three or four estates more workers appeared to know about RA certification and appreciated some of the improvements (e.g. hygiene and overall cleanliness of the estate). Sprayers were one group that were more aware of the standards, because of the requirement to wear personal protective equipment (PPE). During our visits in 2011 and 2012, awareness amongst workers on the RA certified estates was associated with the overall cleanliness of the estate, waste management practices, protection of wildlife and use of PPE by sprayers and factory workers. The sprayers were more aware of the type of pesticides being used after the RA standards and the need for buffer zones.

One of the RA certified estates also obtained Fairtrade certification after the baseline visit. During the light monitoring at this estate, workers had knowledge of Fairtrade, of the Joint Management Committee (JMC), of the election process by which workers are elected to the JMC and of the procedure for selecting projects for premium funds. Workers attend discussions of the premium funds and the JMC members explain to the wider group what

Fairtrade is and how it works. During the final survey we met a different set of female workers; from the manner in which they articulated the usefulness of premium expenditure projects and the suggestions for future, we could understand the on-going dialogue process between JMC and the workers.

Occupational health and safety

Key occupational health hazards include pruning accidents, continuous standing and exposure to the cold climate for pluckers, and exposure to pesticides while mixing and spraying. Factory workers are exposed to the huge noise of the machines and dust in the factory. To protect the workers from these risks and to ensure the cleanliness of the product, safety gear has been provided according to the managers interviewed. More improvements were observed at the certified estates compared to the non-certified estates: at the certified estates we were told about and observed new and better quality protective gear, phasing out of hazardous pesticides and the provision of facilities for washing, particularly for sprayers. Managers reported spending between 2.2% and 4.4 % of the total amounts they have invested in achieving RA certification on providing safety gear for workers. RA compliance costs vary across the estates, depending on how much expenditure is incurred on capital investment or maintenance, but we were given figures ranging from USD 7,500 for one estate in 2009/10 and USD 4,200 for another in 20011/12. At the end of the day, the workers wash the protective gear at a designated location where soak pits have been built. At the non-certified estate, the workers said they washed their coat each week and they wash after spraying. At one estate male workers said that they have always used safety gear, but now they get new types of protective gear and if something is damaged, it is immediately replaced.

No difference was found between the certified and non-certified estates in terms of the phasing out of hazardous pesticides. Red and yellow marked pesticides are hazardous and have been phased out at both certified and non-certified estates in favour of blue and green marked pesticides. This is because the non-certified estate earlier engaged with the Ethical Tea Partnership (ETP) which also requires this, but had later disengaged.

Before RA certification, buffer zones (restricted areas) were not maintained and spraying near human dwellings, water bodies etc. was not uncommon, but RA certification has ensured that buffer zones have now been created near the factory, houses, schools, forest, and water bodies in all the estates, where sprayers do not spray and poinsettia has been planted to prevent the spray drifting across the buffer zone. Further, workers are told which tea gardens not to enter for 15 days after spraying. Big signboards in yellow are used to inform the workers and others about the re-entry restriction period at the certified estates. There were no signboards observed at the non-certified estate, although the pluckers reported that supervisors tell them which areas to avoid for 15 days after spraying. While the certified estates provided gloves, face mask and boots etc. for the spraying workers, the non-certified provided just the coat.

Management of one estate mentioned that the amendment made to the Plantation Labour Act (PLA) Chapter IV A (18th May 2010) specifies provision of PPE to the workers, safe handling of chemicals and wash facilities for workers handling the chemicals. RA certification and the regular visits of auditors do appear to ensure that workers have the equipment they need, and this is promptly replaced when damaged, that signage is clear and informative etc. It was not possible to verify whether workers wear their PPG routinely of their own accord at times when the study team was not there, but the workers themselves said that they had not always worn this in the past, but did so now (except at one estate where they said they did not wear it). The team also observed directly the washrooms, signage, storage areas for chemicals, and soakpits

behind worker housing. Two of the managers said that the number of person days lost has been reduced due to the RA measures, but at one estate the management were frustrated that despite providing the PPG, workers do not wear it and a violation was noted during their last audit reducing their compliance rate.

Many of the estate managers reported initiating the provision of medical tests (e.g. for HIV and TB) for workers, as well as tests for skin infection for factory workers, screening for breast cancer and eye check-ups for drivers. All the RA estates carry out a specific blood test for the sanitary and the pesticide sprayers which costs Rs.400 (\$8.88) per person. Both the Plantation Labour Act (revision of 2010) and RA standards require as part of occupational health and safety measures that all workers exposed to chemicals should undergo medical check-ups and that workers should have access to these records. According to the nurses interviewed, as yet no adverse reports have arisen for workers. All the estates have a female nurse, one has a hospital and the others have a dispensary with a doctor visiting three times a week. However, none of this is stimulated by certification to a sustainability standard, but it is motivated by a need to keep the workforce healthy given the aging profile of the workforce and the acute shortage of labour. The non-certified estate manager explained that he had instituted a medical insurance scheme, but there had been a breakdown in communication between the workers and the managers and it was not functioning well. There was no mention of the blood tests being carried out at the non-certified estate. In terms of worker satisfaction with health care provision, this was significantly higher at the certified estates.

Training

Changes in access to training do not necessarily indicate a poverty impact. Instead it represents an output which could eventually lead to poverty impact. Training provision and access to information was significantly better and had improved more at the certified compared to the non-certified estate. Generally speaking pluckers do not receive much training in their work and have to learn on the job. Factory workers might receive more training and the management of all the certified estates said that after RA, they provided training to workers particularly male workers in the safe handling of chemicals, because men are traditionally ascribed this role in prevailing gender norms. There has also been training on the importance of the environment and maintaining ecosystems. Sprayers have been trained in the use of protective gear while mixing pesticides, and this has reduced the incidence of skin diseases according to the workers. Factory workers have been trained in fire drills and fire prevention. All workers at one estate have been trained in sexual harassment awareness.

Water quality

A major improvement seen by the workers is in the quality of drinking water. Purified water is more readily available as RA estates have invested in chlorination. Water is provided by all the estates and chlorination is done manually in all the estates except for one certified estate where an automatic chlorination unit has been installed. Water samples are regularly analysed and records kept. Improved regulation of the water supply had led to reduced wastage of water, and reduced depletion of ground water tables, improved awareness of the quality of the water used within the estate and allowed out from it, and prevention of pollution of water bodies. At the non-certified estate, the workers said the water is very good from the stream and is as good as the bottled water that is sold in the market.

The RA measures are very likely to have had a positive environmental impact (public good), but have also led to health benefits for workers. The certified workers reported an improvement in health in the period of the study, whereas the non-certified workers noted a slight deterioration. For those workers who have experienced positive health changes they reported

fewer days off work due to ill health and said they were able to work longer hours and were also feeling stronger and healthier. This leads us to the conclusion that RA does have a direct health impact on women and men, although the difference is not statistically significant.

The team collected data on sick leave from the estate, but it is not possible to draw a connection between sick days and levels of health amongst the work force, because of the high levels of absenteeism recorded by workers, who are actually doing casual work off the estate.

Other environmental measures

As well as water conservation measures, in terms of the other environmental principles which are of central importance to Rainforest Alliance, there are a number of areas of positive change. Tea is a monocrop and therefore not particularly conducive to enhancing biodiversity. But some of the areas of the Nilgiris are rich in wildlife, especially those estates bordering forest reserves. In terms of wildlife conservation a number of estates have conducted awareness raising activities (e.g. training of teachers and workers), and all of the estates now conduct wildlife spotting and registry, and have a ban on hunting of wild animals. One estate has constructed a water body for wildlife and another has created a link to a local environmental NGO, which has advised on the planting of natural species in dedicated biodiversity spots. There is no obvious poverty impact of this for the workers, although the estates are sometimes affected (e.g. replanting at one estate was affected by wild animal damage) and one estate has constructed a fence to prevent incursion by wild animals. The non-certified estate allows wild animals to pass through its estate, but has not conducted awareness raising activities etc.

Managers report investment in soil management and conservation, such as the planting of *Vetiveria zizynoides*, native species planting and not cutting trees, which have been undertaken to prevent soil erosion and to improve soil productivity. Unfortunately we were not able to gain access to yields and productivity data from the estates in question to establish whether this has as yet made a difference, but they are clearly important long-term investments in the health of the ecosystem, upon which the estate depends. Some of these measures have been undertaken at the non-certified estate, although to a lesser degree.

Investments have been made as a result of RA certification in waste management and these in the long-term are likely to have positive impacts upon worker health. In all the RA certified estates, systematic waste management procedures have been instituted. They make a distinction between degradable and non-degradable wastes. Degradable wastes are used as compost within the estate. Non-degradable wastes are given to the appropriate authorities for safe disposal. The manager at the non-certified estate said that they have constructed a pit near every workers' colony for waste, but no distinction is made between degradable and non-degradable wastes in it. At the non-certified estate, bins and information boards were not found everywhere as on the RA certified estates. The safe disposal of chemical containers is still an issue, because suppliers do not take them back according to all the estate managers. Managers of the RA estates say that awareness of RA has improved the living conditions of workers, by avoiding plastics and because appropriate waste disposal methods are now followed. At the non-certified estate, wastes are put together and burnt and plastics are not segregated. It is difficult to maintain them separately according to the management.

Integrated crop management measures of RA (and combined with EU requirements) have led to the phasing out of hazardous pesticides, with an overall reduction in the use of pesticides, although managers reported that the approved pesticides are more expensive than the

banned ones, incurring significant cost, and several managers were concerned that appropriate alternatives were not available and that resistance would soon build up in the existing approved pesticides. Some managers complained that they had experienced crop loss as some of the pests cannot be adequately controlled and they have a shortage of workers to spray properly. One estate has purchased cows and is using the organic manure, with 50 acres under conversion to organic production. Another estate is trialling spraying of neem leaf paste. The non-certified estate is using red colour pesticides, but in their floriculture production. The managers all said that maintaining the buffer zones is difficult, because the area is large and reduces the area of tea cultivation. Hence, they have given a joint recommendation to RA that while no pesticides will be sprayed on the buffer zone, they should be allowed to spray the fertilizers and herbicides (RA recommended ones). The estate managers had not yet had an official response from RA at the time of the fieldwork.

In terms of ecosystem conservation, several estates have planted pockets of native species, with two estates being supported by the Nature Conservation Foundation, a local NGO, to plant trees. Unfortunately, the managers say that they cannot plant native species within the tea gardens as they would compete for nutrition with the tea bushes. All of the estates source their fuelwood for the factory from the plains. They are adopting some minor measures to reduce fuelwood use, such as cutting the wood into small pieces to retain more moisture and one estate has constructed fuelwood sheds and installed a solar drying unit to reduce firewood consumption. One estate has installed gasifiers, using a government subsidy, but this was not related to RA certification particularly. Several estates have encouraged workers to use gas stoves instead of firewood for cooking. Several estates had informed workers they should not cut trees for fuelwood. The non-certified estate has not done so, but the management provides firewood to the workers.

All of these environmental measures provide a public good, and may have spillover effects for local communities (e.g. reduced water pollution). Unfortunately, we did not have the resources to measure changes (e.g. in water quality), or to visit neighbouring communities as these are scattered and the area is not densely populated. There did not appear to be any major social and economic impacts on local communities as a result of certification. The Fairtrade Premium investments may lead to benefits in the future, but it is too early to say as yet. The day after our visit for the final survey, a whole group of managers and workers from the estate visited a neighbouring tribal community to hold a health awareness programme, conduct health check-ups and provide reading glasses. The estate also provided some blankets for the local hospital. We were unable to visit the tribal community or local hospital to verify or detail the impact of these investments, but the visits were mentioned by workers as well as managers.

Impacts of standards on estates

Beyond the impacts of certification on the individual workers and the environment, it is important to consider how the estates themselves have been affected in terms of their productivity, viability and management etc. Many estate managers noted the overlap between the requirements of existing legislation such as the PLA and said that they follow these anyway, but that RA had improved documentation. The adoption of the social and environmental management system required by RA certification has led the certified estates to become more vigilant about their practices, and they now keep meticulous records of the various practices adopted, to check their procedures and to change attitudes. However, there is a time cost and a burden, although once you have met all of the detailed RA requirements, it is easier to meet other standards (such as Utz, which are less onerous). Some of the managers indicated that RA certification has helped to create greater commitment amongst the

managers/owners of the estates to corporate social responsibility and the environment – particularly in relation to the ‘three ws: water, wildlife and waste’.

The estate managers did point out that RA certification does not extend to domestic markets. Many of the study sample sell to Unilever, which buys between 75 to 90% of their production, but the remainder is sold on the domestic market auction where there is no differentiation between certified and non-certified tea and so there is unlikely to be change in that sector. Further, new markets may arise for these companies in the future where standards are not required. Although estate managers did not raise the issue of smallholders, it is also clear that currently the standards are not being implemented in the smallholder sector, yet this is where there are significant livelihood challenges for smallholders and their families.

The costs of obtaining and sustaining certification were noted as being high by several managers, especially audit costs, but also in terms of the investments to be made. Initially Unilever paid a small premium to cover the costs of achieving RA certification, which helped the estates to meet the standards. However, this premium is not now available, and it is not clear how new entrants would therefore cover the costs or whether the practices would be sufficiently embedded were certification to fall out of favour with the estate or in the wider world. Some costs are incurred initially, but then tail off. For example, laying pipelines for drinking water represents an investment, which would not be reversed. There may be maintenance work in the future, but the costs may not be as high. But other things such as the buffer zone might not be sustained in a scenario where certification is no longer sustained. Audit costs are also an issue.

The non-certified estate manager said that they had stopped selling to Unilever in 2009, because they could not afford to sustain the required ethical trade practices, particularly paying minimum wages to temporary workers (he said their estate is lower yielding than others and he used to pay by weight, but that Ethical Tea Partnership standards required that workers be paid minimum wage instead). However, the labour shortage the following year was so severe that he had to pay the same wage and extended social security to temporary workers as well, who would otherwise possibly leave if they were not paid the minimum wage), but also due to the strict product quality requirements. The non-certified estate was struggling with its labour relations and had experienced a strike, when plucking was less and this affected yield. There are also yield losses from the maintenance of the buffer zone.

Several managers suggested that the standards should be crop/region specific, to allow for greater flexibility – some of the estates have many roads through and alongside the estate and it is not feasible to sustain a 10 metre barrier everywhere. Harmonization of standards was commonly raised as being an important priority for the managers to reduce audit costs.

The tea estates are adopting certification because their buyers demand it – Unilever requires RA certification and Finlays requires Fairtrade certification. Some estates are stacking up the certifications as a means of potentially finding new buyers – the estate which now has Utz as well as RA and Fairtrade certification is selling to Unilever, but because Unilever is not buying all their produce they need to attract other buyers. The non-certified estate stopped exporting and went through a difficult period financially, and therefore ended its association with the Ethical Tea Partnership (prior to this study), although they are trying to obtain GlobalGAP certification now and have given Utz certified some consideration. One of the RA certified estates now has Fairtrade certification and another is seeking it, but one estate, which is sourcing from large numbers of outgrowers, is not eligible under Fairtrade rules (it is not clear why). This estate has more outgrowers than many other estates with 165 smallholder

outgrowers supplying them. The study team visited outgrowers supplying this estate and did observe a separate store room to maintain chemicals and the records of use. The smallholders reported that they have been given PPG by the estate for free, and they ask their workers to use this when spraying – although the estate manager said it was difficult to track this or to conduct the normal medical tests on a transient workforce. The smallholders have been trained in waste management, but they do not provide housing for their workers who are casual labourers. The non-certified estate reported that it would not be able to trace all the outgrower suppliers and ensure they were following sustainability standard requirements.

The costs of production are very high for India, compared to other countries such as Kenya, with whom they are competing, because of the wages and the indirect costs such as social costs involved. The main costs incurred are labour costs, and the Nilgiris Planters Association has been lobbying government to ask them to share some of the social costs involved. Costs are rising due to input cost rises (labour and fertilizer), meaning margins are reduced, according to a couple of the managers, but the prices received from buyers have not changed and the estates bargaining power with their international buyers is weak and tea cartels control prices on the domestic auction. The competitive pressures of tourism and urbanisation are an incentive to many owners to exit tea production, and labour shortages as well as profitability pressures represent significant challenges for the future.

Changes to the climate were noted by most of the managers, who were concerned about longer-term climate change trends, but there was little knowledge of any climate adaptation options, and estates are not eligible to obtain climate mitigation finance under current schemes.

Given that the impacts of certification have not been extensive, as explained in the preceding sections, it is not likely that there will be wider impacts, e.g. on the local community or regional economy. A few of the certified estates have been engaged in providing community services even before adopting RA standards.

Conclusions

Sustainability standards have not had an impact upon workers income in India, because of the wide reach of unions and the collective bargaining agreement on wages and incentives for factory workers and pluckers on tea estates. There is traditionally, a relatively high level of unionization. Further, a shortage of labour means that workers' rights are relatively well respected with most having permanent contracts. The largest number of estates are certified to Rainforest Alliance, driven by the demand of buyers and therefore as a means of maintaining market access and direct sales. The Plantation Labour Act (PLA) has also played a key role in shaping conditions on plantations, with clear requirements in terms of services to be provided to workers, such as housing on the estate. Temporary workers are paid social security, for example, not because of certification to a standard, but due to the labour shortage, which means that estates wish to retain their labour force. This shortage of labour has led many estates to recruit migrant workers from Northern India, who are treated on a par with local workers – there is no obvious discrimination in employment opportunities.

However, the estate managers were clear that RA certification has meant they have been more systematic and rigorous in documenting their procedures and have been pushed to make some additional improvements – e.g. in housing. Rather than pushing them to begin new investment, it has improved the quality and scope of investments and services. For example, housing stock has been repaired, rewired, and improvements made to roofing. More toilets

have been constructed with water and electricity, and one estate has constructed toilets along the labour lines for use during working hours.

Changes have been made in relation to environmental and occupational health and safety measures – some of which have benefitted workers. There have been improvements in the Personal Protective Equipment (PPE) provided to factory workers and sprayers, including replacements when damaged, which has led to reduced exposure to agrochemicals. Plus there has been phasing out of dangerous chemicals – although much of this is required under EU regulations. The establishment of buffer zones where chemicals are not used and stronger controls on when workers can return to work in sprayed areas have been important in reducing exposure. A key impact has been in the improved monitoring of water use and water quality. All the estates have covered their water sources to prevent contamination by wildlife and water has been chlorinated to provide safe drinking water to workers. Water pipelines have been changed from iron pipes to HDPE pipes to prevent corrosion and leakages. Waste management has been improved, providing cleaner and more hygienic living conditions for workers. Soil management and conservation measures have been instituted, and these are contributing to healthier ecosystems upon which the estate (and ultimately worker livelihoods) depends, but not immediate short-term poverty impacts for workers.

While some of these improvements have also been carried out at the non-certified estate, it is also struggling with employer-employee relations, and conditions are not as good as at the certified estates for workers. According to the management they have experienced financial problems, which have led to employee-employer tensions. Some changes were instituted (e.g. in payment of minimum wages to temporary workers, rather than payment by weight of tea plucked per day) when this estate engaged with the Ethical Tea Partnership, but the estate found it difficult to sustain these ethical practices according to management and when the estate stopped exporting, it disengaged with ETP. Some of the practices were continued, but others which they found difficult to observe were not sustained.

The estate which has multiple certifications (Rainforest Alliance, Organic, Utz and Fairtrade) has established a Joint Body with worker and manager representative, and linked to a local NGO and has begun investments in workers' children's education, provision of a daily free nutrition drink, but these investments are relatively recent and therefore it is not possible to establish clear impacts.

The estates say that the documentation and measures required by the sustainability standard systems are a burden, but also bring benefits in terms of ensuring that the issues in question are treated systematically and are written down. Auditing costs are high, but the main buyer demanding RA certification, did provide a premium at the start to support the estates to obtain certification and to implement the necessary measures to achieve compliance. However, the managers are all keen for there to be harmonization. Although the estate management reported rising input costs, they say they have weak bargaining power and the prices they receive from their buyers have not kept pace with these rises and do not allow them to raise workers' wages. As well as profitability challenges, there are very serious labour shortage issues ahead, as the workforce ages and the children of workers obtain employment elsewhere. Some estates are monitoring their smallholder suppliers quite rigorously, but others less so.

The current sustainability standards are not being applied in the smallholder sector, where there are many poverty related and livelihood issues requiring attention. Some outgrowers have been brought into certification and have benefitted from provision of PPE and

construction of store rooms, but the benefits appear somewhat limited. Not all the estates have outgrowers. The challenge is to leverage change in international markets where there is no demand for certification and in the domestic market, and to build up awareness of and demand for action on labour rights amongst stakeholders in the industry with a culture not of compliance with standards driven by buyers, but of empowering workers through more transformative change, while sustaining profitable businesses. Amongst many things this requires greater investment and commitment to action along the chain – including from retailers and packers contributing more to the costs.

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Table 1: Actual Impact Pathway Findings

Inputs	Outputs	Outcomes	Impacts for individual producers and estates
RA & FLO requirements on improvements in systems and data collection	Changes made in management systems by certified estates.	Documentation of different activities undertaken, efficient systems to respond to certification requirements	Stronger organisations with systems in place, enabling a review of the process of production and correction measures wherever necessary by the estate owners, which also enables the estate to sustain certification.
Environmental (e.g. RA SAN criteria; FLO environmental criteria)			
Ecosystem conservation	Awareness about environmental degradation, afforestation drive, phasing out hazardous chemicals	Planting of native species, ban on cutting trees, installation of fuel efficient heaters, gasifiers to reduce fuel wood consumption, restricted use of hazardous chemicals,	(a) Maintenance and improvement of tree cover at some estates (b) Biodiversity benefits likely (c) Greater fuel efficiency at some estates (d) Likely improvements over the longer term in soil fertility (e) reduced water pollution from agrochemicals
Wildlife protection	Ban on hunting & wildlife awareness raising already in legislation, but reinforced by RA	Awareness raised on biodiversity (managers & workers), provision of water bodies for the wildlife, wildlife inventory	Two estates report wildlife damage (1 certified; 1 non-certified), but also greater appreciation amongst workforce and management of wildlife at certified estates, and not at the non-certified estate
Water conservation	Covering water sources, ban on polluting the water sources, regulating water use	Clean drinking water, Compiled statistics on water use consumption, adoption of buffer zones,	Reduced: i) wastage of water and depletion of ground water; ii) awareness about the quality of the water used within the estate and let out from the estate; iii) prevention of pollution of water bodies. Likely environmental positive impact (public good) and health benefits for workers.
Integrated crop management	Monitoring of pest levels & restrictions on pesticide spraying	Pesticide spraying only after assessing the threshold limit & safe harvest periods reduces pesticide use & phasing out of harmful chemicals (RA & EU legislation)	Better product due to less or nil MRL and sustained EU market access. Reduced pesticide consumption as a result of RA certification, reported by workers to be leading to reduced exposure to agrochemicals and better health. Reduced agrochemical use reduces costs for estates especially as prices are rising for inputs (but buffer zones reduce yields from specific parts of the estate). Potential for long term improvement in soil fertility and productivity leading to better returns for the estates
Soil management and conservation	Measures to (a) prevent runoff of water, (b) use of composts promoted	Planting of <i>Vetiveria zizynoides</i> shrubs near the water source	Less soil erosion, use of compost from biodegradable waste in the garden, medium and long term improvement in soil quality, fertility, and land productivity. Likely environmental positive impact (public good).
Integrated waste management	Instituting waste collection and management measures	Separating degradable and non-degradable wastes, installation of sign boards and provision of separate bins at different parts of the estate, more care in disposal of plastics	Cleaner environment, improved living conditions for the workers, improved hygiene, safe disposal of the wastes, use of compost generated from biowaste from the estate. Fewer episodes of illness reported by some workers (which in turn could lead to better earnings and food security). Significantly higher levels of satisfaction on water and sanitation provision and improvement among certified workers compared with non-certified.

Energy conservation	Tea board giving subsidies for the use of gasifiers. Energy efficiency is a recent addition to RA SAN standards	Certified estates are initiating measures for energy audit and measures to improve fuel efficiency	In the longer term, investments likely to deliver savings on energy costs for the estates, making them more competitive with other producing countries, which may protect jobs.
Fair treatment and working conditions			
Conditions of employment	Less impact by RA due PLA. Adherence to minimum wages across estates.	All workers in the supply chain get the minimum statutory wages due to RA	Uniform wage levels. Incentives depend on estate productivity & yields. Temporary workers (who are on the muster roll of the estate and due to be permanent in the near-term) are also paid the same wages and same incentives as permanent workers, including at the non-certified estate. There are some casual workers employed at one estate, which has a smaller workforce, but they are paid above the minimum wage & provided with lunch. Possible effect on overtime from RA certification.
Freedom from discrimination	Less impact by RA (Equal Remuneration Act)	No specific measures instituted	Uniform wages and incentives for local workers and migrant workers
Freedom from harassment	Not prevalent according to those interviewed, but limited data	-	-
Freedom to associate & collective bargaining	Historical presence of trade unions across estates, tripartite agreement or relevant state government law.	Managements do not prevent the formation of unions in the estate.	Freedom to choose the trade union of workers choice. Awareness of the workers' rights, participation in the election.
Occupational health and safety			
Requirements of RA and FLO	Worker safety measures: training in hazardous chemical handling, improved provision of PPE for factory workers & pesticide sprayers, phasing out hazardous chemicals, buffer zone establishment, safe re-entry periods observed, wash areas and zones created/improved; health check-ups for sanitary workers, pesticide sprayers and eye check-up for drivers annually. Other health check-ups, but not RA driven.	Less exposure to noise and dust pollution in the factory. Safer handling of chemicals. Ban on reuse of chemical containers. Reduction in illness episodes reported. Prevention of possible contamination of chemicals in water and human living spaces.	Improvements in worker's health reported by workers

Trader standards (Fairtrade only)			
Payment of Fairtrade premium	Instituting procedures to receive/spend premium	Tie up with NGO. Joint management committee set up. Various worker welfare activities.	Expenditures to facilitate educational attainment of children, health support measures and provision of nutritious drink. Process of participating in Joint Body appreciated, but too soon to judge transparency & impact
Growing markets & linking to buyers			
FLO & RA standard system inputs	Many of sample estates selling to Unilever (requires RA), but other buyers require FT. Multiple certification by some estates	No real change in size of sales, but market access sustained and direct sales are important for stability (cf auctions).	Sustained market access ensuring lucrative contracts are kept and for those obtaining multiple certifications there may be new buyers. However, no change in value addition patterns along the chain
Advocacy, networking			
FLO producer support and producer networks	Estates are members of planter association (not RA) also informal networking among the estates to compare notes on certifications. But no FT or RA facilitated networking	Awareness of new practices adopted in different estates in energy saving and cost reduction techniques as a result of RA certification & partnerships	Information sharing between estates, but no evidence of networking, exchanges or advocacy activities by workers
Community relations inputs			
RA CSR criteria and FLO (Premium investments)	<p>RA - maintenance of the buffer zone, checking of quality of water leaving the estate.</p> <p>FT Premium investments not only for estate workers' benefit, but wider community</p>	<p>RA: Some estate actions already influenced wider community (e.g. use of the estate roads by public transport service in 3 estates and neighbouring villages; Maintenance of temple, Use of estate crèche, hospital and school facility by community) etc. But maintenance of a buffer zone & checking water quality are the result of RA</p> <p>FT: Provision of blankets in hospitals and tribal community health programs with FT premiums.</p>	<p>All the certified estates had instituted the buffer zone and while this is likely to have positive ecosystem impacts and direct influence on human health (e.g. less hazards due to contamination of chemicals or waste water).</p> <p>We were not able to visit local communities due to limited resources and distant and inaccessible locations. FT management were positive about the investments made by the Joint Body using Premium investments, but these were very recent and limited in scale, so difficult to assess impact.</p>

Table 2: Summary table of findings against key research questions on poverty impacts

Impacts on Individual Workers	
Income	<ul style="list-style-type: none"> • Tea is the primary source of income for the majority. Since the basic wages are the same in all the estates (if other estates are also party to the tripartite agreement), income disparities among the workers can only arise from (a) workers in better yielding estates able to earn more than others (b) good health leading to more productive days (c) savings by workers on the FT estate, as the burden of educational expenditure is taken care of through premium activity and hence the possibility of more saving and more asset creations or reduced debt burden. • No major significant differences were observed for tea workers in income (due to existing legislation, unionisation & collective bargaining agreement). Suppliers in the value chain are required to adopt payment of minimum wages to all workers by both standards, which most of them have adhered to and payment is on a fixed day per month so incomes are fairly stable. (minimum daily wage in 2010 was 2.6 USD per day) There may be a slight negative impact from RA overtime restrictions for some factory workers at certified estates. • However, various improvements from RA & FT certification have contributed to workers' feeling better off than workers on neighbouring estates. Workers at certified estates rated the improvement in daily income and stability of income, significantly higher than workers at the noncertified estate. • Income for certified workers was found to be higher than for non-certified workers, but the difference is not statistically significant. This is likely due to the fact that some certified estates pay higher bonuses than others and offer specific incentives for performance (e.g. maintaining clean living quarters). • The recent installation of an ATM facility is positive, especially for female workers, but is not the result of certification. • There is no obvious impact pathway from creating additional skills or creating income earning opportunities for workers under RA. If yields increase at an estate then workers can pluck more per day and raise their incomes. RA2 and RA4 are higher yielding estates, but there is no clearly emerging evidence on yields being raised as a result of RA as yet. • At the FT/RA certified estate a vocational training programme has been funded using the FT premium and the children of workers and local community members can use it. Limited information yet on its performance/impact as relatively recently established.
Job security & employment	<p>No real changes observed in job security, as PLA already in place, plus labour shortages in the plantation sector mean that most workers are employed on a permanent basis & new recruits are rapidly moved onto permanent contracts. Temporary workers have social security - not due to RA, but due to labour shortages and minimum wages. Some casual workers are employed on one estate and they receive 150 Rs per day, which is above the minimum wage, and are included in the lunch scheme. Migrant workers are also treated on par with the locals. Representatives of migrant workers are included in the joint management committee at the Fairtrade certified estate. No discrimination was reported in providing employment opportunities – again due to shaping contextual factors. Migrant workers or temporary workers, all get the same access to housing, health, water and sanitation as existing or permanent workers primarily due to labour shortage.</p>

Food security	<p>No significant differences found between certified and non-certified estates in food security, due to uniform prevalence of basic wage rates & payment on a fixed day of every month providing income stability. Most workers say they are able to cover their basic needs. Workers are satisfied with the quality and the quantity of the food intake. The governments' food subsidy through the public distribution system (PDS) provides some cushion against food inflation – those without the PDS card will be worse off, only able to cover food costs. It is more difficult for migrant workers as they have to deregister in their home state and re-register in their new location to obtain the PDS card – assuming they are eligible. Meat is too expensive for most workers to buy daily. A free noon-meal scheme for all the workers operating in one estate. At the FT certified estate, a nutritious drink is provided for all the workers and evening snacks given to children who go for tuition classes, funded by the Fairtrade Premium.</p>
Household assets & services	<p>Financial: Informal revolving saving fund schemes present on each estate to assist workers & some workers have savings with formal financial institutions, but neither result from certification. Most of the certified estate owners provide credit to workers to assist with emergencies or larger expenses without charging interest & give letters of support so workers can access formal credit. The non-certified estate has withdrawn this service following financial difficulties and tensions between management and employees.</p> <p>Social - Children's Education: Children's education is highly valued & most workers pay fees for private schools: most of their children are already technically qualified or pursuing technical education. No significant difference was found between certified and non-certified estates on this indicator. The FT/RA certified estate provides salaries for the teachers who coach the children in the after school hours, funded by the FT Premium, which has also been used to fund scholarships, tuition fees, buy educational materials and accessories. Vocational and soft skill training courses are also provided for the children of the workers and community members to improve job prospects. It is too soon to judge impact, but in the future workers in the FT estate may have better opportunities to save more as educational expenditures are taken care of by the Fairtrade Premium fund in comparison with workers in the RA estate.</p> <p>Social - Health: Reduced exposure to pesticides and agrochemicals (e.g. phasing out harmful pesticides, training on safe handling, improved PPE kit provision etc) leads to health benefits for workers. Reports of reduced skin allergies and eye irritation, loss of appetite etc. Buffer zone and safe re-entry period has reduced direct contact with chemicals by pluckers. This means possible income generating benefits if fewer sick days – but sick day records are not reliable due to absenteeism. Provision of safe chlorinated drinking water has also reduced the illness due to waterborne diseases. Annual health check-ups are routinely being conducted for sanitary workers, pesticide sprayers and drivers due to RA (the PLA was revised later in 2010, but the certified estates were already complying). We do not have confirmation that the non-certified estate is conducting all these tests currently. General health check-ups for all the workers and screening for breast cancer and HIV-AIDS is part of company CSR (rather than RA related).</p> <p>Social - Gender Equality: No significant shift in gender relations to achieve greater equality: women continue to be trapped in plucking positions & men more likely to have factory or supervisor roles. Some instances of women being promoted, but this is not due to certification. Limited training for plucking as not a specialist task, and few opportunities to be promoted for women especially – whether certified estate or not. Household decisions are taken after consulting the spouse according to most workers, but also widespread complaints reported by the managers of male workers spending on alcohol. Neither workers on-certified and non-certified estates reported sexual harassment either by the supervisors or management. No obvious influence of RA or FT – although women workers were appreciative of some of the FT Premium investments and the process of decision-making.</p>

	<p>Political empowerment: Relatively good employer-employee relations at certified estates. Workers pleased with RA & FT changes. Disquiet amongst workers at non-certified estate. However, this is not the result of certification, but a reflection of different levels of management capacity, financial situation and ownership and this itself is connected to whether the company operates on the domestic and not international market. Most workers have grown up on the estates, are now an average age of 42 years and have some degree of labour rights protection through PLA & unionization, plus their children work mainly elsewhere. Though most women workers are members of the trade union, their active participation in the meetings and elections is limited. In estate with FT certification female members of the Joint Management Committee (JMC) reported positive experience participating in the discussions, but the team was not able to directly observe a JMB meeting and thus assess how transparent and democratic is the decision-making. Election to the JMC from different section of workers, including migrant and women workers, has resulted in a sense of joint responsibility for their own welfare activities and also empowerment. No real change in producer understanding of or access to value chain information. RA workers are aware of the physical changes like housing, waste management measures, environmental protection & use of personal protective gear are due to certification. At the estate with FT certification there is fairly high worker awareness of FT. Workers were generally satisfied with the services provided particularly in the certified estate, like housing, school, crèche, transport, medical etc compared to the workers in the non-certified estate</p> <p>Natural Capital: RA certification has raised awareness amongst certified workers on the need to protect the environment and sustainable practices in agriculture. Workers and managers report that there is no more unauthorised felling of trees or hunting of animals. Improved ecosystem health is likely following RA measures & this will in the longer-term underpin estate operations & ultimately worker livelihoods</p> <p>Physical: Positive RA impact - greater improvement in housing quality, i.e. repairs of leaking roofs, electrical wiring upgrading at certified estates. Where investments made at non-certified (e.g. house repair, laying of sewage lines, rewiring) there were problems with the quality of works. The non-certified has covered its water sources. Positive RA impact on drinking water quality (coverage of water sources to prevent contamination by wildlife; chlorination of water; upgrading of water pipelines); Positive RA impact on waste management leading to more hygienic living conditions by workers; Positive RA impact on sanitation: Each certified workers' house has a toilet with water and electricity, improving personal and environmental cleanliness. The physical improvements in the houses of the workers, provision of individual toilets, etc. have made the workers feel that they are socially better off compared to their counterparts in other estates.</p>
<p>Child & hired labour</p>	<p>No child labour on the estates. Estate managers report that they monitor smallholder outgrowers - their workers are employed on a casual basis so fall outside of the influence of RA and FT. If estates source from outgrowers they also need to be monitored against RA standards, however few use agro-chemicals as they currently lack the labour to spray. If an estate sources from uncertified outgrowers then it has to keep the tea separate for traceability purposes. .</p>
<p>Reach of standards</p>	<p>There are 99 tea estates in the Nilgiris, with a total of 29,941 workers, of which 8 are RA certified and 1 is Fairtrade certified. Workers on estates selling into domestic market not reached by standards. As migrant workers are being given permanent contracts fairly rapidly and live on the estate as the existing workforce they also benefit from any certification benefits. Smallholders supplying estates are monitored, but it is not clear if and how they benefit, beyond a continued trading relationship, but potentially they benefit from training and improvements in farming practices, reduced pesticide use, quality and can achieve a better product. Smallholders not linked to estates also not reached by estates, yet they form a large part of the Nilgiris tea industry. Differences in impacts according to job status – e.g. factory workers and pesticide sprayers receive more training in health and safety because they handle the machines, exposed to high noise levels and do the spraying</p>

IMPACTS ON ESTATES

Management capacity	Some improvement in management systems (data collection and recording). Documentation of various activities adopted only after certification & clearer road map for introducing cost reduction strategies & sustainable method of production. Increased management attention on the quality of the services provided by them for workers. More attention is also paid to adopting sustainable cultivation and production processes and environmental conservation. At the FT estate the owners/managers have been keen to engage with FT to improve worker wellbeing, although it is less clear that this will lead to a change in worker rights and empowerment. Certification has resulted in a reawakening of managers' corporate social responsibilities towards their workers, environment and society, although the main driver for certification was always the demands of key buyers, as on an average, exports constitute nearly 65 per cent for the certified estates. Also reputational benefits in local industry - the certified estates carry a better image among the other estates for their services (interview with the non-certified and an export intermediary).
Employer/E employee relations	Easy access to the management both directly and through the worker management committees. Complaint box system introduced (rather than just a register) to help workers to voice their issues, but not said to be due to certification. No reported sexual harassment of the workers, although we could not research this sensitive topic in-depth.
Satisfaction of workers	Overall, the services provided by the estates have improved after certification. Certified workers are significantly more satisfied with the services like housing, crèche, schooling, medical, sanitation, drinking water, electricity, transport and food, than at the non-certified estate. However, the changes are limited in scale.
Estate profitability	The certified estates on average sell 65% of their tea on export markets. In recent years tea prices have been better and they were able to realise profits, but prior to this tea prices had been low. They are also affected by rising labour and input costs. Most of these estates sell directly to Unilever (and small amounts on the auctions). The estates have been selling a fixed amount to their buyers (e.g. Unilever, Finlays) who require RA or FT certification. The bargaining power of the estates is limited if they want to retain these contracts, which give them more stability than the auction. Unilever provided a premium to the estates enabling them to obtain RA certification. Their share of exports on average accounts for 60 per cent of the total sales. The non-certified estate has experienced financial difficulties and was unable to sustain earlier ethical standards. It now sells on the domestic market and continues to struggle with employer-employee relations. In terms of worker productivity, workers reported health improvements due to safe drinking water and use of protective equipment enabling them to work better. Though this ideally should lead to reduction in person days lost due to illness, sick leave taken by workers does not show a clear trend (due to absenteeism and the ageing demographic of the workforce etc). Costs of certification were initially covered for RA estates by the buyer, but not now. Once an estate has obtained certification from one standard, it is easier to meet the demands of others with some standards requiring more documentation than others.
Market access & value	No changes. Limited transparency in the chain.

Diversity of buyers and relative	For the RA certified estate there is only one buyer and hence estates are dependent on this buyer. This can have both positive and negative advantage. The fixed price prevails during the contract.. Hence, the returns to investment are more or less known. But there is no assured minimum purchase by the buyer. There is also no alternative export market for the certified product. If the product has to be sold at a lower price in the domestic market, then the returns may not be high and thereby it could affect the profits shared with the workers. Estates with multiple certifications have perhaps opportunities to explore new markets
How networked are POs?	There are no formal association of the certified estates, though the estates are members of UPASI and the Tamil Nadu Planters Association. But estates do use the social occasions to discuss the newer strategies adopted by them, including certification and have made a joint response to RA to request alteration to buffer zone rules.

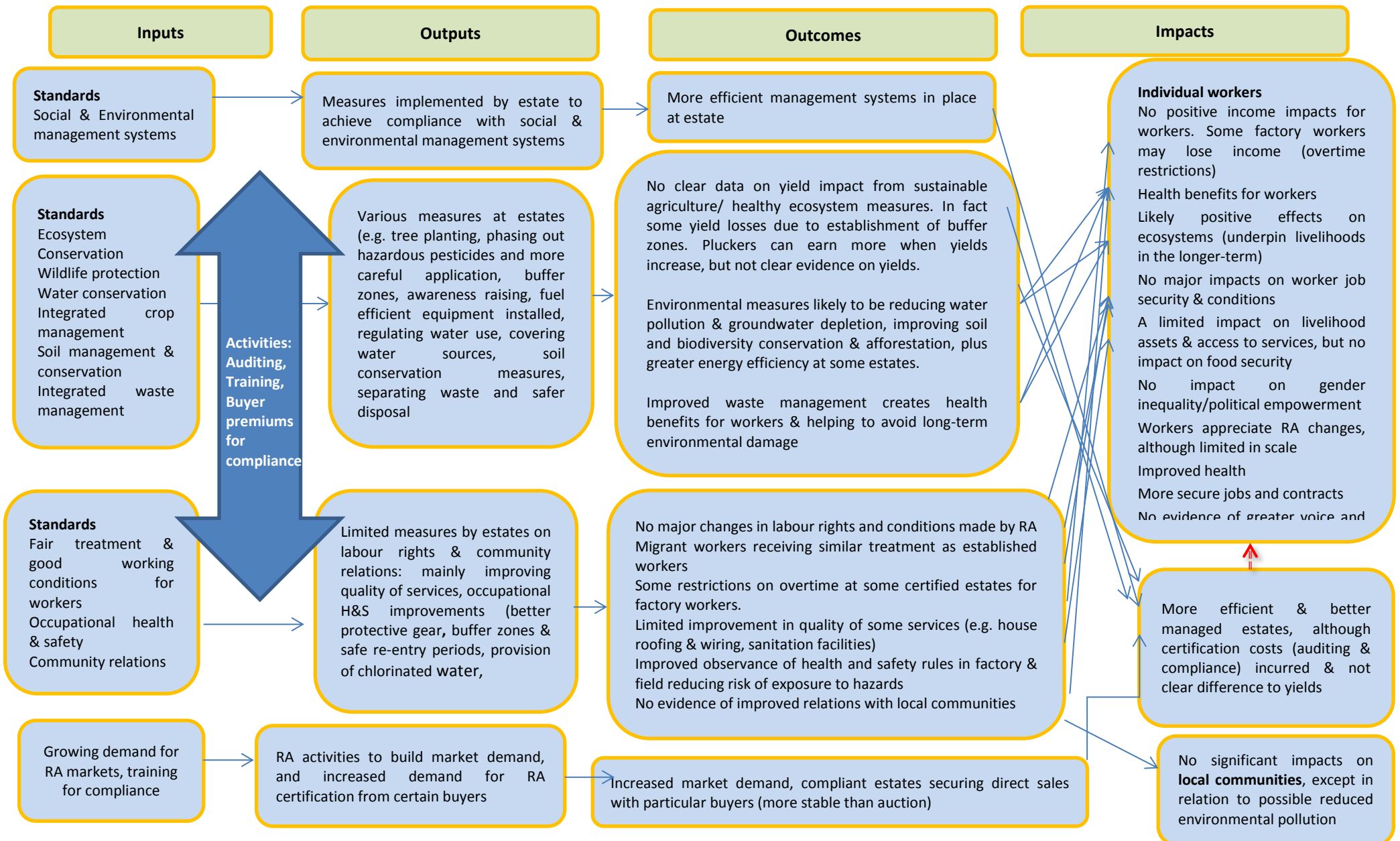
IMPACT ON WIDER COMMUNITY

Wider impacts	FT premium has been used to provide (a) blankets in the hospitals (b) health camps in a nearby tribal area and (c)provision eye check-up and reading glasses for the aged in the tribal area(and the workers). Hospital patients and local tribal community are benefiting from FT premium investment, but too soon to judge impact and limited data. Adherence to buffer zones ensures that the neighbourhood is not affected by the pesticide spray, with likely health benefits & biodiversity benefits. Similarly, the check on water quality at the exit point and treatment of waste water also ensure that the community dependent on the same water source is not affected by any type of contamination. Use of the estate crèche, hospital and roads by the neighbouring community and public transport – but not related to certification.
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IMPACT ON ENVIRONMENT

Environmental impacts	Integrated pest management practices, phasing out of hazardous chemicals, soil conservation practices, use of natural compost to strengthen soil are some of the practices reported by the estates. All these have a positive impact on improving soil fertility and productivity which would yield in the long term. Certified estates are shifting to energy efficiency methods of production. Integrated pest management and soil conservation measures currently being followed by the estates also would yield benefits in the long run to the estates by improving soil fertility. Non-certified estate has also stopped using toxic chemicals, and adopted safe re-entry period for allowing workers to re-enter a sprayed field. But no PPE provided (only a coat), compared with good provision on certified estates. No separate wash areas have been constructed with soakpits for the sprayers either at the non-certified estate, whereas this was provided on the certified estates. Permission to cut trees is required from the Forest Dept. of India, so all the estates (certified or non-certified) do follow this in terms of banning tree felling. However, chopping of trees by workers for firewood has come under greater scrutiny from management as a result of RA certification, in order to prevent it happening and it was reported by workers and managers that that indiscriminate cutting of trees in the estate and surrounding areas has been stopped. The availability of gas cylinders under a government scheme has made life easier for many workers, and pruned bushes are not buried but given to workers to use for fuelwood. Estates also plant more trees, which should lead to more tree cover and reduce the adverse climatic changes and better rainfall pattern. Wildlife protection and ban on hunting would lead to increased bio diversity in the region, less occasions of human-animal conflict.
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Figure 1 Actual Impact Pathway Hired labour Theory of Change (Rainforest Alliance)



Increasing influence of context (existing Plantation Labour Act, collective bargaining agreements, unionization, labour shortages, increasing buyer demand for RA certification)

1. Introduction

The objective of this research project is *'to systematically assess the poverty impact of voluntary social and environmental standards'*. Tea (in Kenya and India) and cocoa (in Ecuador and Ghana) are the two commodities that have been selected as the focus of this DFID funded study. Tea was chosen because of the lack of studies on the impacts of standards in relation to this commodity and the importance of tea in the global trade in beverages.

The study is an impact evaluation and thus comprises both certified and non-certified groups (treatment and control groups) and is longitudinal, allowing comparisons to be made over time to attribute impact to the standard systems rather than other contextual features. The study has given equal weight to qualitative research, covering a wide range of stakeholders across different levels. Triangulation of data sources and methods improves the trustworthiness of the findings and helps the research team to draw out the causal linkages of the impact chain. A theory of change approach has been employed by the study, with a generic and various standard-specific theories of change developed and used to refine research questions and instruments. Ultimately, the findings will contribute to the evidence base on the poverty impact of sustainability standards to inform policy-makers and practitioners so that they can both learn how to improve their impact and also demonstrate how far change is being achieved.

In India the study covered tea in Tamil Nadu where there are both Rainforest Alliance (RA) and FLO Fairtrade certified estates enabling analysis and comparison of the poverty impact for workers. It was not possible to include Fairtrade certified estates in the initial selection, because of a lack of agreement to participate in the study. However, a number of Rainforest Alliance (RA) certified companies agreed to participate and one of these estates later obtained Fairtrade certification during the course of the study, and another is seeking Fairtrade certification.



The upland landscape of the Nilgiris Hills

2. Study Methodology

2.1 Overall approach

The methodology employed in this study is an impact evaluation design. Starting with the elaboration of theories of change (in the absence of clearly articulated theories of change for each standard system), the study is based on the drawing of comparisons between multiple certified and non-certified groups in the same location with analyses conducted over time in a longitudinal analysis. The approach relies on a rigorous sampling method, the use of mixed methods – qualitative and quantitative techniques and statistical analysis to tests for significance in expected outcomes.

The baseline survey was conducted in February 2010, followed by a light monitoring exercise in 2011 to identify changes in impact since the baseline and to enable more in-depth investigation of complex issues. The final survey was conducted in February 2012.

2.2 Theory of change & research questions

A generic theory of change for standard systems was explored. At the time of the baseline study, the estates that agreed to participate in the study had Rainforest Alliance (RA) certification. RA is an international non-profit organization that promotes standards for sustainability, to conserve wildlife and wildlands and ensure the well-being of the workers and their communities³.

RA aims to promote fair treatment and good working conditions for workers, occupational health and safety, integrated crop management and community relations. RA certifies any organization that follows these principles and the organization can use the logo of RA when the products are sold. The benefits of adopting RA standards are said to be as follows; environment and farms are protected through sustainable agriculture practices; reduction in the pesticide use leads to improvement in health of the workers; protection of the ecosystems benefits the workers and community with safe environment; the management has a wider market and consumers are provided with tea that is (a) cultivated in environmentally safe and socially responsible farms and (b) safe to drink (Rainforest Alliance Manual, provided by RA6).

Rainforest Alliance uses the Sustainable Agriculture Network (SAN) standard. No theory of change had been articulated by Rainforest Alliance at the start of this study, and so we devised our own to guide the study, having interviewed RA staff. The theory of change builds upon the key elements of the standard and the support given to achieve certification, and how these might have an impact upon worker poverty.

Seven out of the ten RA principles emphasize protection of the environment and three deal directly with the workers and the community. These principles are as follows: i) social and environmental management system; ii) ecosystem conservation; iii) wildlife protection; iv) water conservation; v) fair treatment and good working conditions for workers; vi) occupational health and safety; vii) community relations; viii) integrated crop management; ix) soil management and conservation; x) integrated waste management. See table 3 below.

³<http://www.rainforest-alliance.org/about.cfm?id=mission> (website, 2010). This has recently been reformulated as: 'The Rainforest Alliance works to conserve biodiversity and ensure sustainable livelihoods by transforming land use practices, business practices and consumer behaviour'. Redesigning Land-Use and Business Practices: 25 Years of Impacts (Rainforest Alliance 25 Years) <http://www.rainforest-alliance.org/about/documents/tensie-25anniversary-presentation.pdf>

Table 3: Key principles of the SAN sustainable agriculture standards

Principle	Details
Social and environmental management system	Policies and plans to implement the best management practices in this standard; systems for avoiding mixing of certified and non-certified products;
Ecosystem services	Protection of natural ecosystems and activities to restore degraded ecosystems by re-establishing riparian forests – forests can be an important means of diversifying farm incomes when sustainably managed.
Wildlife protection	Farms act as refuges for resident and migratory wildlife, especially threatened and endangered species; protecting of natural areas, containing food useful for wild animals or key reproductive habitats; activities to restore ecosystems important for wildlife; reductions in wild animal hunting and trade.
Water conservation	Steps taken to conserve water and avoid waste and prevent contamination of surface and underground water e treating/monitoring wastewater – e.g. from runoff of chemicals or sediments.
Fair Treatment and Good Working Conditions	Follow human rights, children’s rights and ILO conventions and recommendations; farms pay salaries and benefits equal or more than the legal minimum; workweek and working hours must not exceed the legal maximums or those established by the ILO; workers may organize and associate freely, especially for negotiating working conditions; no discrimination or use of forced or child labour – farms also work hard to offer employment opportunities and education to people in neighbouring communities; housing provided by certified farms in good condition, has potable water, sanitary facilities, and domestic waste collection; families living on farm have access to medical services; children have access to education.
Occupational Health and Safety	Programme in place to reduce or prevent the risk of accidents in the workplace; All workers receive training on how to do their work safely, especially regarding the application of agrochemicals; certified farms provide the necessary equipment to protect and guarantee the tools, infrastructure, machinery and all equipment used on the farms is in good condition and does not pose a danger to human health or the environment; measures are taken on these farms to avoid the effects of agrochemicals on workers, neighbours and visitors; certified farms identify potential emergencies and are prepared with plans and equipment to respond to any event or incident as well as to minimize the possible impacts on workers and the environment.
Community Relations	Positive interactions with neighbours; inform local communities about activities and plans; consult with interested parties about changes that may affect them; contribution to local economic development through training, employment and preventing negative impacts on areas/activities or services important for local populations; contribute fairly to costs of community infrastructure and local shared resources consumed etc).
Integrated crop management	Encourages the elimination of chemical products known internationally, regionally and nationally for their negative impacts on human health and natural resources. Certified farms contribute to the elimination of these products through integrated crop management to reduce the risk of pest infestations. They also record the use of agrochemicals to register the amounts consumed, and work to reduce and eliminate these products, especially the most toxic ones. To minimize the excessive application and waste of agrochemicals, certified farms have the procedures and equipment for mixing these products and for maintaining and calibrating application equipment. Certified farms do not use products that are not registered for use in their country, nor do they use transgenic organisms or other products prohibited by different entities or national and international agreements.
Soil management and conservation	Sustainable agriculture aims in the long-term to improve soils that support agricultural production – so certified farms prevent or control erosion and thus

	reduce the loss of nutrients and negative impacts on water bodies; fertilization programme based on crop requirements and soil characteristics; use of vegetative ground cover and crop rotation reduces dependency on agrochemicals for the control of pests and weeds; new production areas limited to land suitable for agriculture and the new crops and never by cutting forests.
Integrated waste management	Clean and orderly farms; farm workers and residents cooperate with maintaining the farm clean and are proud of the farm's image; programs for managing waste

Each principle is composed of different criteria. The SAN standard version April 2009 contains 94 criteria which describe the best practices for social and environmental management. These are evaluated during the inspection process. RA certification is withdrawn in the case of major non-compliances, e.g. workers found not wearing their protective gear during spraying operations or in the factory; inappropriate handling of chemicals; use of banned pesticides.

The Ethical Tea Partnership⁴ has also set criteria for tea production and Fairtrade is also present in the Tamil Nadu plantation sector. The ETP, Fairtrade and RA standards overlap in terms of fair treatment, good working conditions, occupational health and safety measures for workers and the requirement for the product to be produced in a socially and environmentally sustainable manner.⁵

Table 4: Comparison of pesticide categories prohibited by RFA and FT

Pesticide category list	Rainforest Alliance	Fairtrade
a) POP	Yes	No
b) PIC	Yes	Yes
c) WHO Class 1a and 1b	No immediate prohibition but growers must phase it out after three years of certification	Yes with specific exemption possible on certain crops
d) WHO Class II	No	No
e) Pan dirty dozen	Yes	Yes
f) EU or US prohibited list	Yes (some)	No
d) Methyl Bromide	Yes	No

Note: 'Yes' indicates that a pesticide category is prohibited; 'No' indicates no prohibition of a specific category; POP: Persistent organic pollutant; PIC: Prior informed consent; WHO class 1a and 1b: Extremely and highly hazardous category; WHO Class II: Moderately hazardous category.

Source: Pesticide Action Network (2008), *Reducing Hazardous Pesticide Practice in Coffee Supply Chain*, PAN UK, London.

⁴ The ETP is a non-commercial alliance of international tea companies who share a vision of a thriving tea industry that is socially just and environmentally sustainable. Formed in 1997, by several major tea companies seeking to improve social and environmental conditions in their supply chains. Currently their work focuses on monitoring and certification, producer support and strategic sustainability.

⁵ On March 1, 2010, the Fairtrade labelling Organization and ETP announced their joint commitment to work together to improve the lives of tea workers and promote sustainability in the tea industry. ([http://www.fairtrade.net/single_view1.html?L=0&cHash=be5aa608ef&tx_ttnews\[tt_news\]=128](http://www.fairtrade.net/single_view1.html?L=0&cHash=be5aa608ef&tx_ttnews[tt_news]=128)). ETP also collaborates with Rainforest Alliance.

Table 5: Comparison of Health and Safety Requirements in RFA and FT certification systems

RFA requirements	FT requirements
1. Training for pesticide handlers	
Specific training obligatory for all workers handling or coming into contact with agrochemicals: correct handling and application techniques	Workers are aware of health and environmental risks of the products they handle and take correct emergency actions in case of accidents. Conduct improved, continuous health and safety trainings, including new, reassigned workers and seasonal and subcontracted workers
2. Personal Protective Equipment (PPE)	
All workers in contact with agrochemicals, including washing clothes and equipments must use PPE. Farm must provide this in good condition and provide incentives to workers to use it. Farms must have showers and changing rooms for all workers in contact with agrochemicals and require them to shower after application. Must have exclusive and separate areas for washing PPE and for washing application equipment. Clothes worn while applying agrochemicals must never be washed in workers homes but in designated area near changing rooms with handling procedures defined	Workers including temporary ones handling hazardous chemicals must be provided with adequate PPE of good quality and in good condition at company expense. Workers must always use such equipment and never take it home. After spraying workers must rinse equipment, wash PPE before undressing and shower.
3. Hazard communication	
Areas used for storing and mixing agrochemicals must have signs legible at 20 metres to indicate type of products, dangers and precautionary measures. Farms must take permanent action to protect workers, neighbours and other persons from effects of agrochemicals and biological or organic inputs. Identity groups most exposed to applications and have mechanisms for alerting them in advance of application dates, areas and re-entry restrictions. Must use warning signs to prevent unauthorized persons entering application areas. Workers must know and respect restricted entry during pre-harvest periods. For products with no established restricted entry periods, must apply 48-72 hrs. (WHO-I), 24-48 (WHO II) & 4-12 hours (WHO III & IV).	Safety instructions, re-entry intervals and hygiene recommendations should be displayed clearly in a visible place in the workplace. Local languages and pictographs should be used. Re-entry intervals are strictly observed and foliage must be completely dry before harvesting or other work is undertaken.
4. Chemical storage	
Must store in a manner that minimizes harm to health and environment and only store amounts to meet short term needs. Store location must be separated 60m from buildings and 200m from water sources for human consumption.	Hazardous chemicals must be stored correctly according to their toxicity in a separate, safe and locked room and issued by a qualified person to avoid risk to humans and environment.
5. Container treatment	
Empty containers must be triple rinsed before being stored for disposal or returned to supplier. If supplier will not accept them, farm must seek safe alternatives for disposal	Should control re use of containers to prevent use in food and product storage/transport and plan for disposal of potentially hazardous containers.
6. Water Protection and Buffer Zones	
Must have minimum separation (5m) between production areas and natural ecosystems. Native vegetation zones must be established between the crop and areas of human activity, including public, or frequently used roads to reduce agrochemical drift.	Aerial spraying only permitted for fungicide. Aerial spraying over buffer zones, open water bodies or residential areas is not undertaken. Waste water must not pollute water or contaminate soil or crops with chemicals.

<p>Specific separation distances of production areas from water bodies, roads and buildings according to slope of terrain and level of use of agrochemicals and type of spray equipment. If total or partial compliance with RFA water contamination standards cannot be proven, farm must conduct surface water quality analysis including pesticides to ensure that farm activities do not contribute to degradation of natural water bodies.</p>	
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Source: Compiled from Pesticide Action Network, 2008.

Beyond setting the standards, the Rainforest Alliance provides capacity building support to those seeking RA certification. Most of the estates have spent at least one or two years working towards RA certification⁶.

Seven out of the ten RA principles emphasize protection of the environment and three deal directly with the workers and the community. However both potentially have an impact on reducing the poverty among the workers, although perhaps over different timescales. Hypothetically, the following pathways to impact could therefore be envisaged:

- Over time the sustainable agriculture methods should potentially contribute to better productivity on the estate. Where bonuses are calculated in relation to productivity and incentives are shaped by yields, it is possible that workers may then benefit from higher incomes. A part of improved productivity could be shared with the workers in terms of incentives, bonuses and other welfare measures – although this depends on estate’s gross returns.
- Fair treatment to workers should ensure that there is no discrimination of any kind and thus there are equal employment opportunities for all the eligible workers.
- Provision of crèche/day care facilities for the babies should ensure that women do not lose income because they lack access to childcare.
- Provision of appropriate housing with potable water and sanitation facilities should lead to reductions in water borne illnesses and other infectious diseases.
- Occupational health safety measures which aim to prevent and reduce occupational risks (and combined with the Fair treatment measures) should lead to reduced illness and thus reductions in the number of days that the workers could be off work due to illness.
- Ecosystem conservation measures are expected to reduce, for instance, the felling of trees and to encourage planting of more trees which could lessen groundwater depletion and could potentially increase resilience to climate change. This in turn might have a positive bearing on production and income opportunities for the workers, and contribute to greater sustainability of production over the longer term because of improved environmental protection.
- The integrated waste management measures, besides having a direct bearing on health and thereby income opportunities for the workers, also in the long term should prevent potential environmental hazards due to the indiscriminate disposal of non-degradable wastes like plastics.
- Poverty impact of wildlife protection could be indirect through promotion of tourism and related income generating opportunities for people in the region.

⁶In RA1 the preparations started in early 2007 and they were ready by March 2008. In RA5 the preparation began in February 2008.

As well as the content of these standards, the capacity building support provided by RA should enable estates to achieve certification, sustain or achieve market access, particularly in premium markets. Increased market access resulting from certification might also increase estate profits and could theoretically influence poverty impacts at the worker level.

Figure 2 below was developed following interviews with RA staff early in the project to explore the theory of change or impact chain of Rainforest Alliance standard system focusing on tea estates and workers. It explores the potential pathways of impact flowing from the best management practices indicated in the standard and adds training – this was highlighted by the RA representative interviewed.

A theory of change diagram (Crosse, 2009) was not publicly available in 2009 when we began our study – see appendix 1. It provides an outline of a Rainforest Alliance Theory of Change (TOC). It is not clear if this TOC is the official Rainforest Alliance version, but it provides useful insights into how the standard system envisages change. The TOCs are fairly similar although the NRI one focuses on teasing out the **poverty** impacts in particular.

None of the estates agreeing to participate in the *baseline* survey had Fairtrade certification. However, one estate has achieved Fairtrade certification since the baseline survey. Thus a Fairtrade theories of change for hired labour is provided below.



Signage on a certified estate

Figure 2 Hypothetical Rainforest Alliance Hired labour Theory of Change

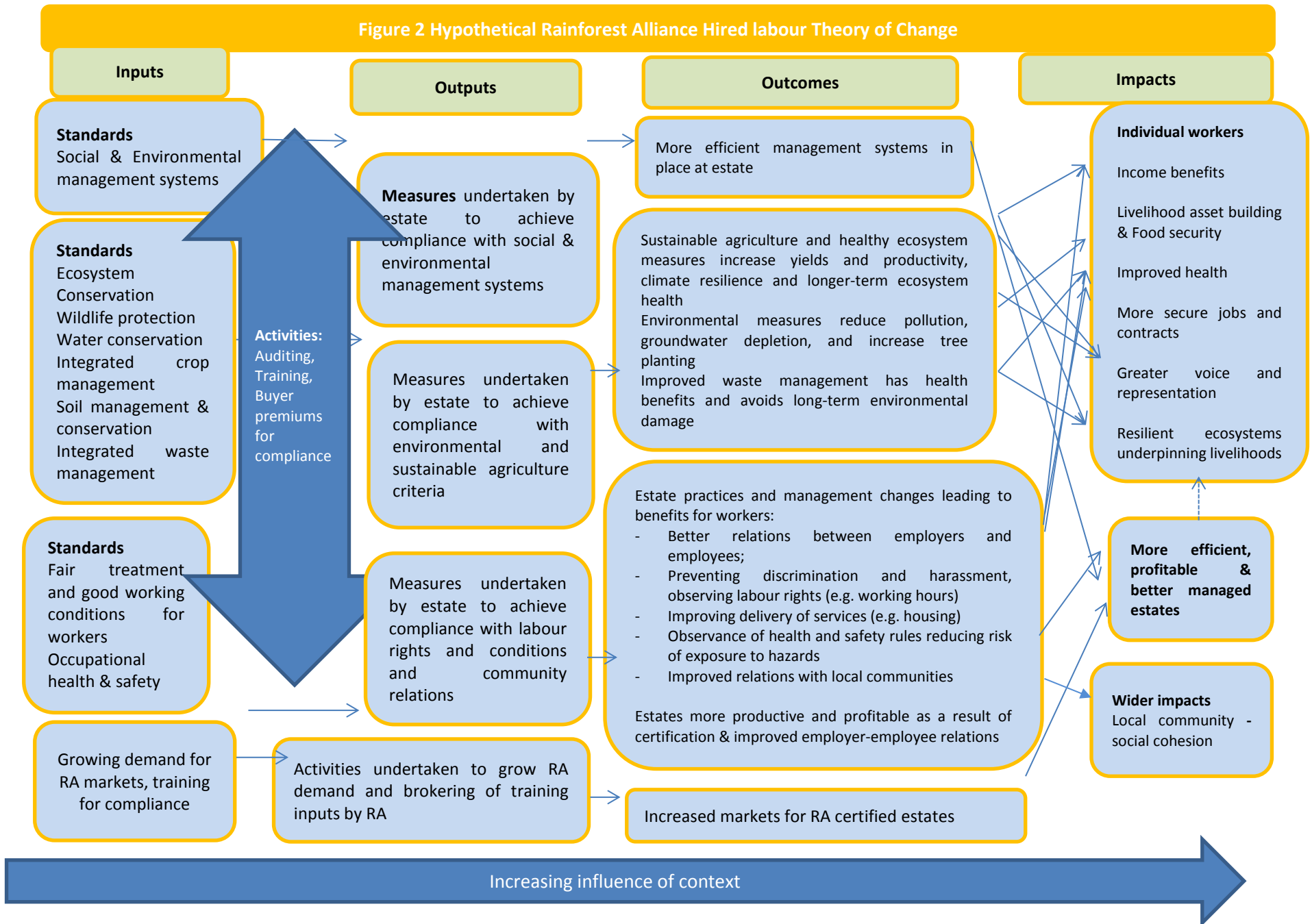
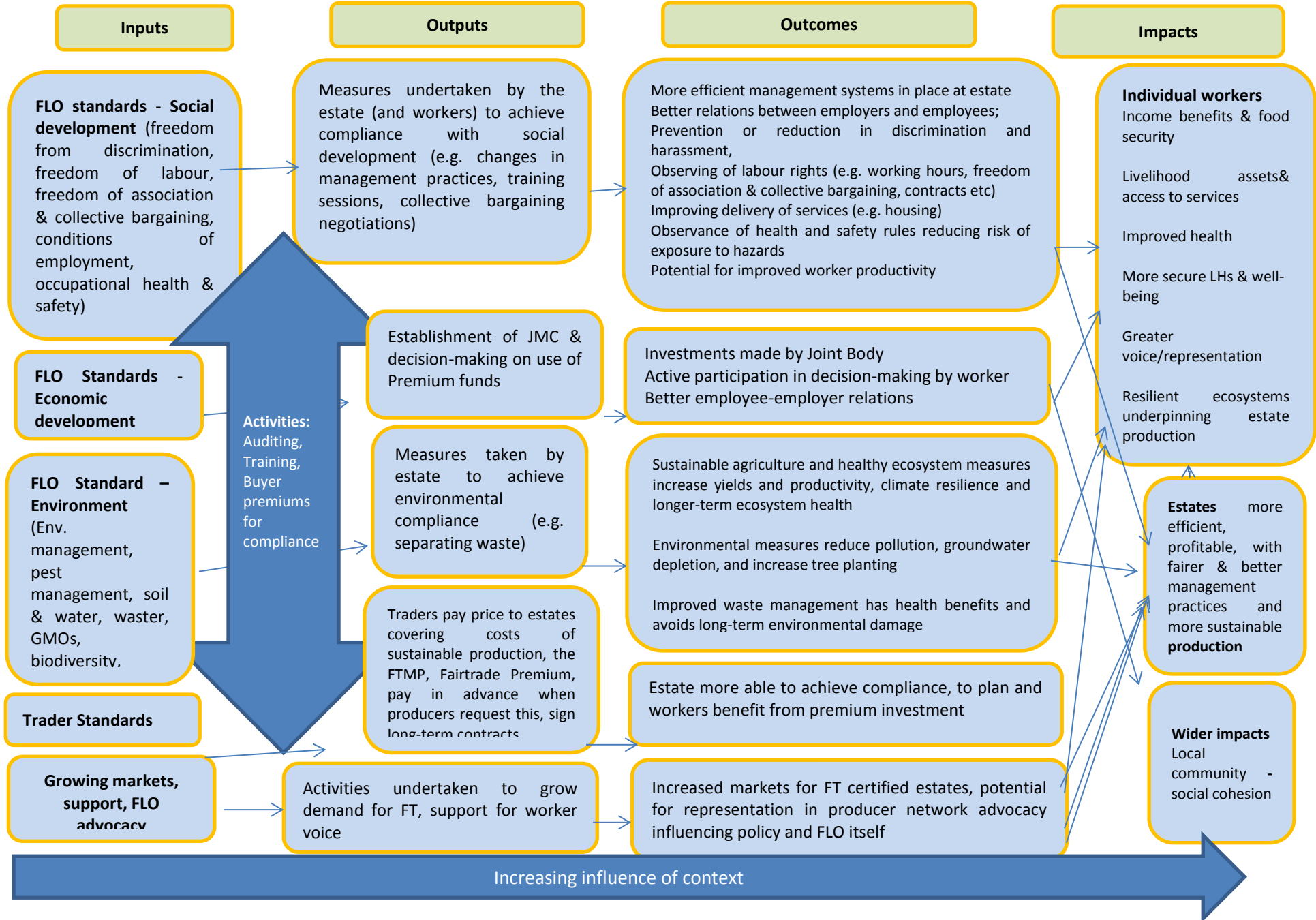


Figure 3: Hypothetical Fairtrade Hired labour Theory of Change



2.3 Methodology

The study employed mixed methods. The research instruments were designed drawing from the theories of change developed as hypothetical guides to identify the ways in which the relevant standard systems may have an impact.

A generic tea worker questionnaire survey was designed by the NRI team with the aim of gathering data from individual producers on incomes, contract and employment conditions and access to services, and improvements in these since certification, occupational health and safety, individual health, food security, and awareness of the Fairtrade premium and its uses (for Fairtrade certified estates). The questionnaire thus captures data at certification, at the time of the baseline and in the final survey period. The questionnaire was piloted by the Indian research team, adapted to the Indian context and translated into Tamil. The team of enumerators was then trained in conducting interviews using the questionnaires. The questionnaire covers a range of indicators of outcomes and impacts (see box 1 below).

Box 1 Main indicators covered in the questionnaire

- Profile of individual & household members
- Contract & Employment Conditions
- Income: wages, overtime, annual total etc
- Key livelihood activities and income sources;
- Proportion of income from waged labour
- Investment of additional income
- Changes since certification
- Cause of any changes observed in past 2 years
- Ability to cover basic needs with work income
- Degree of satisfaction with diverse services provided by the estate
- Changes in services & occupational H&S measures over last 2 years
- Changes in health over last 2 years
- Food Security
- Awareness of RA and Fairtrade

Equal weight was given to the qualitative data collection, with a range of methods being employed. A series of qualitative checklists were also designed by the NRI, to ensure some comparability of data collection across the four study countries, but these were also adapted to the Indian tea and hired labour situations and translated into Tamil (see project website <http://www.nri.org/projects/tradestandards/index.html>). Focus group discussions covered similar issues to those outlined in the questionnaire survey, but allow much more scope for probing and for in-depth discussion of priority issues to workers. The individual household case study interviews sought to gather a more in-depth understanding of household dynamics and the potential role of certification in making a difference to the livelihoods and income of household members.

The checklists were used at both certified and non-certified estates. As well as the focus group discussions and individual household case studies, there were checklists for management and key informant interviews (e.g. local industry bodies, private sector representatives, community leaders, certification representatives, value chain actors etc). The management interviews focused on a discussion of changes made due to certification, the costs, strengths and weaknesses of certification and upcoming challenges and views on the future.

During the light monitoring exercise (March 24th – April 2011) a separate visit was undertaken to provide an update to participating estates and stakeholders, to fill in gaps in information in management interviews, and to discuss changes observed by workers and managers since the baseline survey and to what these changes can be attributed. All estates except RA6 were available. However, workers were interviewed at all the estates except RA7 (the manager was travelling overseas). Focus group discussions were held with workers in mixed groups of men and women (except in RA3, RA5 and at the non-certified estate where we met them individually). In RA1, RA2 and RA4, the management arranged the number of workers to be interviewed. Some of the workers had participated in the FGD and individual interviews that had been conducted in 2010. A feedback paper was prepared for estate managers and a checklist of questions for different groups was elaborated.

For the final survey the baseline checklists were adapted⁷. It was also decided that the individual household case studies would not be repeated. The baseline fieldwork was conducted in February 2010 by the GIDR team leader, five enumerators and an NRI representative. Similarly, the Light Monitoring (2011) and Final Survey (2012) exercises were conducted by GIDR, enumerators (research students in economics and sociology from different colleges in Tamil Nadu) and NRI staff.



Interviews in the field

2.4 Sampling process

2.4.1 Selecting countries

DFID guided the research team to focus on Africa and South Asia, given the previous focus on work in this field in Latin America (see Nelson and Pound, 2010). The information was not readily available from the websites of these organizations and had to be constructed from scratch. A matrix was developed with the support of Fairtrade, Rainforest Alliance and Utz Certified standard systems to establish the location of all certified estates and producer groups, and to gather information on their relative size (e.g. numbers of members) and to obtain contact details. Once the information was gathered, selection criteria were established

⁷ Questions related to the socio-economic background of the workers were common in baseline and final survey. During the baseline survey, the questions probed the difference between situations before certification and at 2010. In the final survey, there were specific questions related to (a) changes in income of the workers since the baseline and since the certification of the estate. (b) changes in the workers basic rights and services provided by the companies since the baseline survey in 2010.

to guide in the selection of countries, commodities and the units of analysis (e.g. the producer groups and estates to approach) (Nelson et al, 2009).⁸

Once the matrix was complete it was clear that Tamil Nadu state in India provided the only location in Asia where there are both Fairtrade and Rainforest Alliance certified estates. Thus, India tea was selected as one of the four countries in the study. Unfortunately, no smallholder groups are certified in this Indian state. A smallholder group is certified in Kerala, but it was decided that it was not possible to include this group because of the language, and cost implications. Subsequent work was conducted to obtain information on the number of workers at each estate and to identify the exact location and contact details.

Table 6: Distribution of FLO/ RFA certified tea plantations in India, 2009

State/ region	Number of fair trade certified Tea plantations		
	FTF/FLO	RFA/SAN@	Total
1. Nilgiris –Tamil Nadu	5	8	13 (56%)
2. Assam	2	0	2 (8%)
3. Darjeeling-West Bengal	4	0	4 (17%)
4. Kerala	4	0	4(17%)
All India	15	8	23 (100)

Note: FTF – Fair Trade Foundation; SAN – Sustainable Agriculture Network.

Source: Compiled from sources: @<http://www.rainforest-alliance.org/multimedia/indian-tea-estates>, <http://www.fairtradenap.net/india/> accessed on 30th December 2011.

2.4.2 Sampling the estates

Tamil Nadu is the main tea producing state in southern India. The vast majority of the certified estates are in Tamil Nadu’s Nilgiri district, and so this was chosen as the fieldwork location. The research team visited various RA and FT tea estates in December 2009 to request their agreement to participate in the study. The response - except for one RA-certified estate – was reluctance or complete rejection. There were 5 FLO-certified estates in 2009-10, but none of them agreed to participate. However, through the intervention of Unilever we contacted an intermediary stakeholder who encouraged the five RA certified estates selling to Unilever to participate⁹. A total of six RA certified estates had thus agreed to participate. Unfortunately, none of the Fairtrade certified estates agreed to participate in the baseline survey. However, by the time of the final survey one of the certified estates (RA5) had obtained further certifications, e.g. Organic certification (2008), Fairtrade (2010, August) and Utz Certified (2011).

All of the seven tea estates in Tamil Nadu achieved RA certification in November 2008. The period that had elapsed between the survey and certification was 14 or 15 months. However, to obtain such certification, introduction of new or improved practices have to be in place for several months prior to certification, so improvements on various parameters may have begun approximately two years before the survey. Respondents were asked about the changes since 2008. One estate (RA5) holds several certifications. At the time of the baseline RA5 had ETP (2005), Rainforest Alliance (2008), and later achieved Fairtrade certification in 2010 and later achieved Utz Certification in 2011 (see table 7). It has a small acreage of certified organic tea.

⁸V.Nelson, A. Martin, C. Barahona, C. Coote, (2009) [‘Assessing the poverty impact of voluntary sustainability standards, Conceptual and methodological framework’](#)

⁹Mr.IndrajitChatterjee, the CEO of Container Tea Commodities, and through whom the tea produced by five of the RA estates is sold to Unilever. Mr Chatterjee provided invaluable support in encouraging these five RA estates to participate.

Map 1: showing location of Nilgiris District, Tamil Nadu



In order to measure and attribute poverty impact to the standards, it was necessary to construct a counterfactual. The original proposed sample was 6 FLO Fairtrade certified estates, 5 RA certified estates and 5 non-certified estates in Nilgiris. Unfortunately, the Fairtrade estates did not agree to participate in the baseline survey, and two of the family-owned non-certified companies also refused to participate. Another non-certified estate was dealing with the aftermath of a fire in its factory premises and hence was not able to participate. Yet another estate which we were initially informed was a non-certified estate actually turned out to be a certified out grower for RA5: this was nevertheless included in the sample as an additional RA-certified estate, bringing the total up to seven.

Table 7: Certifications held by study sample

Year	2010	2012	Estate has own factory	Features
CODE				
RA1	RFA, ISO 22000 in process	RFA, ISO 22000 for the factory in the pipeline	yes	
RA2	ETP, ISO9000, ISO 22000	RFA	yes	
RA3	ETP, ISO 9001-2008, ISO 22000-2005, UQCSR**	RFA, ISO 22000 in pipeline (?)	yes	Expecting to obtain UTZ certification in the future
RA4	ETP, HACCP in process	RFA, ISO 22000	Yes	
RA5	ETP, ISO 22000-2005 in process, RA, organic in process	ETP, RFA, ISO22000, Utz (inspected by Utz, awaiting certificate), organic and Fairtrade (after baseline later in 2010)	yes	Most certifications held, including Fairtrade, ISO 22000-2002 for fields*
RA6	ISO 22000 in process	RFA, ISO22000 for factory	yes	Preparing for Fairtrade certification
RA7	Institute of Market Ecology	RFA	No	Suppliers of green leaves and supplies its entire green leaves to RA5.
NC1		None	yes	

**Unilever Quality and Consumer Safety Roadmap, where Unilever combines the ISO 22000 and ISO 14000, * expected within 3 months.

Source: Management interviews.

In terms of non-certified estates, access was also very difficult, with only one estate agreeing to participate. This estate is also not an ideal comparison for the certified estates, because it sells only onto the domestic market in India, and does not export to other markets that demand certification. However, it was the best comparison available to the study.

All the estates are private limited companies. Of the seven estates with Rainforest Alliance certification in the study sample, six have a factory located at the estate and process their own tea.

Unilever which purchases certified tea from the RA certified estates supported them financially in the first two years of obtaining and complying with RA certification, as there are substantial costs involved, particularly in infrastructure investments of various kinds. All estates received the same amount, but this premium ended in 2009. The premium provided by Unilever more or less paid for the various improvements that the estates had to undertake according to the managers. The preparation for RA certification began in 2007 or early 2008 and the final certification was awarded in November 2008 for all the estates under study.

Table 8: Profile of the selected tea estates

Estate	Size of estate (hectares)	Products	Total production (million Kg)	Export market (%)
RA1	195	Green tea	0.8	75
RA2	185	80% Orthodox and the rest CTC	2-2.5	Most of it exported
RA3	404.8	Orthodox and CTC	1-1.5	50-60
RA4	182.88	Orthodox	1	70
RA5	170	Orthodox (99%), green, organic	2	90
RA6	Total planted area 569	Orthodox (90%), CTC rest	1.7	90
RA7	80.9	Supplies leaves to RA5	0.085*	
Non-certified	150	Orthodox tea	0.8	100 per cent domestic market

Source: Compiled from management interviews

Except for the non-certified estate, all the estates sell a pre-determined quantity to Unilever which in turn sells in the UK and other export markets. The non-certified estate focuses on the domestic market. In all 95% of the workers are permanent employees of the estates and 5 % are employed as temporary workers (baseline data). All the certified estates and the non-certified have their own factories in which the tea is processed.

2.4.3 Sampling the workers

The project statistician at the time from the University of Reading indicated that approximately 700 interviews would be ideal for statistical purposes across the sample of certified estates identified. However, due to access issues it was clear that only agreement to interview a smaller number of workers could be gained at each estate. The research team then proposed to interview a sample size of 400 workers – with 25 workers drawn from each of the estates. Unfortunately, a smaller than anticipated number of estates finally agreed to participate in the study and so the research team sought to increase the size of the worker sample in each of the estates having built trust with the management. It became possible to interview as many as 50

workers at one visit. On an average we interviewed 7.9 per cent of the total number of workers in the estates during the baseline survey and in the final survey 8.66% of the total number of workers was interviewed.

During the baseline survey in most cases the workers for the structured questionnaire interviews were randomly selected by the research team from the company's computerized list of workers. An exception was RA2, where they had already made what they called a 'random selection' and had arranged for the workers to be available for interview at a particular time. We selected about 60 workers to allow for any absentees that day and so that the overall sample interviewed would be at least 50 in an estate. The estates indicated that as the study was being conducted during the lean season in terms of production on the estate, workers tend to take their annual leave at this time.

From the list of workers we randomly picked the first name and then every 10th person was selected. In estates which had more than one division, like RA6, we selected every 10th person from each division and repeated the exercise till we had the required number of respondents. In some cases this was done when we arrived at the estate and in other cases we had obtained the list before hand and were able to notify the management in advance as to which workers we wanted to interview. Given that the selection of respondents was often done under considerable time pressure, it was not possible to firstly stratify the employees by gender which would have enabled us to have equal numbers of men and women. In total 304 worker interviews were conducted in the baseline, across 7 certified estates and 1 non-certified estate (Table 9).

Table 9: Total number of workers interviewed in the chosen estates

	2010			2012		
	Male	Female	Total	Male	Female	Total
RA1	30	29	59	17	39	56
RA2	6	19	25	11	19	30
RA3	15	19	34	17	14	31
RA4	12	13	25	12	13	25
RA5	15	11	26	15	11	26
RA6	21	32	53	20	33	53
RA7	9	27	36	5	27	32
NC1	14	32	46	15	10	25
	122	182	304	112	166	278

During the final survey, the low season had reduced the number of workers on site to only 50% of normal size (e.g. in RA2, RA4, RA5 and RA6) and some of the divisions of employees were working at very far locations from the estate office. For these reasons it was not feasible to select workers from the workers' list on the same day and bring them together for interviews or even to interview them in the field in the time available. At these estates the managers had arranged to bring the required number of workers for the focus group discussions and worker interviews to the estate office when the research team arrived. They included men and women, pluckers and factory workers (except at the non-certified group where access was not allowed beyond the factory workers in the final survey, in contrast to the full access granted in the baseline). The workers were drawn from units that happened to be working on the estate near the office, or at the collection point once they had finished work for the day. It is not thought that their selection by managers introduced any systematic bias. At the other certified estates, the team went into the field to find workers in which case the selection was random.

Table 10: Numbers of workers and structured worker interviews in 2012*

Estate	Total number of workers in the estate			Number of respondents		
	Male	Female	Total	Male	Female	Total
RA1	148	175	333	17	39	56 (16.8)
RA2	135	293	428	11	19	30 (7)
RA3	394	573	967	17	14	31 (3.2)
RA4	53	250	303	12	13	25 (8.2)
RA5	130	194	324	15	11	26 (8.0)
RA6	489	583	1072	20	33	53 (5.42)
RA7	25	30	55	5	27	32 (58.0)
Non-certified	53	160	213	15	10	25 (11.7)
				112	166	278 (8.66)

*Also includes workers in the factory.

Figures in parentheses indicate the percentage of respondents to total number of workers

An analysis of respondents of the questionnaire survey indicates that the proportion of male respondents is significantly larger for the non-certified estate than for the certified estates. This arose from the restricted access to pluckers (who are mainly women) imposed by the management of the non-certified estate at the time of the final survey, resulting in a larger number of interviewees involved in production, processing and packing (jobs which have a higher proportion of male workers).

2.4.4 Data gathering

For the management interviews, the team were supported by an intermediary (Container Teas) to set up interview schedules and to request meetings with managers. The CEO of Container Tea provided crucial assistance in gaining a first meeting with estate managers, who were wary of external studies following a Dutch NGO study which had been highly critical in their view. This support was extended throughout the research study. In the light monitoring, all the estates except RA6 were visited by the team. For the family owned estates, the owner of the estate heads the administration and is in charge of day to day administration, except in RA3 where the owner lives in Sri Lanka. In a few family owned estates, the research team was able to meet the owner along with the estate manager or RA manager (Table 11).

Table 11: Interviews with management during the study

Who Interviewed	Baseline Survey (2010)	Light Monitoring (2011)	Final Survey (2012)
RA1 (Family Business)	Owner interviewed	Owner interviewed	Owner interviewed
RA2 (Family Owned)	Owner, RA group manager and other officials	Owner, RA group manager and other officials	Owner's son (new induct to the management), RA group manager and other officials
RA3 (Family owned)	Estate manager and other officials	Estate manager and other officials	Estate manager and other officials
RA4 (Family owned)	Estate manager	Owner & estate manager	Owner & estate manager
RA5 (Private Limited)	Owner, RA group manager	RA group manager	Owner, RA group manager
RA6 (Private Limited)	Owner, estate manager, other officials	Not available	Owner, estate manager, other officials
RA7 (Family owned)	Owner, estate manager	Owner, estate manager, other officials	Estate supervisor
Non-certified (Family owned)	Interview: Owner	Owner	Owner

Table 12: Number of focus group discussions conducted during the study

Estate (coded)	Baseline		Light Monitoring		Final Survey		Total
	FGDs Male	FGDs Female	FGDs Male	FGDs Female	FGDs Male	FGDs Female	
RA1	1	1	Mixed		x	1	4
RA2	1	1	Mixed		1	1	5
RA3	1	1	1	1	1	1	6
RA4	1	1	Mixed		1	1	5
RA5	1	1	1	1	x	1	5
RA6	1	1	-	-	1	1	4
RA7	1	1	-	-	x	1	3
Non-certified	1	1	1	1	1	1	6
Subtotals	8	8	6	3	5	8	38

During the baseline survey, participants for the focus group discussions (FGD) and the individual household (HH) interviews, workers were identified by management due to time pressures and because this was the only access the team were allowed. Focus group discussions were held with separate groups of female and male workers as a way of drawing out gender differentiated perspectives and one focus group was held with smallholder workers on an outgrowers' farm. Between four and seven participants were selected to participate in each focus group discussions.

Table 13: Numbers of individual household case studies conducted during the study

Estate (coded)	Baseline		Total
	HH Male	interviews Female	
RA1	1	1	2
RA2	1	1	2
RA3	1	1	2
RA4	1	1	2
RA5	1	1	2
RA6	1	2*	3
RA7	1	1	2
Non-certified	1	1	2
Subtotals	8	9	17

**In RA6 we interviewed a woman who had recently migrated from Jharkhand, in addition to the other female interview*

During the baseline survey at RA7 and at the non-certified estate the individual interviews and FGDs were held in the tea garden. At the other estates the management facilitated the process by providing us space in buildings (e.g. in the school). However, managers were not present in the place where the interviews were held. It should be mentioned that the participants were friendly and appeared to be talking to us freely and without any obvious inhibition.

During the light monitoring exercise, we met the workers as in the baseline in spaces provided by the estates, except in RA3 and non-certified, where we met the workers in the tea garden. At RA7, we could not meet the workers. During the light monitoring exercise interviews were held with mixed groups of men and women at most of the estates because of time/resource constraints, except for at RA3 and RA5 where separate men's and women's discussions were held. At the non-certified estate FGDs were also held separately with men and women workers.

The final survey was also conducted during the low season for the estates, because yields are reduced in winter and thus workers tend to take their annual leave during this period. Each of the estates was therefore functioning with fewer workers than normal, and so in a few estates we could not find an adequate number of male workers to conduct the focus group discussions. Female workers were available though less in number, because the plucking operations have to be continuous throughout the year. There was also some difficulty in gaining cooperation from management at one estate in the final survey. Because of this difficulty the sample size of 2012 is smaller than the sample of 2010 for the focus group discussions.

A range of key informants were interviewed throughout the study. See table 14 below.

Table 14: Key informants interviewed throughout the study

Key Informants	Stakeholder description	Baseline	Light Monitoring	Final Survey
National				
Secretary, Nilgiri Planters Association (NPA), Coonoor.	Membership of the NPA helps estates participate in the Indian tea auction system. NPA sometimes arranges auctions in foreign markets. Lobbies state or central government (e.g. on wages, prices etc)	√		
Assistant Director, Advisory services of Tea Research Foundation (TRF), Coonoor.	Advises estates on the use of inputs (fertilizers, pesticides), with frequent visits and so familiarity with measures to achieve compliance with standards. TRF is linked to Upasi Tea Research Foundation	√		
UPASI Tea Research Foundation		√		√
Tea Board of India Secretary, Planters Association Tamil Nadu, Manager, INDCOSERVE. Individual researcher on tea	Represents all plantations, acts as a advisory board. Advocay representation at the state level.			√
International				
Fairtrade representatives (e.g. Global Product Manager – Tea; M&E staff)		√	√	√
Rainforest Alliance staff (e.g. programme leaders, lead on tea)		√	√	√
Unilever				No response to request

2.4.5 Data management and analysis

The qualitative data was written up into interview transcripts and notes. The information has been tabulated and analysed by the research team flowing from the theory of change and the research questions.

Databases were designed by the University of Reading and the data was inputted by GIDR. The data were then checked and cleaned by the study team. Statistical analyses were then conducted of the baseline data and of the final survey data, with more complex analyses also being run in 2012 to identify difference-in-difference and to test propensity score matching. Records of the data included in the databases are held by both NRI and GIDR.

The data from the questionnaire baseline interviews have been analysed using T test and Mann-Whitney tests to determine the significance of any differences between workers at estates with different certification status.

The Difference-in-Difference, or Double Difference (DD), method was used to compare the differences in change over time between workers at estates with different certification status. DD compares the different groups in terms of outcome changes over time relative to the outcomes observed at a baseline.

2.5 Confidentiality

The participating estates have been coded to ensure their anonymity. This was a condition of their participation, because of the commercial sensitivity of the data.

2.6 Limitations

The major limitation in this study was the refusal of many of the estates approached to participate. The aim had been to obtain a random selection across a wide variety of estates. This is because in our experience there is variation between estates in terms of their size, ownership and in the outlook and culture of the management – all of which can shape how standards are taken up and implemented and therefore what impact they may have in practice. It was not possible to achieve as broad a reach as envisaged, because of the refusal of many of the companies to participate, and the sample did not include Fairtrade certified estates initially. It seems that many of the estates did not wish to participate because they had cooperated with an earlier study by a Dutch organization, which had then produced a report which was felt by many of the Nilgiris estates to be highly unbalanced.

Furthermore, the non certified estate had previously had Ethical Tea Partnership (ETP) certification. The ETP has stepped back from monitoring its standard, choosing instead to work with other standard systems. The training provided by ETP and compliance with its standard would have led to changes prior to the RA certification, and this has helped the certified estates to comply smoothly with Rainforest Alliance certification. It also means that some changes would have been made at the 'non-certified estate', although the compliance had been dropped by the estate. More differences may have been found resulting from Rainforest Alliance certification if the non-certified estate had not engaged with the ETP prior to the study period.

The dynamism in the sector in terms of certification is apparent – one of the estates had obtained Fairtrade certification before the final survey. Another had sought certification, but could not achieve Fairtrade certification as it works on an outgrower model. The estate which had achieved Fairtrade certification, had also stacked up several other certifications (organic,

Utz Certified – the latter moving into Indian tea in 2011). This means it is harder to separate out from the analysis the impact of RA certification as opposed to Fairtrade certification, but it is still possible to aggregate the data to compare certification to any sustainability standard with the situation on these estates before certification AND to compare with the non-certified estate (although the latter had ETP certification previously).

Although, the team did manage to conduct more interviews at each company in the baseline than originally planned, to try and increase the overall number of observations, the total number was less than the ideal outlined by the statistician. During the final survey one of the estates was less cooperative than in the baseline – perhaps because of the larger number of interviews requested.

In terms of selecting individual workers for interviews for the questionnaire survey, it was also not possible in every single case to randomly select the workers, although it is thought that the level of bias introduced is not high because workers were drawn from whichever group was working near the office on the day – and this was coincidental. In view of these limitations, for some elements in the analysis, e.g. workers incomes, a propensity score matching was used for a supplementary analysis, creating a matched sample of certified and non certified workers (on observable characteristics) from the total sample.

The lack of a clear theory of change articulated for Rainforest Alliance meant that the study team had to develop their own. During the period of the study ISEAL decided to require all standard systems to develop a theory of change and to improve their monitoring and evaluation systems.

It was not possible to conduct our study prior to the estates becoming certified. Therefore to some extent we are relying on recall data in the baseline survey, which included questions relating to ‘the last x years or since certification’. This approach was easier in India than in some other countries, because all of the RA certified estates had obtained RA certification at the same time – in 2008. However, there are issues with recall data generally (see Ravallion, 2001, who questions the reliability of rapid appraisal recall methods)¹⁰.



Indian Tea Board offices, Nilgiris

¹⁰Ravallion, M (2001) ‘Rapid appraisal methods can be deceptive about the impact of development projects’. World Bank Policy Research Working Paper, 5983.

3. Contextual analysis

3.1 Tea

Tea is the second most consumed drink globally after water. All teas are derived from the same sub-tropical plant, *Camellia sinensis*, which is native to Asia. Orthodox tea is produced through plucking of two leaves and a bud, following by five key steps in processing. The five key steps of processing are plucking, withering, rolling, oxidizing and firing. Unorthodox methods include CTC (crush, tear, curl), which is often used to produce strong tea, which is commonly used in tea bags and Masala Chai in India. It is a quicker form of production and processing, and the tea may or may not be plucked by hand, with commercial machine harvesters used to cut the leaves in many cases and leaf shredder machines to cut the tea into small pieces.

Indian tea began in the colonial era, with plantations established in remote areas and with workers having minimal rights. There were forced relocations of indentured labour and the use of debt bondage (Moxham, 2003 cited by Neilson and Pritchard, 2010). Plantations were 'enclave-economies, disarticulated from pre-existing Indian social and commercial networks, with workers dependent on planters for the basic necessities of life, including housing, fuel, food, health and education (Neilson and Pritchard, 2010). The reason being that since the tea plantations were located in higher altitudes with not so easy access terrain, the plantations needed to create basic amenities for the wellbeing of the workers who migrated from other areas to work in the plantations (Sarkar and Bhowmik, 1999).

Following independence, unionization of workers began and additional rights were established. The Plantation Labour Act of 1952 was an important step in establishing minimum standards. This Act replaced what were known as the *dastoor* traditions – informal institutions on each plantation relating to the provision of services and housing etc. by plantation owners (Neilson and Pritchard, 2010). The PLA, workforce unionization and other initiatives (e.g. on eliminating child labour) led to improvements in working conditions over the following decades on Indian tea estates (Neilson and Pritchard, 2009¹¹). UPASI and the Tea Board of India suggest that as a result of these standards, Indian tea is the most ethical source of tea in the world, (UPASI and Tea Board of India, 2007: p. 5 cited by Neilson and Pritchard, 2010, 2010), but some scholars argue it has reduced Indian competitiveness (Accenture, 2002:81; Bhandari, 2005, cited by Neilson and Pritchard, 2010).

3.2 Global tea markets

3.2.1 Production

Tea is produced in approximately 45 countries globally, with the largest producers being China, India, Sri Lanka, Kenya, Vietnam, Indonesia, Bangladesh and Japan. Together these countries represent approx. 86% of the global tea harvested area as per the latest data reported by the FAO¹². China and India have the largest share of the tea harvested area, with spectacular growth in the last fifty years in the area of tea cultivation in China. Kenya and Vietnam have also expanded tea cultivation areas. Conversely, conventional producers such as Sri Lanka and Japan have reported significant declines in the area under tea.

¹¹ Neilson, J and B. Pritchard (2009) 'Value chain struggles: Institutions and Governance in the Plantation Districts of South India'. RGS with IBG. Blackwell Publishing, UK.

¹² <http://faostat.fao.org/site/567/DesktopDefault.aspx?PageID=567#anchor>, accessed 22nd January 2013.

In relative terms, India's share in global tea harvested area had declined from 24.2 per cent in 1961 to 17.8 per cent in 2011. The decline in tea area in India has been more pronounced during the current decade, as its global share dropped from 21% in 2000 to 17.8% in 2011. Between 2008 and 2011 Indian tea production declined from 986 million kg to 966.4 million kg whereas during the same period, Chinese production grew from 1,274 million kg to 1,640 million kg¹³. The gap in production has thus increased from 288 million kg to more than 680 million kg in the same period. The Indian share of global tea markets has declined from 37-39% in the 1960s to 12% in 2009 (Veeramani, C, 2012, P.13)¹⁴. Nagoor (2012) observes that the "increase in tea export supply of Kenya and Vietnam, stagnant tea imports in traditional tea importing countries such as UK, aggressive marketing strategy by Kenya and Vietnam and decline in India's global tea competitiveness are responsible factors for India to search for new market and poor performance of its tea exports" (Nagoor B H, 2012)¹⁵.

3.2.2 Areas of production

Assam, West Bengal, Tamil Nadu, and Kerala are the largest tea producing States of India, but production has not increased in recent years. Within India, North India dominates in terms of area and production of tea plantations with a relative share of 79% and 77% respectively. Interestingly, although South Indian states, dominated by Tamil Nadu and Kerala, have a lower share in area and production of tea, they have a larger concentration of tea producing units, comprising large and medium estates and small and marginal tea producers. Although the share of South Indian states in the number of tea estates declined over time from 79 % in 1971 to 48% in 2007, the tea producing regions in the South Indian states have a larger concentration of small and marginal producers. Assam accounts for about 34% of the total tea plantation units in India with a larger share of 52% of the total tea planted area in the country.

Tamil Nadu in South India has the highest share in India in the number of tea plantations at 48% while its share in area has been stagnating at around 15% during the last few years. West Bengal in North India has the second largest share in the area under tea plantations in India. Kerala state in South India accounts for only 5% of the tea plantations and 7% of the area. An interesting structural feature of the Indian tea plantation sector is the predominance of small producing units with areas up to 10.12 ha, which account for almost 99 per cent of the production units in the country. A conservative estimate by the Government of India reports that currently approximately 4.5 million producer households and about 20 million farm workers and their households derive their livelihood from ancillary activities associated with production, value addition and marketing of tea in India (GOI, 2007). Thus, an important socio-economic outcome of plantation development programmes, especially tea in India, has been its greater employment potential (direct and indirect).

While tea plantations require a massive labour force for tea plucking and routine agro-management operations (production workers), they are also vertically integrated in terms of tea processing and manufacturing of processed tea (factory workers) as well as management workers. Particularly in the case of tea, the employment potential also has a strong gender dimension since the very beginning of the plantations. Plucking of green tea leaves has

¹³ <http://faostat.fao.org/site/567/DesktopDefault.aspx?PageID=567#ancor>, accessed 22nd January 2013.

¹⁴ Veeramani C, (2012) Competitive Structure of Plantation Commodity Exports: India's Tea and Coffee Exports in a Comparative Perspective, Discussion paper no.12, National Research Programme on Plantation Development (NRPPD), CDS, Thiruvananthapuram.

¹⁵ Nagoor B H (2012), "Market Integration and Changing Tea Trade Direction of India" presented in the National Seminar on Building Competitiveness in a Globalised World: Experience of India's Plantation Sector, 23-24th January 2012, organized by National Research Programme on Plantation Development (NRPPD), and held at Centre for Development Studies, Thiruvananthapuram.

historically been the task performed mostly by women workers in all tea producing countries, including India.

Nilgiri is situated at an elevation of 900 metres to 2636 metres above sea level. About 60 per cent of the cultivable land falls on slopes and is thus suitable for plantations. Tea occupies 70 per cent of the cultivated area. Tea estates in Nilgiri produce (1) Cut twist curl leaf (CTC) and dust tea (2) orthodox leaf and dust; and (3) and one produces green tea. The overall production figure for tea estates in Nilgiris is 2119.11 million KGs as of Jan 2012.¹⁶

3.2.3 Exports

Until 1991, the majority of Indian tea was exported to the USSR (48.07%), as well as the UK and Egypt. In 2010, this share declined to 15.51%. With improvement in trade relations between Russia and Sri Lanka, most of the tea imported by Russia is now sourced from Sri Lanka, despite the fact that it is generally more expensive than Indian tea (Nagoor, 2012).

India enjoyed a strong position in the export of tea in the first half of the 1960s (37% of total world exports). But except for an improved performance between 1980 and 1981, India's share fluctuated in the range of 19-25% between 1978 and 1991, and was hovering around 13-16% between 1992 and 2001. India's global market share further declined to 10-12% in the period between 2002 and 2009.

The decline in the market share of higher value added tea/mate extracts¹⁷ from approximately 12% in 1993 to 10% in 2010 is responsible for the decline in the export share, Veeramani (2012). This decline occurred despite an increase in the share of tea extracts in the total value of India's tea exports from about 6% in 1993 to about 10 % in 2010. The decline in India's market share is due to a faster growth of this item in world trade.

In terms of tea exports, besides the major producing countries, the UK, France and Germany also play a significant role in the export of the value added teas to the world.

3.2.4 Productivity

India's productivity has been stagnating around 1700 kg/ ha during the last three decades, while countries, such as Kenya, China, and Vietnam have reported significant rise in tea productivity over time. The age of tea bushes in India is a concern, (37% are more than 50 years old) compared to the younger plantations seen in Kenya (70% of the tea area includes younger plantations) and Sri Lanka (younger plantations represent 68%). All Vietnamese tea bushes are less than 20 years old and nearly a third of Chinese tea bushes are less than 10 years old. The CAG report (2011-12) notes that productivity in Indian tea plantations is reducing because of the ageing tea bushes, which need to be checked by replantation. The report notes that the area under unproductive tea bushes has increased from 42 % in 1997 to 57 % in 2009 (p.23). But the report also observes that replanting in the country accounts only for 2 per cent of the total area and in South India it is negligible.

The Special Purpose Tea Fund created by the Tea Board in partnership with the Commerce Ministry, Government of India to provide funds to the needy estates for replanting and rejuvenation of the old tea bushes is not sufficient to meet the demand of the estates for

¹⁶ Figures provided by TeaBoard on 21st February, 2012.

¹⁷ Indian tea exports are in 4 product groups viz black tea, bulk (2) black tea in immediate packings, (3) tea mate extracts and (4) green tea.

replanting¹⁸. Replanting is capital intensive which is beyond the reach of many smallholders (i.e. those with less than 25 acres) due to their lack of access to capital, as well as managerial and technical skills¹⁹²⁰.

This slowdown in growth in production and productivity of tea in India may be attributed to the crisis that the tea plantation sector experienced especially since the late 1990s.

3.2.5 Tea prices and the crisis in the plantation sector

Structural oversupply is combined with uneven value distribution in global tea value chains with implications for those at the production end. Large numbers of people in remote and poor rural areas rely for their livelihoods on tea smallholding or work. Global tea production doubled over the past three decades, but demand is lagging behind, creating a situation of oversupply, which has contributed to continuing low prices for tea producers, combined with uneven value distribution, with complex tea chains involving producers, collectors, traders/brokers and packers (Tropical Commodities Coalition or TCC). A small number of multinationals dominate buying and retailing and have a strong negotiation position, capturing a significant proportion of value in the chain (TCC, website, 26.10.2012).

Tea producing countries are significantly affected by international market conditions for tropical beverage prices, particularly some Sub Saharan African countries which are heavily dependent on these exports. Tropical beverage markets are unstable because of short-term price cycles and unstable export revenues, and world demand is price inelastic. Changes in export earnings can influence employment, incomes and living standards (Maizels, Bacon and Mavrotas, 1997). Real commodity prices have experienced a downward trend starting in 1980, with impacts on export earnings, foreign debt size etc (Maizels, Bacon and Mavrotas (1997)²¹.

The decline in tea prices on international markets has severely affected the Indian tea sector in terms of a sharp decline in value realised from tea exports. For instance, when Indian tea exports increased in quantitative terms by 2 per cent between 1990-91 and 2000-01, there was more than a 27 per cent decline in value terms from US\$ 596 million to US\$ 433 million, the corresponding decline in unit value being more than 28 per cent. Between 2000 and 2010, though, Indian tea exports increased only by 16 percent, there was an increase of 60 per cent in value terms but unit value of exports increased only 27.4 per cent²². This is because of the very slow increase in the unit price of Indian tea as compared to Japanese and Sri Lankan tea presented in Table 15 below.

¹⁸ <http://www.thehindubusinessline.com/industry-and-economy/agri-biz/article3770531.ece>

¹⁹ Pallavi Mansingh and Liby T. Johnson, (2012), Comparative Analysis of Existing Models of Small Tea Growers in Tea Value Chain in the Nilgiris, Discussion Paper no. 20.N ational Research Programme on Plantation Development (NRPPD), CDS, Thiruvananthapuram.

²⁰ The Tea Board has several mechanisms to support smallholders (e.g. the Small Growers Development Scheme, Tea Plantation Development Scheme and a Price Stabilisation Fund, if the prices fall below a certain level) (Upasi key informant interview). Smallholders are also being organized into Primary Producer Societies (PPS), who once registered can receive technical inputs and information from government schemes, but currently there are just 136 societies and many more (upto 1000) are needed to provide widespread coverage of the smallholder sector.

²¹ A. Maizels, R. Bacon, G. Mavrotas (1997) 'Commodity Supply Management by Producing Countries: A Case Study of the Tropical Beverage Crops'. Oxford University Press

²² <http://faostat.fao.org/site/342/default.aspx> accessed on 22nd January, 2013.

Table 15: Comparison of unit price of tea of major tea-exporting countries.

Name of country	2000	2001	2002	2003	2004	2005	2006	2007	2008 (E)	2009
India	2.04	1.95	1.79	1.97	2.06	2.09	2.03	2.45	2.71	2.91
Kenya	2.12	1.75	1.58	1.68	1.64.	1.67	2.09	1.99	2.34	2.63
Sri Lanka	2.37	2.28	2.24	2.25	2.41	2.58	2.64	3.26	4.02	4.09
US \$ per kg										

Source: Chapter 5, Development of Tea-Improving Quality of Tea in Report on Role of Tea Board in Development of Tea in India, Report no.10 of 2011-12, Comptroller and Auditor General of India, New Delhi

The Indian tea sector has otherwise been facing two major challenges, namely: a) loss of export markets to its competitors; and b) almost stagnant levels of domestic consumption. The growing stock of output has exerted tremendous pressure on domestic prices leading them to fall, resulting in continued loss in profitability of the plantations and loss in foreign exchange earnings for the country. Following the crisis, the Indian tea auction prices have continued to be highly volatile and lower compared to the auction prices reported from Kenya (Mombasa) and Colombo (Sri Lanka).

The slowdown in productivity and production in the Indian estate sector has been triggered by both exogenous and endogenous factors. Exogenous factors mostly include the Asian financial crisis (1997) and the trade reforms leading to removal of tariff and non-tariff barriers for facilitating easy market access under the WTO regime. On the other hand, endogenous factors mostly relate to the structural and operational issues confronting the tea and rubber plantation sectors in India (Viswanathan and Shah, 2009). From a macro perspective, an immediate cause of the crisis has been the perceptible decline in international and domestic prices of plantation products, particularly, tea.

From the beginning of April 2010, tea auction prices have been falling and in the last auction in Coonoor tea worth US\$ 706089 (Rs. 3.30 crore²³) remained unsold with as much as 33% of the year's second highest volume of 19.18 lakh²⁴ kg on offer had to be withdrawn for want of buyers (The Hindu Business line, June 28, 2010²⁵). According to the recent statistics provided by the Tea Board of India, the tea price in South India which was at Rs.81.03 in 2009, fell sharply to 67.69 in 2010 and rose marginally to Rs.70.17 Rs per KG in 2011. The prices of Indian tea are lower than those of competitors and this is widely seen to be due to the inaction of Tea Board. The Tea Board has also been criticized for not augmenting orthodox tea production and for not initiating studies to identify the components that can reduce the cost of production. The CAG (Comptroller and Auditor General of India²⁶), which examines the audited accounts of public sector undertakings in India, has also criticized the Tea Board for the slow replanting programme with the tea estates. The present rate of replanting, according to the CAG, would take another 150 years to complete the backlog²⁷.

²³ Ten million

²⁴ 100,000

²⁵ <http://www.blonnet.com/2010/06/28/stories/2010062851101200.htm>

²⁶ The Supreme Audit Institution of India

²⁷ "Tea Badly Brewed" editorial of 5th September 2011, available at <http://www.thehindubusinessline.com/opinion/editorial/article2424146.ece>, accessed 22nd May 2012.

The cost of production in Indian tea is very high, compared to the price realization in auction as evident from table 16 below. As a result of this, the average margin realized by the Indian producers is negative as compared to the producers from other countries.

Table 16: Cost of production vis-a-vis price realization

Name of the country		Cost of production (US \$ / kg)	Auction realisation (US \$ / kg)	Average margins
India	North India	1.62	1.50	(-) 8%
	South India	1.48	0.95	(-) 56%
Kenya		0.97	2.02	52%
Malawi		0.80	1.02	22%
Sri Lanka		1.52	1.92	21%

Source: Chapter 6, Development of Tea Cost Reduction, Report on Role of Tea Board in Development of Tea in India, Report no.10 of 2011-12, Comptroller and Auditor General of India, New Delhi

Labour costs represent approximately 50% of price realisation (net returns) on the plantations, but represent only 10 to 12% off the retail tea price²⁸. The sector could afford to pay better wages by redistributing profit margins, but a key hindrance to this is the stranglehold over tea prices at the auctions.

In 2010²⁹, India imported 20.04 mkg (25.67 mkg in 2009) of tea worth Rs 184.94 crore (Rs 216.03 crore) at an average price of Rs 92.26 a kg (\$1.67) (Rs 84.16 \$1.53)³⁰.

Average auction prices in South India declined from Rs 69 (\$1.25) per kg in 1998 to Rs 44 per kg (\$0.8) in the year 2000. From 2000 to 2007, the auction price varied between Rs 45 to Rs 50 per kg (\$0.8 to \$0.9). It increased to Rs 66 in 2008 and to Rs 81 in 2009, but fell to Rs 69 by 2011 — the tea price prevailing in 1998. Though inflation had more than doubled the cost of living, the plantation tea price for 2011 had returned to the prevailing value of 12 years ago. The crisis in the plantation sector is endemic across the country. The minimum tea garden wages, at Rs 85 per day in West Bengal and Rs 71 per day in Assam, are significantly lower than those in Kerala. Prices are governed by powerful traders operating in six tea auction centres across India.

The Tea Board is aware of the oligopsony (market controlled by few buyers). But without basic changes in the market structure to make plantations more profitable, attempts by the Board will only yield limited results³¹. The official of INDCOSERVE notes that tea is a buyers' market and tea producers are always at the mercy of buyers. Recently, a Parliamentary Panel has been established to review the current tea auction system³².

²⁸ <http://www.thehindubusinessline.com/opinion/article2777994.ece>

²⁹ Figures in brackets are the figures for 2009.

³⁰ <http://www.thehindubusinessline.com/industry-and-economy/agri-biz/article2751993.ece>.

³¹ <http://www.thehindubusinessline.com/opinion/article2777994.ece>

³² A parliamentary panel has urged the Commerce Ministry and the Tea Board to review India's current tea auction system, which is said to prevent maximizing prices for farmers. The standard auction system presently in place makes it hard for farmers to control prices once the crop is offered at the auction, whereas the newly introduced e-auction platform remains inaccessible to those without an Internet connection. The panel is also concerned by a steady decrease in India's annual output from 986 million kilograms in 2007 to 966 million kg in 2010, while China's production rose by roughly 30% in the same period. Finally, the committee will look into the issue of aging bushes, with 37% of tea bushes being over



Transporting tea

3.2.6 Types of tea produced and the auction system

An important aspect of the tea industry worldwide is the predominance of the auction system in trading. Roughly 70% of the global tea output is transacted through handful of auction centres mainly located in India (Kolkata, Cochin), Sri Lanka, (Colombo) and Kenya, (Mombasa). These three major auction centres together account for almost 90 per cent of the tea auctions during 2007.

Teas produced in Sri Lanka are mainly of the orthodox type, accounting for almost 95% of the total production. Indonesia, Vietnam and China also export mainly orthodox teas. India, Kenya and Malawi on the other hand, produce mainly CTC used primarily in tea bags (Wal, 2008). About 97 per cent of Kenya's tea production is constituted CTC or black tea. South India produced mostly the orthodox type tea until 1981, since when the region has increased its share in CTC production. Orthodox type tea still accounts for 16% of the total tea output in South India as compared to only 5 per cent in North India. The shares of specialty teas, like green tea and Darjeeling tea have been rather insignificant in the national tea output. In this regard, it may be noted that India is yet to make a major shift in its tea production towards high value products, such as green tea (Viswanathan, 2010³³). However, the emphasis on quality tea in India has grown following the break-up of the Soviet Union, and in order to compete with others in global arena. If the tea is hand plucked, the plucking should be carried out every 10 days³⁴. If shears are used, tea plucking should occur every 15 days. If shears are properly used then quality can be maintained³⁵.

3.2.7 Labour legislation

The government legislation sets various labour standards under the Plantation Labour Act of 1951. All the estates are governed by the Plantation Labour Act of 1951. Traditionally, the regions which are best suited for plantations such as tea did not have adequate labour to work on these plantations, which often resulted in the migration of workers with their families from one area to the other. As there was no legislation governing them prior to the Plantation Labour Act of 1951, exploitation of labour was not uncommon in tea plantations. Plantations

50 years old. <http://www.thehindubusinessline.com/industry-and-economy/agri-biz/article3770531.ece>

³³ Viswanathan PK (2010): "Indian Tea Plantation Industry-An overview of its development and future directions in the context of global market integration and trade reforms", An unpublished report submitted to Natural Resources Institute, Greenwich University, London

³⁴ Officials from UPASI and Tea Board said that hand plucked tea is better in quality compared to shears plucking where the chances of coarse leaves getting cut is high, if pluckers are not careful.

³⁵ Official from UPASI.

paid low wages to increase their profits (Sarkar and Bhowmik, 1999³⁶). Labour unions were established on the tea estates because of this situation and the labour union was recognized by the industry in 1947-48.

Chapter 3 of The Plantations Labour Act of 1951 stipulates the legal health and safety requirements including providing and maintaining:

- drinking water supply
- sanitation (latrines and urinals)
- electricity
- local roads
- medical facilities
- crèche/day care centre for infants and small children
- accommodation (minimum standards set out)
- education facilities
- amenities to protect workers from cold or rain
- if an adult worker is expected to work for more than 48 hours a week, then he/she will be eligible for overtime that should be paid twice the ordinary wages (Overtime is limited to 9 hours a day or 54 hours a week).
- the Act states that a day off is a must every week and one day of leave with wages is provided for every 20 days worked (under the Act, the worker ceases to earn leave, when the earned leave exceeds 30 days. While the basic necessities are provided to every other person irrespective of the employment status, the leave benefits are applicable only for the permanent employees).
- while all the permanent workers get the sickness benefit of 14 days, permanent female workers get maternity leave for 12 weeks.

The Plantation Labour Act is applicable to all plantations exceeding 25 acres and employing more than twenty people. It is subject to annual inspection and any violation leads to legal action on the estate. The Inspector of Plantations monitors compliance through quarterly visits (Bhowmik et al., 1996, page 97, cited by Neilson and Pritchard, 2009³⁷).

After the Equal Remuneration Act of 1976, women and men should be paid equally in the plantation (Sarkar and Bhowmik, 1999). South India is unique in vigorously adopting labour codes in the plantation sector driven by strong labour union movements with communist ideology or left leaning ethnic nationalism (Hayami and Damodaran, 2004³⁸). The wages of labourers in the tea plantations are currently (and have been for some time) decided by collective bargaining between the United Planters Association of South India and the representatives of major trade unions, mediated by the states' labour offices, which is known as tripartite negotiations.

The research team has thus been careful to distinguish where impacts are the result of Rainforest Alliance certification processes and where they result from observance and enforcement of the law, and thus precede and are parallel to Rainforest Alliance certification.

³⁶ Sarkar and Bhowmik (1999) Trade unions and women workers in tea plantations, *Economic and Political Weekly*, Vol.33No.52 Dec 26, 1998-Jan 1,1999, L50-52.

³⁷ Neilson, J. and B. Pritchard (2009) "Value chain struggles: Institutions and governance in the plantation districts of South India". Blackwell Publishing. RGS-IBG Book Series.

³⁸ Hayami and Damodaran (2004), Towards an alternative agrarian reform: Tea plantations in South India, *Economic and Political Weekly*, Vol.39, No.36, pp 3993-3997.

Given the crisis in the tea sector outlined earlier, tea planters have adopted various cost cutting and prudent financial management measures to overcome the crisis. Some of the important measures adopted by the tea planters have included, amongst other things:

- retrenchment of labourers
- abandonment or lockouts of plantations
- lowering and non-revision of wages
- cutting down on the provisions of the various labour welfare measures.

The cumulative effect has been a drastic reduction in employment in tea plantations. The average daily employment declined from 1.02 million (1990) to 0.62 million (2003) across India. The seven year average employment levels in tea plantations declined from 1.15 million (1990-96) to 0.72 million (1997-2003). The crisis has given the planters an opportunity to restructure their entire plantation operations. The process of restructuring has led to reports across all plantation regions in India of a) lowering or stagnation of wages; b) non-revision of wages; c) non-provision of bonus; d) increase in workloads, i.e., a hike in the minimum quantity of tea leaves to be collected and increase in tapping tasks in the case of rubber plantations (number of rubber trees to be tapped); e) curtailment of non-wage or extra-wage benefits and incentives; f) non-compliance of provisions of welfare measures as stipulated by the PL Act, 1951; g) closure of creche, health centres; h) non-maintenance of labour lines, etc to mention the most pressing needs impacting the livelihoods of the plantation workers. The extent and degree of imposition of these measures has varied across plantations depending on the extent to which the planters wanted to maintain their profit margins intact (Viswanathan and Shah, 2009³⁹).

It is thus highly likely that the crisis as experienced in the plantation sector has negatively affected the livelihoods of the workforce and the dependent households. Moreover, since plantations are situated in isolated and remote areas, there are no alternative means of earning their livelihoods. A loss in employment due to retrenchment or closure of plantations means even more severe poverty for the whole household (Viswanathan and Shah, 2009)

3.2.8 Socio-economic position of tea workers

Workers on tea estates are relatively well off generally compared to the wider population, because they receive both monetary and non-monetary benefits and so are well above the poorest in India who do not have such safety nets. However, the monetary benefits (wages) are the least paid in comparison with other workers in the organized sector and the quality of the non-monetary services are also debatable. 'Although pay rates differ between states and individual companies, South Indian plantation workers typically receive at least Rs 80/day (approximately US\$2) plus paid holiday entitlements, employer-based statutory payments into provident funds (pension funds) and the provision of housing, health, fuel etc as specified by the *Plantation Labour Act*' (Neilson and Pritchard, 2009, pages 143-46). This can be compared with the daily rates that workers in poorer parts of rural India earn, which is Rs 25/day (approximately US\$0.63) with no auxiliary benefits whatsoever (Neilson and Pritchard, 2010, p7). Despite the fact that tea workers may be better off than other sections of the rural poor, their work is still 'arduous and repetitive' (Neilson and Pritchard, 2009, p8).

In South India, pluckers are expected to meet daily minimum plucking volumes of 25kg/day in Tamil Nadu, and 16kg/day in Kerala. During the monsoon, tea pluckers are drenched each day,

³⁹ Viswanathan P K and Amita Shah (2009):Challenges, opportunities and imperatives for techno economic and institutional reforms under trade liberalization:case studies of tea and rubber plantation sectors in India, The South Asia Network of Economic Research Institutes, Bangladesh, May.

with only plastic raincoats to ward off the often-bucketing rain. Sickness through colds and flu (and more serious related ailments) is widespread in this industry. Pluckers also bear the hazards of insect bites (particularly from wasps) and snakes. When global tea prices went into steep decline in the late 1990s, plantation owners successfully argued for a freeze in base wages, and implemented a range of salary incentive mechanisms that sought to reward workers for increased daily plucking volumes. The net result of this agenda was an intensification of working conditions. In Kerala in particular, these measures were met by a spate of strikes, lock-outs and other forms of industrial protest (Tharian and Joseph, 2005:2681). At the same time, financial problems for many estates meant that workers' wages were often delayed, paid-in-part, or simply cut. Tasks deemed as 'non-essential' (such as pruning, pest and disease mitigation practices, etc) were delayed, reducing labour demand and leading to widespread redundancies.

3.2.9 Plantations and Smallholders

The Indian tea plantation sector is characterized by the predominance of small producing units (see section 3.2.2 above). "In South India, tea plantations account for 117,000 acres. Of this 85,000 are small growers⁴⁰. According to a key industry informant, tea smallholders in the Nilgiris produce 240 million kilos of the total tea produced in South India. Nilgiri (including Gudalore) has 66, 156 hectares and produces 134.8 million kilograms. Approximately 55 % is the small growers' production. 70% is exported to UAE, Egypt and Pakistan through merchandise auction. Most of the Nilgiri producers are direct exporters. The Tea board is proposing to set up the Small Tea Growers Development Authority and appointments are taking place"⁴¹.

The Tamil Nadu government has also set up a co-operative growers association and factory called INDCOSERVE to help the growers with small holding of half an acre to 20 acre. Growers who become members of INDCOSERVE can sell their tea to INDCOSERVE. On procurement, INDCOSERVE provides Rs. 5 per kilo as advance and the rest is paid after the production of black tea. Usually before the 10th the next month, the rest of the money is given. This official noted that the price of the green leaf is fixed at Rs.15 which becomes uneconomical if the suppliers do not supply the entire tea to INDCOSERVE, but noted that except for a few suppliers who regularly sell the leaves to them, others sell a larger percentage to private buyers.

INDCOSERVE vehicles go to different places to collect the green leaves which are processed in 15 different tea factories. Growers are also provided with manure and pesticides on credit basis. The credit is recovered in 5 or 6 instalments and the spray is done as per the instruction given by UPASI which varies according to the season. The growers who sell tea to INDCOSERVE all use shears for harvesting the tea. Leaf harvesting machines were also provided at 50 per cent of the cost to nearly 300 members. The advantage of using the harvesting machine is that tea will be picked on time and secondly tea is a tree, but has to be maintained as a bush which is done by plucking the leaves on time. According to this official, the machines do a faster job. According to the INDCOSERVE's official, if tea is plucked every 10 days, it will lengthen the life of the tea Bushes. The Indian army is the largest purchaser of the INDCOSERVE's tea which is sold in the name of Ooty tea.

⁴⁰ According to the Comptroller and Auditor General Report (2011-12), percentage of small growers in Tamil Nadu is higher than all other tea growing regions of India (Table, 2, page 12).

⁴¹ Interview with Mr. Ramamurthy, Subject Matter Specialist, Agricultural Engineer, KrushiVigyan Kendra at UPASI, on 22Feb 2012.



Smallholders supplying a RA certified estate

3.2.10 Certified tea market and trends in India

A number of certifications are observed in the tea plantation sector like Ethical Tea Partnership, Rainforest Alliance, Fair Trade, Utz and Organic. Ethical certification is now widespread across tea industries, and the South Indian tea sector similarly is no exception. Premier Brands in the UK (previously the owner of Typhoo Tea), introduced a Quality Assurance Program in 1992, which required all suppliers to undertake a social audit (Typhoo Tea, 2007 cited by Neilson and Pritchard, 2010). Unilever, began social and environmental auditing of its production in 1998 (the 'Growing for the Future' programme which evaluated various products against sustainability benchmarks). By 2007 Unilever had committed to purchasing all its tea from sustainable and ethical sources. It now commits to sourcing 100% of agricultural raw materials from sustainable sources (10% by 2010; 30% by 2012; 50% by 2015 and 100% by 2020)⁴².

The Ethical Tea Partnership (ETP) started in 1997 when a few tea companies started monitoring their own supply chains to produce a tea that is socially just and environmentally sustainable. It covers all the major tea producing regions. The ETP global standard aligns with major certification programs. ETP has entered into collaborative agreements with Rain Forest Alliance (in 2009) and Fair Trade in (2010) to increase its impact and to reduce the audit burden for the producers⁴³.

Rainforest Alliance is the standard with the greatest reach in Tamil Nadu tea. RA is an international non-profit organization that promotes standards for sustainability, to conserve wildlife and wildlands and ensure the wellbeing of the workers and their communities (<http://www.rainforest-alliance.org/about.cfm?id=mission>). It also aims to promote fair treatment and good working conditions for workers, occupational health and safety, integrated crop management and community relations. RA certifies any organization that follows these principles and the organization can use the logo of RA when the products are sold. The benefits of adopting RA standards are said to be as follows; environment and farms are protected through sustainable agriculture practices; reduction in the pesticide use leads to improvement in health of the workers; protection of the ecosystems benefits the workers and

⁴² "By 2015 we aim to have the tea in all Lipton tea bags sourced from Rainforest Alliance Certified™ estates. By 2020 100% of Unilever's tea, including loose tea, will be sustainably sourced. 57% of our Lipton tea bag blends contained sustainable tea at end 2011: 25% was fully Rainforest Alliance Certified™ and 32% contained a proportion of Rainforest Alliance Certified™ tea en route to full certification. Overall, 28% of the tea purchased for all our brands was sourced from Rainforest Alliance Certified™ farms. <http://www.unilever.com/sustainable-living/sustainablesourcing/why/index.aspx> Accessed 23.03.2013

⁴³ Compiled from <http://www.ethicalteapartnership.org/about/history/> on 28th December 2012.

community with safe environment; the management has a wider market and consumers are provided with tea that is (a) cultivated in environmentally safe and socially responsible farms and (b) safe to drink. A recent report from Rainforest Alliance finds that 9.4% of the global tea market is now Rainforest Alliance Certified (RA, 2012).

Fairtrade aims to promote greater equity in international trade and is based on a partnership between producers and consumers. The Fairtrade Labelling Organization (FLO) has set standards for small producer organizations, hired labour, contract production and trader standards. Total production of Fairtrade certified products from hired labour organisations was MT 116,800 (2010/11) (FLO, 2012)⁴⁴. Fairtrade sales income for tea (2010-11) was €8.6 million. The volumes that producer organizations reported as Fairtrade sales indicate strong growth in cocoa, coffee, and tea sold compared with the preceding year (FLO ,ibid).

The International Federation of Organic Agriculture Movements (IFOAM) sets the standards for organic farming. To be certified as an organic farm, the said farm should have not used chemical inputs such as fertilisers and pesticides and genetically modified organisms. Strict separation of organic and non-organic materials is essential for certification. These requirements ensure that there are no chemical residues in the certified product and thus positively impact the health of the workers and the environment.

UTZ certification stands for sustainable farming, better opportunities for farmers and their families. UTZ Program ensures farmers grow better crops while safeguarding the environment and securing the Earth’s natural resources. UTZ certified farms are required to follow good agricultural practices and management, safe and healthy working conditions, no child labour and protection of the environment. UTZ certification enables the tracking of the certified product from the farmer to the shelf in the store⁴⁵.

3.2.11 Socio-economic context

Tamil Nadu is one of the developed states of India which ranks 6th compared to the other Indian states, in terms of the UNDP, Human development Index⁴⁶ and fifth overall when adjusted for inequality. However in terms of income inequality Tamil Nadu scores higher than than for India as a whole (16.7 compared to 16.37). But Tamil Nadu ranks better in terms of health and literacy indicators as shown in Table 17 below.

Table 17: Data from the UNDP Human Development Index

Indicator	Tamil Nadu	India
Area ('000' Sq.Kms) (2011 Census)	130	3287
Population (in Crores) (2011 Census(P))	7.21	121
Rural (2011 Census)	3.72	83.3
Urban (2011 Census)	3.49	37.7
Density (Population per Sq.Kms) (2011 Census)	555	382
Decadal Growth Rate (2011 Census)	15.6	17.64

⁴⁴ FLO (2012) “Monitoring the Scope and Benefits of Fairtrade Fourth Edition, 2012”. http://www.fairtrade.net/fileadmin/user_upload/content/2009/resources/2012-Monitoring_report_web.pdf

⁴⁵ Compiled from <https://www.utzcertified.org/en/aboututzcertified> on 29th January 2013.

⁴⁶ http://www.in.undp.org/content/dam/india/docs/inequality_adjusted_human_development_index_for_indias_state1.pdf, accessed 29th January, 2013.

Sex Ratio (Females per 1000 Males) (2011 Census)	995	940
Child (0-6 years) Sex Ratio (2011 Census)	946	914
Urban Population Percentage (2011 Census)	48.45	31.8
Scheduled Caste Population as Percentage of Total Population (2001 Census)	19	16.2
Scheduled Tribe Population as Percentage of Total Population (2001 Census)	1	8.2
Birth Rate – 2010 (SRS)	15.9	22.1
Death rate – 2010 (SRS)	7.6	7.2
Infant Mortality Rate – 2010 (SRS)	24	47
Literacy Rate - 2011		
Persons *	80.3	74
Male *	86.8	82.1
Female *	73.9	65.4

<http://www.tn.gov.in/deptst/Tnataglance.htm#> ECONOMIC INDICATORS, accessed on 29th Jan 2013.

4. Findings on impacts on individual producers

This section assesses the outcomes and impacts of certification on individual workers on Tamil Nadu tea estates.

All the plantations are subject to the Plantation Labour Act, which specifies the labour and social welfare codes of conduct for the plantations. The Labour department of the state government is in charge of monitoring and implementing this and labour inspectors visit the estates once in three months to inspect the plantation.

Auditors visit the estates to inspect against the RA SAN criteria. In 2009 the certified estates in the study sample had achieved the following compliance figures (against the detailed RA criteria): RA6 achieved 85% compliance in 2009, RA7 achieved 95% and RA5 had a compliance rate of 97% (baseline survey interviews).

During the Light Monitoring exercise, several certified estate managers reported that an RA audit had been completed relatively recently (in late March 2011) in the Nilgiris and so only a few of the estates had received information on their current compliance rate. RA3 had been told that their scoring was better compared to the previous year. Management of RA3 said that 90% of the requirement has to be statutorily complied with anyway, such as maintenance of housing, regardless of RA certification. RA2 said the compliance certificate is based on compliance with 102 criteria of which 18 are very critical, such as the provision of the personal protective gear and discharge of hazardous chemicals.



Focus group discussion with women workers at certified estate

4.1 Socio-economic characteristics

This information was collected to provide a profile of the workers on the estates.

The baseline survey had 304 respondents in the questionnaire - 61% were females and 39% were males. In the final survey, 60 per cent were females.

4.1.1 Caste

All over India, it is the 'socially backward' and vulnerable groups who are engaged in the tea estates (Choudhary and Tayal, 2010)⁴⁷ and the GOI 2009⁴⁸ report notes that 90% of the

⁴⁷Choudhary N and Tayal 2010, A Comparative Study of the Informal Conditions of the Plantation Labourers of India and Srilanka, Indian Journal of Labour Economics, 53 (2), 339-357.

workers in Tamil Nadu belonged to the scheduled castes. In Nilgiris also 70% of the workers belong to the scheduled tribes and 21% belonged to the other backward castes. Only 11% of the workers belonged to the upper castes.

In the study, the majority of workers on the tea estates are dalits, with the rest belonging to the backward caste (RA3 manager, baseline survey and qualitative research). In the baseline survey the majority of respondents belonged to the scheduled caste, followed by backward caste and scheduled tribe. In the final survey also, the majority of respondents belonged to the scheduled caste.

4.1.2 Household heads and size

In the baseline survey the households are predominantly male headed (86%) and 14% are female headed. This is unsurprising as Tamil Nadu is a patriarchal society. The average size of the household is 3.6 persons for both certified and non-certified estates. In the final survey 46 per cent of the worker respondents were head of their household. In the non-certified and RA-certified, this percentage was 60 and 37 per cent respectively, reflecting the higher proportion of male informants from the non certified estate.

4.1.3 Origins

According to a Government of India study: 'Tea plantation provides employment to more than a million workers who comprise immigrant workers and their descendents. For example, the workers in the tea gardens of Tamil Nadu are not original residents of the region but are migrants from Karnataka and other nearby states. The labourers of Assam and West Bengal are people who migrated from Central India and Nepal. These workers have over the years settled down in the gardens and now have little or no contact with their place of origin' (GOI, 2009, p.5)⁴⁹.

A majority of the people interviewed in the FGDs (baseline and final survey) and case studies (baseline) came from Tamil Nadu (Trichy district more particularly), but some people from neighbouring states such as Karnataka and Kerala were also found to have made home in the estates. In RA4 we met a large number of workers who had migrated from Sri Lanka in the 1960s and were now settled in Nilgiris/Tamil Nadu. A few of the estates (RA3, RA5 and RA6) have also brought people from the northern states of Assam and/or Jharkhand. People from neighbouring states speak the local language fluently, as they settled in Nilgiris a few decades ago, but the in-migration from Assam and Jharkhand is a more recent phenomenon (often in the last two years). These later migrants do not all speak the local language, but they have been accepted (Women's FGD RA6) among the workers. One of the participants in the female FGD in the baseline survey in RA3 said, "*we [workers belonging to Tamil Nadu] do not view the migrants as a threat, because, the migrants also have come here looking for jobs*".

At RA5, a migrant worker from Jharkhand was interviewed. He said: "*I work as a sprayer and pruner here. I like this job because I get regular income. In Jharkhand, I was working as a farm labourer. If I get work on that day, I will get wages. I came to know about this tea estate work, when 'Sahib'* came to our village. He showed us a film about the estate and the workers doing different work in the estate. We saw the tea garden, factory, houses, school, crèche and the dispensary. I liked it. My wife and child are with me here. My wife is also working here as a*

⁴⁸Government of India (2009), Socio-Economic Conditions of Women Workers in Plantation Industry, Ministry of Labour and Employment, Chandigarh

⁴⁹Choudhary N and Tayal 2010, A Comparative Study of the Informal Conditions of the Plantation Labourers of India and Sri Lanka, Indian Journal of Labour Economics, 53 (2), 339-357.

plucker. My child goes to the school in the estate. I cannot speak Tamil yet, but now follow the conversation. I learnt the job from my co-workers who used to demonstrate me the job. I have been here for the past two years...now I am a permanent employee. I like the job and the life in the estate. I will tell my friends and relatives about my job and lifestyle and bring them also here when I go home this year. I miss celebrating Holi (the festival of colours). Nobody knows what is Holi here”.

4.1.4 Age

Among the participants in the focus group discussions, most of the male workers were in the age group of late forties or early fifties and the age of the women ranged between 30 and 50. Most of the women whom we interviewed in all the estates were in their mid-thirties and the men were in their forties. This age profile is a concern for the managers, because they face a potential labour shortage in the coming years (according to manager RA4). New workers are not coming into tea and the RA3 manager said that soon there will be shortage as 20% of their work force is in the age group of 51-60. For the non-certified estate this ageing workforce is also a matter of concern.

The final survey revealed that the average age of the workers in the tea estates is 42. The difference in the ages between the certified and the non-certified is statistically not significant. Labour shortages are already present and will only get more pronounced.



Workers gathering to receive free spectacles from the management

4.1.5 Education of workers.

There are huge differences in the employment seeking behaviour of the earlier and the present generation. This shift is due to changing education opportunities and processes of industrialization and urbanisation. Most of the presently employed workers were born on the estate and have not been educated beyond primary level, which is the case for the different certified and non-certified estates.

Codes were used in the questionnaire for different levels of education, with 1 being no formal education, 2 incomplete primary education, 3 completion of primary schooling, and 4 and 5 incomplete and complete secondary education respectively). The average education level of workers was 2.92. The data from the workers' interviews show that there are more literates in the non-certified estate than the RA certified estate (88 and 67% respectively), but this most likely reflects the greater proportion of male factory workers in the final survey at the non-certified estate.

Among the participants in the FGD we observed that older women (in their fifties) were either illiterate or at most had primary schooling. However, women in their early thirties or in their late twenties had completed their secondary education. The limitations on women’s mobility and educational opportunity was illustrated by some of the female workers who participated in the focus group discussion in RA1, RA3 and RA6 who said that they were born on the same estate where they are working (baseline). Overall, education levels are lower amongst women workers than male workers. None of the men reported being illiterate. We also came across a graduate working as a field worker in the non-certified estate. Most of the children of these workers have obtained technical qualifications (e.g. engineer or nurse or vocational training) (FGD and household interviews).

Many of the workers interviewed have adopted new family planning norms (management interview RA2, Light monitoring) to ensure that their children get better welfare prospects. Most of the participants in the focus group discussions (both men and women) reported having sent their children to English medium schools and to institutions that provide technical education. In RA2, for example, one of the workers’ sons is employed in the administration as an accounts clerk (Management interview at RA2, final survey).

In RA6, one of the participants in the focus group discussions (FGD) for male workers, who is employed as a driver, proudly told us that one of his children is an engineer and another woman in (women’s FGD,RA1) told us that her daughter is preparing to write the competitive exam to become an Indian Forest Service Officer. In RA5, one of the participants told us about the financial support that she receives from her technically qualified son settled in Dubai (women’s FGD, baseline survey). Except for a few rare cases where the present workers’ children are employed in the estate as drivers (RA2 and RA4), there were no examples of families where the children of the workers were employed in the estate as pluckers or sprayers. Most of these workers reported that their children are studying/employed/settled in Coimbatore or Trichy.

4.1.6 Work profiles and gender.

There is a statistical difference between the females and males in terms of the types of work done in tea production at the certified estate. In the baseline survey all of the women interviewed at the non-certified estate were pluckers, and the entries are zero for the other types of work done by the respondents (table 18).

Table 18: Type of work done by female and male workers in the non-certified estate

BASELINE	SUB-SAMPLE: NON CERTIFIED ONLY	Gender of worker respondents			
		ALL	FEMALE	MALE	Sig
	N	46	5	41	
type of work done by respondent: tea production		4%	0%	5%	-
type of work done by respondent: picking leaves		74%	100%	71%	-
type of work done by respondent: processing		4%	0%	5%	-
type of work done by respondent: packing		0%	0%	0%	-
type of work done by respondent: transport		2%	0%	2%	-
type of work done by respondent: cleaning		0%	0%	0%	-
type of work done by respondent: administration		0%	0%	0%	-
type of work done by respondent: other		10%	0%	11%	-

Sig = Significance of differences between non-certified and RA-certified groups (based on T-test and Mann-Whitney tests): - not significant, *P≤0.05, **P≤0.01, *** P≤ 0.001

Women were employed in all types of jobs within the certified estates, but the majority of women were engaged in plucking leaves. 65% of workers were engaged in plucking leaves, followed by production and processing (Table 19). In all the estates, more women were working as pluckers than men in the peak season (July-November), but men were also given work plucking tea. Gender stereotyping means that women are often considered more efficient in plucking leaves (Sarkar and Bhowmik (1999), while men are given the maintenance of the tea garden. A few women were also engaged in factory work (data from management interviews), doing processing work such as grading of the tea and sifting and cleaning. Men were engaged in all types of work ranging from pruning the bushes, spraying fertilizer and pesticides, lopping of shade trees, to road maintenance and construction within the estate.

Table 19: Type of work done by female and male workers in the certified estate

BASELINE SUB-SAMPLE: CERTIFIED ESTATES	Gender of worker respondents			
	ALL	FEMALE	MALE	Sig
N	258	37	221	
type of work done by respondent: tea production	17%	5%	19%	*
type of work done by respondent: picking leaves	64%	86%	60%	**
type of work done by respondent: processing	15%	11%	16%	-
type of work done by respondent: packing	6%	3%	6%	-
type of work done by respondent: transport	2%	3%	1%	-
type of work done by respondent: cleaning	4%	3%	4%	-
type of work done by respondent: administration	1%	3%	1%	-
type of work done by respondent: other	14%	13%	14%	-

Sig = Significance of differences between non-certified and RA-certified groups (based on T-test and Mann-Whitney tests): - not significant, *P≤0.05, **P≤0.01, *** P≤ 0.001

Workers commonly reported that factory workers are trained in using the machines, but other work (e.g. plucking with shears, pesticides spray etc) has been learnt mostly on the job. In RA5 and RA6, participants in the household interviews and FGD noted that within the factory they are rotated from one job to another every week. In the overall baseline sample, the majority of the female respondents were pluckers, as compared to 62 % of male respondents (and this difference is highly significant). This shows us that there is a difference in the job profile of the female and male workers, reflecting the prevailing gender discrimination which ascribes plucking as an appropriate task only for women.

Table 20: Type of work done by female and male workers in the overall sample

BASELINE ENTIRE SAMPLE	Gender of worker respondents			Sig
	ALL	FEMALE	MALE	
N	304	42	262	
tea production	15%	5%	17%	*
Picking leaves	65%	88%	62%	***
Processing	13%	10%	14%	-
Packing	5%	2%	5%	-
Transport	2%	2%	2%	-
Cleaning	3%	2%	3%	-
Administration	1%	2%	1%	-
Other	13%	10%	13%	-

- not significant, *P≤0.05, **P≤0.01, *** P≤ 0.001

Source: Questionnaire survey

At the tea garden there are jobs related to picking leaves, processing the leaves and production in the factory, garden and estate maintenance. Generally in the tea estates the female worker population is more than the male workforce⁵⁰, as estates depend upon hand or shear picking of the leaves. Although men are primarily engaged in factory related work, pesticide spraying, pruning and other estate related work, during the high yielding months, men are also deployed to pick leaves (Men's FGD at RA1 BS, LM; RA3 BS, LM,FS; RA7 BS and FS; non-cert, BS, LM and FS). This gender division of labour has historical roots: Before the Equal Remuneration Act came in, plantations employed large numbers of women mainly for picking leaves and paid them less for the work. The practice continued even after the Act was adopted.

According to the GOI 2009 report, 13.3% and 10.4 % of the male and female workers respectively are skilled workers and 76.5% and 77.5 % of workers are unskilled. There is no training involved in picking leaves if they are hand-picked or by using shears. The workers learn by observing other pickers and sprayers. Where mechanization is introduced in picking (Management interview RA6 and RA3 FS) training is provided to the female workers. In the case of factory workers, where the work involves working with machines, the senior workers/factory supervisor trains the new recruits (men's FGD in RA1 BS, RA2BS, FS, RA4BS, FS and women's FGD in RA2 BS, FS, and RA3LM).

Both men and women are employed as supervisors. Chances for promotion in the estates are very few as the positions for vacancies for the post of supervisors arise either by retirement or in the event of death (Management interviews at RA1, RA2, RA3). Workers with higher secondary education and who pass the test and interview conducted by the estate management become the supervisors (FGD men in RA1 BS and LM, FGD women in RA3 LM, RA6 BS and FS and RA7LM and FS). At RA3, one young female factory worker who had completed her 12th Standard and had been working in RA3 for four years, was asked by the management to prepare for the test and interview (LM). This worker was seriously considering taking the test before the end of 2012. In RA7, however, a female worker with only primary education had been promoted four years previously as a supervisor because of her efficiency (management interview RA7 LM).

In the final survey data, there were significant differences between the certified and non-certified estates in terms of the number of workers engaged in tea production, picking leaves, processing, packing and transport. However, this was influenced by the limitations on access to field workers in the non certified estate. The survey showed differences in numbers and types of workers engaged in different types of jobs, but since there is no difference in the wages for the different categories, for example those working within the factory or those engaged in packing or processing, it does not make any difference to the impact of certification.

4.2 Income impacts

To understand the income impacts of certification for individual producers a number of indicators were identified and questions asked in the questionnaire survey and qualitative research. The main source of income for the workers in the tea estates is their income from the tea estate. The wages of the workers and the incentives are decided by the tripartite agreement, involving the estates, trade unions and the government. As well as wages, the

⁵⁰ Government of India (2009), Socio-Economic Conditions of Women Workers in Plantation Industry, Ministry of Labour and Employment, Chandigarh

workers also receive both bonuses and incentives – both are decided upon by the collective bargaining agreement in Tamil Nadu. The statutory level of 8.33% is fixed by the government. Over and above this figure, payments are decided by the estate.

4.2.1 Relative importance of tea income.

The baseline survey found that for 95% of the respondents belonging to all the estates (certified and non-certified), tea income is their major source of income.

A small number of baseline questionnaire respondents had household members who were engaged in unskilled wage labour (7% in non-certified and 2% in certified). But many of the interviewees (household interview and FGD participants) said their 8 hours working in the fields did not leave time for other income generating activities. A few receive remittances⁵¹ and a handful of supervisors have other jobs⁵².

All the household members and FGD participants in the baseline said they have to send money to their children, who are studying/need support, or to other relatives⁵³. They said that they do not receive remittances from working age children living elsewhere, because they tend to live in towns such as Coimbatore, where the cost of accommodation itself is higher. Hence, their children's earnings only meet their requirements and there is no surplus to share with their parents. A few workers reported receiving financial assistance from their children in times of need (e.g. women's FGD at RA5 baseline, RA3, LM, household interview; men's RA1, BS), but the majority of the workers whose children were working elsewhere said that they could not expect their children to send money on a regular basis, since the cost of living in urban areas did not leave them the luxury of having a large saving at their disposal.

Almost all the respondents (both men's and women's FGDs) in the final survey pointed out that their main source of income is from the tea estate and it is most important for all the workers in all the estates (Table 21 below).

We find that there is difference between the groups in terms of the proportion of tea income to total income. The final survey findings show that there is difference in the percentage of respondents reporting income from tea as the major source of income: it is higher in the non-certified, than respondents at certified estates.

The income from working in the tea estate as a proportion of total income constitutes 73.8 and 60.3 per cent for the non-certified and certified estates in the aggregate analysis. The difference is statistically significant at 1 per cent level.

⁵¹One household interviewee mentioned that they receive remittances of Rs.1000-2000 from their children (RA2, female HH interview) and another woman said she received money from her son in Dubai (RA5 women's FGD).

⁵²The female supervisor at RA6 (HH interview), who has a cow and obtains additional income from the sale of milk; and (2) The supervisor from RA2 (male worker FGD) who has a small piece of land within the estate, where he cultivates tea and sells the tea to other bought leaf factories.

⁵³Workers in RA4 and RA7 said their relatives view tea workers as a privileged group because of the free housing, water and medical services and their generally peaceful life; and hence they cannot ask their relatives for any support.

Table 21: Source of livelihood income of the respondents (Final survey).

	No certification	Certified	Sig
N	25	258	
<i>Values of variables below are means of a ranking exercise where: 0 = not important; 1 = third most important; 2 = second most important; 3 = most important</i>			
Ranking importance income activities: working at tea estate	2.68	2.78	ns
Ranking importance income activities: trade	0.20	0.04	ns
Ranking importance income activities: selling crops / livestock	0.00	0.00	ns
Ranking importance income activities: remittances	0.00	0.00	ns
Ranking importance income activities: paid job	0.24	0.08	ns
Ranking importance income activities: craft	0.00	0.01	ns
Ranking importance income activities: casual labourer	0.36	0.34	ns
Ranking importance income activities: selling food products	0.00	0.00	ns
Ranking importance income activities: selling forest products	0.00	0.01	ns
Ranking importance income activities: other	0.12	0.19	ns
Tea income as proportion of total income (%)	73.8%	60.3%	**
Working on tea estate is major income activity (% respondents)	76%	80%	ns

Sig = Significance of differences between groups (based on T-test and Mann-Whitney tests): ns = not significant, *P≤0.05, **P≤0.01, *** P≤ 0.001

The majority of the workers (participants in the FGD) mentioned that there is no scope for additional income earning by the tea workers, because they are working full time on the estate (from 8am-5 pm with an hour break for lunch between 12 and 1). Women workers (Final survey FGD, RA1 and RA3) mentioned that they need an additional person to take care of the cattle or any other livestock and hence, so only a few workers who have their parents or relatives staying with them, have cattle and/or a few hens. Similarly, only a few maintain a small kitchen garden for domestic use and there are risks of wildlife damage (RA1 and RA2 women's FGD). An enterprising woman supervisor (HH interview, RA6 Female, BS) told us that she kept a cow at home, which provides her a little extra income as she sells the extra milk within the estate. Similarly, a male supervisor in RA2 (FGD, RA2, BS), has an acre of tea garden within RA2, which is a source of leaves supply for a Bought Leaf Factory nearby. In RA2 one of the factory workers told us about his interest in sewing, which takes care of the requirement of his spouse and children.

Very few workers said that they have other sources of income. In the majority of the cases, both the spouses work on the estate, but there is a distinct and historical gendered division of labour: often the female worker is employed as a plucker and the male spouse works in the factory or on the tea estate as a security person, driver, pruner or sprayer.

A critical source of additional income is doing casual work while absent from the estate. The management uniformly reported that their workers take leave from the estate, to take up casual work elsewhere (e.g. in construction), because they can earn higher wages of Rs.300 to 400 a day. Because the workers receive benefits on the estate such as housing, they are not keen to leave the estate, but are attracted by the opportunities to earn more cash. Absenteeism is thus a problem for many estates, but particularly at RA3 which is located close to Coonoor. The manager at RA1 noted that when an approach road was constructed to their estate by the Mahatma Gandhi National Rural Employment Guarantee Act programme (MGNREGA) many workers were attracted by the opportunities to earn cash and while he was aware of this, he was unable to prevent it. An associated complaint from management is that these funds are spent on alcohol.

4.2.2 Wages

Stipulations on the Fair Treatment of workers in the SAN standards states that 'Farms pay salaries and benefits equal or more than the legal minimum, and the workweek and working hours must not exceed the legal maximums or those established by the ILO'⁵⁴. In the case of Indian tea, the Plantation Labor Act is of key relevance here in setting the minimum conditions which employers should follow. In situations where law enforcement is weak, social and environmental voluntary standards can potentially improve enforcement through the auditing process.

Wages in the tea plantations are arrived at through collective bargaining based upon the tripartite agreement involving the estates (members of the Nilgiri Planters Association), trade union and the concerned state government department. Through this agreement, the incentive rates for the pickers, sprayers and the factory workers for both during season and lean days are fixed and remain in force for three years or till the next agreement is worked out. Similar negotiated wages prevail for the other tea growing regions, like Gudalore and Anamalai, which is lower than Nilgiris (RA1). The agreement was arrived at in May 1 2009 and is effective till June 2013.

As wages on tea estates in Tamil Nadu are set through collective bargaining and because tea is the major source of income for tea households on all tea estates it **became clear to the research team that it would be unlikely that there would be significant differences between workers on certified and non-certified estates or changes since certification.**

Wages have three components:-the basic wage on which social security will be calculated + dearness allowance (e.g. Provident Fund; Pension Fund etc) + the terrain allowance.

There is a fixed rate of US \$2.6 (Rs.121.85) per day, which is the minimum wage for all the plantation workers⁵⁵ (2010). This increased to 130.10 Rs in March 2011 (paid during the LM) and rose further to 138.60 Rs in February 2012. These are daily wages and do not include additional incentives for different jobs or for plucking (See table 22 below).

The final survey found no significant differences in daily wages at the different categories of estates if the supervisors are excluded from the sample. Unsurprisingly, as the wages paid by all the estates are set under the same agreement, we find that there is statistically no significant difference observed between the certified estates and the non-certified estate in (a) wage income per day, (b) working hours per day, (c) number of days usually worked per week (d) weeks paid per year, (e) payment of overtime, (f) overtime earned per year and (g) the total estimated annual income. **However, there is significant difference between the certified and the non-certified estate in the hourly rate paid for overtime** (Table 23).

⁵⁴(SAN Standards, p21, http://www.rainforestalliance.org/agriculture/documents/sust_ag_standard.pdf).

⁵⁵The consolidated wage is revised as US\$1.92 (Rs.90) per day with effect from May 1, 2009 and the dearness allowance will be US\$0.29 (Rs.14) per day. The consolidated wage and the fixed dearness allowance will be eligible for employees' provident fund, gratuity and bonus payments. In addition to the consolidated wage and the fixed dearness allowance, the workers will also be paid US\$ 0.24(Rs.11.60) a day from May 1, 2009. This allowance amount is likely to vary on quarterly basis about which the Nilgiri Planters Association will be periodically advising the members (Source:Note on Implementation of the NPA Labour Wage Settlement dated May 30, 2009, made available to us by RA3). This settlement will be in force till June 14th 2013.

Pluckers are paid a basic wage plus incentives for the amount of tea plucked. Incentive levels are fixed, but the amount a plucker earns depends upon individuals' efficiency and generally the women tend to earn more than the men in tea estate because of this differential incentive for pickers (management of RA1, RA2 and RA4) (See section 4.2.3 on incentive payments).

Table 22: Prevailing wage rates at the tea estates (Rs)

Category	Wages	FDA	Allowance
Supervisors	Basic wage + 120 per month	420 per month	348 per month*
Non-staff category A & B	Basic wage + 120 per month	420 per month	348 per month
Plantation worker	90 per day or 2700 a month	14 per day or 420 per month	**11.60 a day 348 per month

*Will not attract provident fund, gratuity and bonus** increases by Rs.5 every quarter.

Source: Form B, Memorandum of settlement under Section 18 (1) of the Industrial Disputes Act, 1947, arrived at Coonoor on 29 May 2009, made available by the management of RA3.

Interestingly, during this agreement, the government of Tamil Nadu announced a wage level for the tea plantation workers, which was higher than the wages negotiated by the agreement. The RA1 manager noted in the baseline survey that in the previous couple of years the *minimum wage* has increased from US \$1.34 (Rs.63) to US \$2.22 (Rs.104) (+the terrain allowance for tea workers in the hills⁵⁶), which is above the old negotiated wage of the CBA (Rs.90). While the trade unions were targeting to increase the basic wage from Rs.63 to 90, the Tamil Nadu government announced that the basic wages would be rs.104. Since the government made the announcement the estates adopted it. However, this increase has been contested by a few estates and is pending in the court (RA1). The new minimum is prevalent in all the RA and the non-certified estates and now the minimum wage is virtually the same as the negotiated wage, because of the decision of the courts, which is unlikely to be reversed.

Table 23: Estimated Annual Income of the Workers in 2012 in Rs

	No certification	Certified	Sig
N	25	258	
Typical wage / income per day - excl overtime	142	158	ns
Working hours per day	8.00	7.93	ns
Number of days usually worked per week	5.64	5.87	ns
Weeks paid per year	47.8	47.4	ns
Payment of overtime (%)	96%	84%	ns
Hourly rate for overtime (KSH)	22.4	36.9	***
Overtime earned per year (KSH)	2425	3528	ns
Total estimated annual income (KSH)	39029	46795	ns

Sig = Significance of differences between groups (based on T-test and Mann-Whitney tests): ns = not significant, *P≤0.05, **P≤0.01, *** P≤ 0.001

At RA1 and at the non-certified estate, the workers said the wages should be increased to Rs.300 (6.66\$), which the managers said would not be possible because of the agreement. The workers said Rs.300 is the wage they would get, if they work in repairing roads or in the

⁵⁶This allowance changes every quarter, in line with inflation, and is currently US\$0.38 (Rs17.85). Thus, a tea estate worker's minimum daily wage is currently US\$2.22+0.38 =2.6 (RS 104 + 17.85 = Rs 121.85) in 2010. In 2012 it became Rs. 138 .

vegetable farms (male workers). It was the view of some of the certified managers that if they raised their wages they might upset other estate managers or that they would go out of business and point to the difficulties in Kerala. The non-certified estate owner said that wages should not be increased, because whatever money is given additional to the agreement it would be inadequate. This is because the men consume liquor and need cash and they can take leave from the estate and work as casual labour outside. He further said since the rate of bought leaf is known to the workers, they demand higher pay when they work as a casual labourers on other estates and farms. Hence, the manager of the non-certified estate says, they will have to adopt a different strategy to retain the workers. According to the non-certified estate manager, a tea worker gets Rs.225 by way of indirect costs (housing water, medical etc), which amounts to more than Rs. 5000 per month by way of imputed value on housing, water etc (management interview baseline and final survey).

4.2.3 Incentives

Besides the regular wages, different incentives are paid to pluckers and pesticide sprayers. These incentives were established in the tripartite agreement of 2009 mentioned earlier and this is valid till 2013, when a new negotiation will be undertaken. Thus, total worker income depends upon their wages, plus incentives paid according to tea plucked, but is also determined by deductions by the estate), (gratuity and provident fund) (12% of basic pay is deducted from employees' wages for the Provident Fund and the employer makes the equal contribution. This rate is fixed for everyone for whom social security is applicable.



Tea plucked during the day at certified estate is weighed by supervisor

The Equal remuneration Act ensures that there is no difference in wages according to gender and years of service amongst pluckers, but different positions or tasks are remunerated differently. In 2010 the research team found the following. For example, Factory workers get a total of US\$2.66 (Rs.124.85), including an additional incentive of Rs3. per day (US \$.06) according to the wage agreement. Pesticide spray workers get US\$0.04 (Rs.2) extra on the days they spray pesticides. Motor sprayers get an additional US \$0.05 (2.5 Rs) on top of their basic wage. Pruners get an additional US 0.06 per day (2.75 Rs) per day. Sweepers are paid an incentive of US \$0.05 (2.25) per day. Supervisors get a higher pay than the pluckers (Light monitoring interviews) – an additional amount per 10 kilos plucked by the workers more than expected for the season.

The pluckers are also paid incentives for plucking leaves above the stipulated levels, which are presented in table 24 below. The RA4 manager observed that RA2 and RA4 are the highest yielding estates in the Nilgiris – in the range of 3,500kg per hectare in the made tea segment

which means there is work throughout the year for workers. Implicitly it “means that there workers can earn more (through the incentive payments system) than workers on other estates”.⁵⁷

It may be added here that RA1 and RA2 mentioned that the outgrowers from whom they buy the leaves should also adhere to the minimum wages agreement. If they do not follow this, then the parent estates are not supposed to source leaves from such outgrowers. It was not clear from interviewees whether RA auditors visit the outgrowers.

Table 24: Incentive wages for hand plucking

Yield class GL/YLD/HA/month*	Base output (Kgs)	Extra Output Slabs (Kg)		
		1 st Slab	2 nd Slab	3 rd Slab
1-400Kg	15	16-18	19-34	35 & above
401-800 Kg	22	23-28	29-48	49 & above
801-1600 Kg	30	31-42	43-57	58 & above
1601Kg & above	35	36-47	48-67	68 & above

Table 25: Incentive wages for shear plucking

Yield class GL/YLD/HA/month*	Base output (Kgs)	Extra Output Slabs (Kg)		
		1 st Slab	2 nd Slab	3 rd Slab
1-400Kg*	20	21-27	28-43	44 & above
401-800 Kg	27	28-37	38-53	54 & above
801-1600 Kg	37	38-52	53-62	63 & above
1601Kg & above	42	43-54	55-75	76 & above

*based on the total yield per day. If the yield has reduced during the winter and it is in the range of 1-400 kg then the base output is fixed at 15 kg. So from 16-18 kilos a person will be paid an additional 0.55 per kg. If the person has plucked more than 35 kilos then s/he would get Rs. 1.05 per kg.

Incentives 1st Slab: US \$ 0.011 (0.55 Rs) per kg

Incentives 2nd Slab: US \$ 0.016 (Rs0.75) per kg

Incentives 3rd Slab: US \$ 0.022 (Re 1.05) per kg

Source: Note on implementation of the NPA labour wage settlement dated 30th May 2009 shared by RA3

During the light monitoring exercise managers reported that pluckers’ incentives were being paid according to the agreement that has been arrived at after the negotiation between the estates and the trade unions in the year 2009. However, RA2 and RA3 have a higher incentive rate per kg over and above the prescribed minimum plucked by the workers. Although, RA2 and RA3 were paying more than the incentives fixed by the negotiated agreement, it is not clear what has driven this. RA2 pays Rs 1 (\$ 0.02) for every additional Kilo plucked above 30 Kilos while RA3 pays Rs.2 (\$0.04) for every kilo more than 40 kilos. Attitudes amongst managers vary on this matter though (see previous section). The manager of RA1 said that he could not increase incentive rates because a change would ‘disturb the equilibrium’ that is currently prevailing and other estate managers would be cross with him. So he provides only the statutory incentives. But the managers of RA2 and RA3 view it differently, saying they are capable of giving more incentives and sustaining them and hence, they would give whether or

⁵⁷ RA3 has innovatively pays the monthly wages through the bank which the workers can withdraw using the ATM card. Even if a couple is employed in the estate, both are given separate ATM cards. RA1 and RA4 also provide advances on the monthly wages once a fortnight to meet the workers need for cash

not other estates do so. RA3 provides one further incentive – a cash incentive to households who maintain their environment keeping it clean. They are paid an additional Rs1500 per year.

On the non-certified estate, workers get 55 paise ($\$0.011$)⁵⁸ per kilo over and above the 35 kilos set out in the negotiated agreement during the lean season. Women in RA1, RA3, RA4 and RA5 told us that during the busy season pluckers' earnings can go up to Rs.4500 per month ($\$90$). The temporary workers in RA7 are paid Rs.150 a day ($\$3$).



Plucker carrying the tea to the collection centre for weighing

4.2.4 Bonuses

Estates provide a bonus to workers based on their profits. The statutory minimum is fixed by the government of Tamil Nadu at 8.3%. In the baseline survey the level of bonuses provided varied across estates. RA1, RA2 and RA4 provided a 20% bonus every year while the bonus provided by all others ranged from 8.3% to 18%. RA3 provided a bonus of 15%. The female household case study interviewee at RA3 said the bonus has been increasing year on year. RA3 workers also said that the bonus which is not fixed has been rising. RA7 pays 8.3% of their profits as a bonus to workers. The non-certified provided a bonus of 18%. However, all these benefits are available only to the permanent workers. RA1 and RA6 said that 10 and 25 % of their workers are temporary.

There has been no change in these 'other income benefits' received by workers at the non-certified estate because the percentage reported (48% of workers) has remained the same before 2008 and at 2010. At the certified estates there has been a marginal improvement in the percentage of workers getting bonuses in the year 2008 and in 2012 (68% and 70%) respectively.

There were positive and statistically significant differences between the non-certified and certified estates in the percentage of workers who received 'other income benefits', both in 2008 (48% and 68% **) and in 2012 (48% and 70%**).

RA3 also gives an **additional incentive** of Rs.1500 to workers who have not taken leave at all. The household case study respondent (male) and his wife at RA3 had been given this bonus

⁵⁸ \$ conversions have been made at the rate of 1\$=Rs.50.

last year. In 2010 also he got Rs.500 as award for the same but does not know why the amount was reduced.

During the light monitoring it was established that in recent years some estates have been paying workers bonuses:

- RA1 (for 10 years), RA2 (for the past 25 years 20%), and RA4 (always) have been paying 20% bonus to the workers.
- RA5 has paid a bonus of 20 % in 2010-11. In 2009-10-18 % bonus was paid by RA5.
- The non-certified estate paid 20 per cent bonus in 2010-11 compared to the 17 % in the previous year.
- However, the manager said it would reduce the bonus in 2011-12 to the statutory minimum of 8.33 per cent because of the recent losses.
- RA7 paid 10 % bonus and in 2009-10 paid 8.33% bonus.
- RA3 gives a 1 per cent more bonus for those workers who have maintained their surroundings clean. Experts from outside are brought to judge the quality. The bonus in RA3 hovered around 15 to 17 % which was increased to 20 % last year. According to the manager in the prevailing situation, the workers need to be paid more.

During pruning time, RA3 provides bananas and eggs for workers. Every pruner has to prune 0.2 acres in a day.

A small grower who supplies to RA2 whom we had visited also mentioned the labour shortage and said it affects him, because he does not have access to permanent labour. These labourers are paid Rs.150 (\$3) a day on the days they work and also get bonus if they had worked with the estate for more than certain fixed days.

In the final survey the results found that workers at certified estates report a significantly larger improvement in bonuses than workers at the non-certified estate. A bonus is provided around the time of the Diwali festival in October/November. RA1, RA2 and RA4 have been consistently paying a 20% bonus and for others it varies according to their profitability.

4.2.5 Overtime

Working overtime is required for the factory workers during the high yielding season (men's FGD at RA1, BS, LM, RA3, BS, FS,) since the plucked leaves would lose their moisture after 8-12 hours. Participants (leave pickers) in the women's FGD (RA5 FS) told us that they have asked the management to allow them to work on Sundays to enable them to earn an extra income and incentive.

The SAN standards include provision for the Fair Treatment and good working conditions for workers. For example, the standard stipulates that the working week and working hours must not exceed the legal maximums or those established by the ILO.

For all the tea workers and tea pluckers the payment of overtime has been 100% in both non-certified and certified estate. Under the Plantation Act overtime is limited to nine hours a day or 54 hours a week for which the workers have to be paid at twice their normal wage rate.

The RA3 manager noted that RA stipulates that the maximum number of hours of overtime allowed per day is 2. The RA4 manager said that RA certification has led to restricted or banned overtime, but the RA3 manager said the reduction in overtime hours has been due to reduction in the yield levels generally, rather than as a result of RA certification.

One of the participants in the men's FGD at RA3 (baseline and final survey) told us that because the overtime hours have been reduced due to RA certification they are not now allowed to work on Sundays and as a result the frequency of their meat consumption has reduced. They said that overtime used to enable them to consume meat once in a week.

The men's FGD in RA6 reported that previously the management used to put pressure on workers to work from morning to till 7pm. But now the management deals with the workers '*like friends*'. In this particular case it appears that RA has removed the pressure of overtime on factory workers (other workers do not have overtime because garden related tasks are not carried out after sunset or before dawn).

Estates follow the 6 day schedule and for all the estates Sunday is the weekly day off⁵⁹.

Section 4.2.6 reports the DD results relating to income: there are no significant differences in the changes in daily wage, overtime payments or annual income between workers at certified and non-certified estates. However, in 2010 workers at certified estates used to get paid 49 weeks a year, which was reduced to 47 weeks per year in 2012, the same as the non certified estate. In the non-certified estates the number of weeks paid per year remained the same. As explained above, some workers did mention a reduction in overtime, although managers gave different reasons for this change, with one stating it was the result of lower yields. However, RA does stipulate restrictions on overtime hours to 12 hours per week, and so this may account for the change.

All the permanent female employees get 12 weeks of maternity leave. Estates do not have paternity leave. Men who wish to take leave could take the other leave (FGD) that they are eligible for according to management and workers interviewed. Under the Plantation Act 1951, workers get one day off (paid) for every twenty days worked. We found in the baseline survey that there is a statistically significant difference between workers at certified estates and those at non certified estates in terms of percentages getting paid annual leave, now and in the past.

Other than this, there was no difference between the certified and non-certified estate in terms of other employment benefits and no difference between all workers and tea pluckers.

All the workers with whom we talked in FGDs (baseline, light monitoring and final surveys) and household interviews (baseline) were aware of their rights particularly regarding wages and leave^{60, 61} and this is thought largely to do with relatively high levels of union membership.

⁵⁹It coincides with a weekly market day for workers (RA4 and non-certified) and enables them to do their personal work. The RA6 manager observed that if a worker works on Sunday also, the Plantation Act requires that he/she is given a day off within 10 days. All the estates strictly observe one non-workday which is mostly Sundays in all the estates, though workers may work voluntarily on Sundays during peak season (RA2, RA4).

⁶⁰For example, all the permanent workers are eligible for the paid annual leave, whereby for every 20 working days, one day is credited to their annual leave. Management of different estates informed us that as January to April is the lean season, workers go on leave then. The division head would stagger the number of people who can go on leave at particular point of time (RA1 HH interview with woman). When they go on paid leave, they get the bus fare (RA1 HH interview with woman, Women's FGDR6 and RA7). If they are not interested in going on leave, then they could get cash in lieu of the leave due to them (Women's FGD, RA6).

⁶¹All permanent workers get 14 days of sick leave in a year. When workers are on sick leave they should be given two thirds of their daily wage (RA1). Workers can accumulate sick leave up to 30 days after which it lapses (RA6). RA3 observed that most workers do not exhaust all the 14 days in a year⁶⁹. In RA4

In terms of the hourly rate paid for overtime, the final survey results show that respondents at the non-certified estate on average receive a significantly lower payment for overtime than respondents at certified estates, but no significant difference in terms of the amount of overtime earned per year.



Men's focus group discussion at a tea estate

4.2.6 Annual income

Given the incentives system and the variable bonuses paid by the different estates it is not possible to estimate annual income based only on wages.

As well as analysing the specific components discussed above (e.g. wages, bonuses, overtime) we also asked questionnaire interviewees to provide their own estimates of annual income and to compare this with the research team's calculated figure (done during the interview from the figures supplied by the interviewee). The interviewees were asked to say if they thought that the research team calculation was a correct figure, approximately correct, wrong or do not know. If the workers thought that the calculated figure was wrong, then they were requested to give their estimate.

An analysis of the findings shows that in the entire sample, 62% of all the workers agreed with the calculated annual income. **The difference between the annual income reported by all the workers in the non-certified estate and at the certified estates, though positive and significant, is statistically small. Similarly, in the annual income estimate calculated by us, the difference between the non-certified and certified estate worker is positive and it is significant.**

In the specific case of tea pluckers (as opposed to workers who do other types of work on the estate like processing or factory work) in both the annual income reported by workers as well as in the annual income calculated by us, the difference in the non-certified and certified estate is statistically significant. This could be perhaps due to the fact that some of the estates in the certified sample are high yielding estates (e.g. RA2 and RA4), and this is where the tea

one of the women in FGD observed that she gets Rs.77 when she takes sick leave. In RA6, sick leave is subject to the directors' approval. In RA1 apparently irked by the condition of 'should inform' before going on sick leave, the participants at the men's FGD asked us how would they know that they were to fall sick the next day?

pluckers can earn more (according to the manager of RA4). It could also relate to the bonuses they are offered, which are higher at some estates than others. The non-certified estate is experiencing financial difficulties due to disputes with the labour force, which led to yield losses. In 2009-10 the non-certified paid the 20% bonus to workers, but this has now reduced, because of the financial difficulties being experienced.

A majority of the certified and non-certified workers said that their real income has not changed during the past few years, due to increases in the prices of food items (the rank remained 2.4 for both non-certified and certified, where 2 was assigned if workers said there was no change in their income).

In the final survey the **perceived change in daily income findings** (Q9) indicate that workers at certified estates report a significantly larger improvement in daily income than workers at the non-certified estate. This may be due to variations in bonus payments, or differences in yields on the different estates – those with higher yields can pluck more per day than those on lower yielding estates usually.

In the final survey, though the total estimated annual income of the workers from the certified estates is higher than the non-certified estates, it is not statistically significant (see Table 26).

The results of the Difference-in-Difference analysis are shown below in table 26. Workers at both certified and non-certified estates have seen a significant increase in their wages between 2010 and 2012. However, the annual incomes have not changed over time, as there has been a significant decrease in the number of days worked and overtime payments. Nevertheless, significantly larger proportions of workers at non-certified and certified estates reported an income increase in 2012 compared to 2010. The DD results show that there are no significant differences in the changes in daily wage, overtime payments or annual income between workers at certified and non-certified estates. However, in 2010 workers at certified estates used to get paid 49 weeks a year, which was reduced to 47 weeks per year in 2012. This reduction is significantly different from the non-certified estates where the number of weeks paid per year has remained the same. Workers at a couple of estates mentioned this issue. Some managers said this was due to reduced yields. However, RA does stipulate restrictions on overtime hours to 12 hours per week, and so this may account for the change.

Table 26: Difference in difference analysis of income

Change over time (2010 to 2012)	Non-certified estates	Certified estates	Difference-in-difference	Sig
Estimated annual income	1,231	6,359	5,128	ns
Typical wage / income per day	18	35	17	ns
Working hours per day	0	0	0	ns
Number of days worked per week	0	0	0	ns
Weeks paid per year	0	-1.80	-2.00	*
Overtime is paid (% respondents)	0	0	0	ns
Overtime payment (annual)	-2,578	-2,186	392	ns
Change in income in past 2 years (1=decrease, 2=no change, 3=increase)	0.55	0.52	0	ns

Sig = Significance of differences between groups (based on T-test and Mann-Whitney tests): ns = not significant, *P≤0.05, **P≤0.01, *** P≤ 0.001

4.2.7 Investment of additional income

A question was included in the questionnaire about spending priorities if any additional income was coming into the worker household (which could potentially be the result of standard certification).

Spending on children's education is the top priority when there is any additional income at both certified and non-certified estates (except for housing where the slightly lower standard of housing on average at the non-certified estate might be the cause of this difference). After children's education the next priorities are household durables and house improvements for all the female headed households in all the estates, certified and non-certified estates. However, the difference between the priorities of spending in female headed and male headed households do not differ statistically.

During the light monitoring exercise it was found that at all the estates, both men and women said the income from the estate is '*just adequate*' to meet their basic requirements. If they encounter unexpected costs they will have to seek support. At RA3 the male workers said, if a worker has 4 children studying in non-government schools, then their income is not adequate. However, in RA5 the women workers said that because the management of the estate are meeting the school educational expenditures, their income is adequate. The reason for this is after RA5 was certified by the Fairtrade, some of the premium amount has been spent on the children's education and related expenditure.

In the final survey no statistically significant differences emerged in terms of what the female and male workers would invest in with additional income.

4.2.8 Adequacy of tea income in covering basic needs

In this study we aim to establish if RA certification has a poverty impact and this includes the ability of workers and their households to meet their basic needs and beyond this to escape poverty. Although Rainforest Alliance does not have trade standards, as FLO Fairtrade does, nevertheless certification to Rainforest Alliance could conceivably lead to better incomes through other mechanisms (e.g. better health meaning less days off work or more fair treatment of workers because of auditing etc). In this section we assess if and to what extent workers report their ability to cover basic needs.

The 2010 baseline survey found that 96% of the certified workers and 93% of the non-certified workers are permanent workers and hence have a stable and relatively secure income. All the workers interviewed in the FGDs or the household case studies said that their income is adequate to meet their basic requirements of food, clothing and children's school education.

The baseline survey found that workers reported that income from work on the tea estate met slightly more than half of their expenditure on food. In 2010, a larger proportion of the certified workers reported that the tea income covered more of their basic needs (on average between 'half of it' and 'in its entirety' for food; and on average nearing 'half of it' for clothing) than non-certified workers (on average just above 'half of it' for food; and on average between 'a quarter' and 'half of it' for clothing).

However, in 2012, both certified and non-certified workers reported a decline in the contribution of tea income to food and clothing needs (see Table 27). Tea income covered slightly less than 'half of it' for food (there was no significant difference between the two groups in 2012). For clothing, certified workers reported that their tea income covered, on average, just under 'a quarter' of their needs, whereas non-certified workers reported that

their tea income covered on average over 'a quarter' of their needs for clothing. This difference was statistically significant.

Table 27 Contribution of tea income to basic needs – food and clothing.

Comparison of means	workers at non-certified estates			workers at certified estates		
	2010	2012	Sig	2010	2012	Sig
N	46	25		304	258	
<i>Values of variables below are means of a ranking exercise where: 1 = no contribution; 2 = a quarter; 3 = half of it; 4 = in its entirety</i>						
Does income from tea cover basic needs: food	3.11	2.92	ns	3.41	2.90	***
Does income from tea cover basic needs: clothing	2.30	2.24	ns	2.83	1.96	***
Does income from tea cover basic needs: school expenses	2.71	2.37	ns	2.85	2.33	***
Does income from tea cover basic needs: health costs	1.50	2.00	**	1.27	1.50	***
Does income from tea cover basic needs: energy	2.33	1.80	ns	2.72	1.87	***
Does income from tea cover basic needs: rent	1.00	2.00	*	1.21	1.10	ns

Sig = Significance of differences between groups (based on Mann-Whitney test): ns = not significant, *P≤0.05, **P≤0.01, *** P≤ 0.001

In 2012 the certified workers reported a significantly larger decrease in the contribution of tea income to coverage of food and clothing needs than non-certified workers. The difference in difference analysis shows a significant and negative difference between certified and non-certified workers in the extent to which income covers food and clothing, indicating that the decline in the contribution of tea income to food and clothing needs was reported as more severe by the certified workers than the non-certified workers. Differences in adequacy of tea income to cover other expenditures were weakly significant for health costs and energy requirements, but not significant for school expenses or house rent/mortgages, perhaps because housing is provided free of cost and in primary school the expenses are minimum.

It was evident from the FGDs and the individual interviews that despite an increase in income for the workers in the estates, the prices of food products have also risen⁶². Inflation has been rising much faster than the increase in the wages, particularly inflation in food prices, over the period of the study, which has widened the gap between wages and affordability.

Workers on all the estates, in both men's and women's FGD, said their tea income was very meagre compared to wages in other sectors. For example, a permanent worker with the government at the lowest rank earns much more than a permanent tea estate worker and enjoys a decent standard of living (Women's FGD, non-certified). If the income were to be raised to Rs.250 a day, the workers said it would be sufficient to make ends meet (RA1 women's FGD, RA3 Men's FGD). In RA7 the men's FGD revealed that in order to cope with the limited income plus the price rises, they have resorted to taking leave from the estate and working at vegetable farms near their estates for two or three days which pays them better. They produce a medical certificate from the dispensary to justify their leave of absence. At all the estates workers can approach management for loans which are provided interest free.

⁶²The wholesale price index of food articles (base 1993-94=100) had increased from 189.2 in 2005-06 April to 250.2 in 2009-10 April according to the Reserve Bank of India. Data available at <http://www.rbi.org.in/scripts/PublicationsView.aspx?id=11761>, accessed on 5th July 2010

Particular times of the year may present specific expenses which workers at the non-certified estate struggle to meet.⁶³⁶⁴

The difference in perception between certified and non certified workers on the adequacy of tea income to cover food and clothing needs is difficult to explain, given no significant difference in income changes between certified and non certified groups and similar exposure to price rises and inflation. The manager at RA5 said that the socio-economic situation for workers has improved in recent times, but workers themselves did not necessarily report this. The manager of RA4 said that workers will always report that their income is inadequate, but the problem is that the men's wage are not used for the family, but spent in one of the 22 liquor shops that are located around the estate. This concern regarding the spending of household income on alcohol is shared by the managers at all the other estates. Conversely, participants in men's FGD at various estates (e.g. RA2, RA3, RA4, RA6), said that they are aware of the negative effects of drinking and do not indulge in this. Women in RA3 and RA6 (women's FGD) mentioned that though men do drink alcohol, they do not create a nuisance for others.

Several managers (RA1; RA2; RA4; non-certified) reported that current government populist policy has led to increases in the standard of living of the workers – a process not related to sustainability standards. Various goods have been distributed to workers by the government including a television, a mixer grinder, a gas cylinder for every Public Distribution System (PDS) card holder and a laptop for all the students who enter the 11th year of schooling onwards. These goods provide workers with greater access to information and an improved quality of life.

However, female workers in the non-certified estate told us that a few of the government schemes, such as the Chief Ministers insurance scheme for life threatening diseases, widows pension and gold for marriage are all available only for people who hold the card that certifies them as People Below Poverty Line (i.e. income below Rs. 3000 a month). Tea estate workers are just above BPL limits and are therefore not eligible for such government schemes.

An UPASI official said that there is a huge difference between the auction price and the retail price. Only if the price per kilo realized by the estates rises, would it be viable for the estates to raise wages. During the 1998-99 crisis, UPASI representatives reported that the workers understood the crisis and agreed to lower wages (tea prices had fallen to 48 Rs at that time). Keeping the 1990 figure as the base he constructed a prices-wage index. According to this index, wages have increased to Rs.526 and prices are at Rs.194 as of 2012. The wage increase is thus faster than the increase in price realization according to the UPASI official. If the price falls further, the estates could find it difficult to make ends meet.

⁶³Participants in the male worker FGD at the non-certified estate also revealed that when there are additional expenses, like in the beginning of the academic year, they find it difficult to meet those expenses. In the certified estates, the FGD in RA5 and RA6 (women) revealed that they take loan from the Provident Fund to fund this expenditure.

⁶⁴In all the estates, it emerged during the FGDs and household case study interviews that in case of emergency, workers can approach the management for a loan which is provided interest free. In RA1, huge loans have been given by the owner to meet medical emergencies. In RA3 interest free loan is available for educational purposes.



Interviews with pluckers in the tea garden

4.2.9 Decision-making on income investments

Baseline survey information on decision-making within the household indicated that women have some involvement⁶⁵ but more in-depth information is required to unpick household gender relations. At RA1 and RA4 women in the household interview said that they buy gold with any savings and at RA5 FGD women participants said that they used the money for household durables. It was a common view in the FGDs and individual household interviews that women tend to save better than men (e.g. RA6 men's FGD). All the estates have revolving chit funds among the women which are used in emergencies (women's FGD at RA1, RA5, non-certified) and to get back any mortgaged items (RA7 women's FGD)⁶⁶. Men also seem to save through chit funds at three estates, but not at the others (According to household case study interviewees (male) at RA4, RA6 and participants in the RA5 men's FGD). In RA5, workers in the female FGD mentioned that besides this revolving saving, they also save in the form of recurring deposit with their bank, the money for which is debited from their salary and directly sent to the bank by the estate. Almost all the workers in both the men's and women's FGD in different estates said that the decision on how to spend the money is taken after consulting the spouse. The final survey data shows that there are no significant differences between men and women in terms of ranking investments.

Almost all the workers who participated in the FGD in all the estates said that they do not want their children to follow their footsteps but get educated to land in a decent job. With this idea, the workers send their children to the schools that belong to the private sector, where the medium of instruction is English and the fees are higher, compared to the government schools. Since the workers themselves cannot coach the children in different subjects they need to send them for coaching classes as well. Hence, every worker had invested in the education of his/her child/children. At RA6, one of the male workers (men's FGD), who is employed as a driver, has educated all his three children as professionals. At RA1, one of the female workers

⁶⁵According to a female household case study interview at RA6 this is a joint decision, even though for women working as pluckers their income can be higher than that of their husbands. If there is any additional income this is spent on children's education, although we did not come across any. Another woman worker interviewed at RA6 said that her husband allows her to decide on spending and saving of household income.

⁶⁶In RA6 women (FGD) have used the increased income to buy a piece of land, gold, to buy back mortgaged item and household durables.

(women’s FGD) proudly told us that her daughter is preparing to take the forest service examination. Almost all the workers who have provided professional technical education (e.g. nursing, engineering, teacher training and vocational training) for their children have taken loans from the provident fund. RA2 has employed one of the workers’ sons as an office clerk. We came across only one female worker at RA2 who said her son is working as a driver in the estate (women’s FGD).

At RA6, a few male workers who participated in the FGD said that they have taken loans from the Provident Fund, to invest in a piece of land in their home town, where they would construct a house after their retirement. At RA2, the manager told us that one of the workers has recently bought a car and on Sundays, a few workers join together to buy their weekly provisions. But this apart, the workers said that any extra expenditure has to be met through obtaining credit.

The manager of RA3 has been innovative, introducing banking habits to workers by paying their wages credited in their bank account which they could withdraw using the ATM card. Government officials resisted because they wanted all the money to be paid in cash to workers. But now it has resulted in saving precious hours for the managers and for the workers and it has reduced spending on alcohol according to the manager. As one of the workers at RA3 said, the ATM has reduced their habit of borrowing and the workers ensure that there is some money left in the account. According to the manager of RA3, other estates could emulate this and the banks are willing to have the ATM installed at the estate if they have certain number of captive users.

4.2.10 Gender analysis of annual income

In the entire baseline sample, as well as between the certified and non-certified estate, the annual income earned by females is less than the males. However the difference was not found to be statistically significant. This may be due to lower yields, meaning lower incentives earned by, the largely female, pluckers or that female workers have under-reported their extra incentives as part of their annual income.

However, when we asked what proportion the income from working in the tea estate contributes to the total household income, women reported a significantly higher proportion of household income from working in the tea estate in both certified and non-certified estates compared to their male counterparts (table 28). In the entire baseline sample, workers said that 60 per cent of the total household income is from working on the tea estates. The figure is 58% for the RA estates and 66 per cent for the non-certified. This compares with 80% overall for women; 79% for certified and 90% for non-certified. The difference is statistically significant in all three cases. Reasons for this may relate to the greater engagement of men in casual labour or other paid work outside the tea estate.

Table 28: % of total HH income coming from tea estate (baseline)

Particulars	All	Female	Male	significance
Entire sample	60	80	56	***
RA	58	79	55	***
Non-certified	66	90	63	**

- not significant, *P≤0.05, **P≤0.01, *** P≤ 0.001

All the workers uniformly mentioned (in all FGDs and household case study interviews) that there had been no gender or social discrimination of workers in wages, or promotion or in provision of services in the estates. Women have also been elected onto the worker committees (RA4 and RA5). Worker committees were already established prior to RA

certification. During the light monitoring, women participants in the mixed FGD at RA1 and male participants in the mixed FGD at RA2 said that women have higher earnings than men because of the incentives for the pluckers.



Focus group discussion with certified women workers

In the final survey, the overall contribution of tea income to household income increased to 61.5 per cent. For workers in the non-certified estates, the percentage rose to 73.8 per cent and for certified estates, 60.3 per cent (the difference is statistically significant, see table 29).

Table 29: Importance of tea income (final survey)

	No certification	Certified	Sig
N	25	258	
<i>Values of variables below are means of a ranking exercise where: 0 = not important; 1 = third most important; 2 = second most important; 3 = most important</i>			
Ranking importance income activities: working at tea estate	2.68	2.78	ns
Ranking importance income activities: trade	0.20	0.04	ns
Ranking importance income activities: selling crops / livestock	0.00	0.00	ns
Ranking importance income activities: remittances	0.00	0.00	ns
Ranking importance income activities: paid job	0.24	0.08	ns
Ranking importance income activities: craft	0.00	0.01	ns
Ranking importance income activities: casual labourer	0.36	0.34	ns
Ranking importance income activities: selling food products	0.00	0.00	ns
Ranking importance income activities: selling forest products	0.00	0.01	ns
Ranking importance income activities: other	0.12	0.19	ns
Tea income as proportion of total income (%)	73.8%	60.3%	**
Working on tea estate is major income activity (% respondents)	76%	80%	ns

Sig = Significance of differences between groups (based on T-test and Mann-Whitney tests): ns = not significant, *P≤0.05, **P≤0.01, *** P≤ 0.001

There are no significant differences between certified and non certified workers in rankings of the importance of different income sources. 76 and 80 per cent of the workers in non-certified and certified estates respectively say that working on tea estate is their major income activity. Casual labour, other paid jobs and trade are indicated as other income sources.



Female plucker answering her mobile phone in the tea garden

4.3 Food Security

Questions about food security were included in the questionnaire survey, because food insecurity is key indicator of poverty. The study attempted to assess food security of workers on certified and non-certified estates by measuring satisfaction with food intake. This appears in the baseline survey to be fairly high across all estates, with no significant difference between certified and the non-certified estate. The baseline data showed no significant difference in terms of amount and quality food intake, or in the amount and quality food intake by women and men in the certified and non-certified estate. All the women in all the estates, certified and non-certified, said that they take three meals a day in monsoon, winter and summer. There was no statistical difference between the female and male headed households in the overall sample, or in certified and non-certified estates. When asked whether they consume less or equal or more amounts of nutritious food (in terms of protein and carbohydrates) than their spouse, the women in all the estates said they consume the same level of nutritious food (with no significant differences between male and female headed households). The final survey findings show that workers at the certified estates reported a significantly higher satisfaction with the amount of food and with the quality of food eaten than workers at the non-certified estate (table 30).

Table 30: Food security among workers at certified and non certified estates. (final survey)

Workers at tea estates	Total	No certification	Certified	Sig
N	283	25	258	
Main meals per day in short rains season	2.98	3.00	2.97	ns
Main meals per day in long rains season	2.98	3.00	2.98	ns
Main meals per day in dry season	2.98	3.00	2.98	ns
<i>Values of variables below are means of a ranking exercise where: 1 = less; 2 = the same; 3 = more</i>				
How much protein compared to spouse	2.00	2.00	2.00	ns
How much carbohydrate compared to spouse	2.11	2.00	2.12	ns
<i>Values of variables below are means of a ranking exercise where: 1 = very dissatisfied; 2 = dissatisfied; 3 = neither; 4 = satisfied; 5 = very satisfied</i>				
Satisfaction with amount of food eaten	4.05	3.44	4.10	***
Satisfaction with quality of food eaten	4.04	3.56	4.09	***

Sig = Significance of differences between groups (based on T-test and Mann-Whitney tests): ns = not significant, *P≤0.05, **P≤0.01, *** P≤ 0.001

Gender disaggregation of the final survey findings show no significant differences in the number of meals per day in different seasons. Female workers report a significantly lower consumption of protein and carbohydrates (compared to spouse) than male workers, but there were no significant differences in terms of satisfaction with the quality and quantity of food between female workers and male workers (See Table 31).

Table 31: Food security among male and female workers. (final survey)

All workers at tea estates	Total	female	male	Sig
N	283	171	112	
Main meals per day in short rains/rainy season	2.98	2.96	3.00	ns
Main meals per day in long rains/winter	2.98	2.96	3.01	ns
Main meals per day in dry season/summer	2.98	2.96	3.01	ns
<i>Values of variables below are means of a ranking exercise where: 1 = less; 2 = the same; 3 = more</i>				
How much protein compared to spouse	2.00	1.71	2.41	***
How much carbohydrate compared to spouse	2.11	1.87	2.44	***
<i>Values of variables below are means of a ranking exercise where: 1 = very dissatisfied; 2 = dissatisfied; 3 = neither; 4 = satisfied; 5 = very satisfied</i>				
Satisfaction with amount of food eaten	4.05	4.08	4.00	ns
Satisfaction with quality of food eaten	4.04	4.06	4.00	ns

Sig = Significance of differences between groups (based on T-test and Mann-Whitney tests): ns = not significant, *P≤0.05, **P≤0.01, *** P≤ 0.001

Almost all the workers with whom we had interacted told us that the income from the tea estate is just enough to cover their basic food requirements for the family. Workers who participated in the FGD in RA3 (male FGD) pointed out that with their income, they can have frugal meals and non-vegetarian food only on rare occasions because meat is expensive. The majority of workers said that they are able to meet their food requirements, because of the presence of public distribution system where each household gets 25 kilo of rice at a subsidized rate of 1 Re (.02\$) a kilo.

RA7 has started a midday-meal scheme for all the workers including the temporary workers. This costs the estate Rs.2000 (\$40) a day. The non-certified estate lauded such an initiative when told about it, but said that not every other estate can afford to run a scheme such as this. Also instead of tea or coffee a health drink made of pearl millet is provided in both RA7 and RA5. At RA5, the management said this drink is provided using Fairtrade premium funds at mid-morning. The management said that they provide this health drink, because most workers do not eat anything in the morning before they go to work. RA5 also provides some snacks for the children going to school in the late afternoon when they are attending the coaching class arranged by the management (also a Fairtrade premium funded initiative). They have extended the training programme to the community development centre, where during summer holidays, children who have completed their 10th and 12 are trained for vocational skills. RA4 provides a feast twice a year not only to the estate workers, but also for the adjoining villages on important occasions.

All the management of those estates which have brought workers from Jharkhand noted that most of the workers were emaciated when they arrived. But within a period of two months the managers reported they could see positive difference in the workers' appearance and nutrition. In RA5, the female migrant worker who participated in the women's FGD said that except for the fact that she is very far away from her home, she is happy in the estate and is also able to save money.

4.4 Fair treatment and good working conditions for workers

Labour standards covered by the RA standard (based on ILO standards, human and child rights conventions) include provisions on salaries and benefits, working hours, workers' freedom to associate, and to negotiate working conditions, freedom from discrimination or use of forced or child labour, good housing provision, potable water, sanitary facilities and domestic waste collection, access to medical services, and children's access to education. As stated earlier, the Plantation Act covers many of the labour issues on tea plantations, although enforcement may still be an issue.

Generally speaking, in the Indian tea industry, the lives of the people working on the tea estate are intrinsically woven with the estate and to quote one of the workers *'life begins and ends in the estate'*. It is thus relevant to consider worker representation (structures and processes) and how these might have changed with certification.

4.4.1 Worker management relations

In the baseline survey it was found that in small estates, especially those with only one or two divisions, people know each other well. The workers tend to see the director of the estate as being like a village head and the workers often say they can approach him for help. The director is personally present in all the important functions and festivals in the estate and the school and the workers feel fairly able to approach the director if they experience a sudden financial crisis. Workers have abundant loyalty and devotion to the family and respect them for their virtues (RA2, RA4 and the non-certified estate). By the same token these types of paternalistic relationships might make it difficult for workers to challenge managers.

At RA3, though the estate is family owned, an estate manager is employed and the owner does not stay on the farm. The estate also has multiple divisions and so it is the worker committee members who meet with the manager, rather than all workers directly. Although the estate manager commands a good respect and knows the workers by name, the relationship was not as strong as elsewhere (BS).

At the family-owned RA1, the owner does not speak the regional language and so the communication of management decisions is done through the estate manager (BS). In RA3, RA4, RA5 and RA6, the management has set up workers committees. The worker representatives are elected with elections held every two years. If the estate has more than one division, then representatives are elected from each of the divisions. The worker committee and the management meet at frequent intervals. The representatives inform the workers about the outcome of the meetings. The management and the workers in RA3, RA4, RA5 and RA6 said that the workers committee acts as a communication link between both the parties. However, according to the RA5 manager, this was not because of RA certification, but was part of their welfare initiatives (RA5), although the minutes were now recorded as a result of certification (BS).

For instance, in RA3, RA4, RA5 and RA6, awareness campaigns on appropriate waste disposal, which were begun as a result of RA certification, have been carried out through these committees (BS). Further, the worker committees have both male and female members. In all the estates, though the committees are there, the workers said that they can directly approach the management (mostly the estate manager) for any issue or problem (BS).

In RA4 a complaint register was maintained after certification, but was open for all to see and so was not used much. A complaint box has been introduced in which workers drop their complaints, which is thought to be a result of certification, and this box is opened every ten

days in the presence of workers and a management representative. In RA2, the manager and workers interviewed reported good relations between workers and management (with no complaints to the labour court or labour officer and the estate has not served notice to any worker since 1981-82 (BS).

In all the estates except for the non-certified estate workers reported a cordial relationship with management. They could meet with the manager relatively freely and discuss their problems with them and seek help for their financial problems when necessary.

The baseline survey found that the non-certified estate the owner commands a lot of respect amongst the workers, who said they could approach him directly. However, at the final survey, it was found that many of the problems that the workers mentioned in the baseline had worsened due to the financial tightening which the management has resorted to due to losses to the tune of Rs.50 lakhs (\$111111.1) in 2010-11. For instance, the workers wanted the management to pay for a vehicle, whenever a worker got injured or needed to go to the hospital. Secondly, workers needed large amounts of fuelwood for events such as marriages or funerals. The management had started to charge the workers market rates, whereas previously it had been provided for free. Thirdly, the management asked the workers to apply for leave when workers have to go and meet the insurance companies for the reimbursement; Fourthly, when the workers take a loan from the management to meet any crisis, the loan amount is recovered in full from their next month wages which causes severe hardship for the workers. One of the male participants in particular, had had a very stressful period as his wife fell sick and had to be operated upon. He had taken a loan from the management to meet this crisis, and the entire amount was deducted from his wages the next month. The non-certified estate's management, however, stated that it has incurred a huge loss and would have to tighten their spending. In other estates, workers also take loans from the management for educational, health and social purposes, but in all the cases, the practice has been to deduct the loan in equal monthly instalments over a few months rather than all at once.

In contrast, at RA3 the workers said that the management treats them very humanely. In the case of a death of a worker or worker's family in the estate, then the management provides a vehicle free of charge. In June, the management provides an advance to enable the workers to meet the school expenditure which is deducted from their monthly salary over the next few months.

RA5 has also introduced a grievances box. Workers can put their complaints with their name. The box is opened before the workers' representative every 14th day. The workers are not scared to voice their opinion or their issues. Before RA, RA5 had maintained a complaint register, but the workers used to be too scared to write anything before the manager. The RA5 management informed us that in the grievances box they had complaints about the maintenance of the houses, family problems and a request by a pregnant woman to allot a garden near her house.

4.4.2 Employment rights

While the Plantation Labour Act 1951 of India covers labour welfare legislation, the plantation sector is governed by various other regulations. These are: Contract Labour (Regulation and Abolition) Act, 1970, Employee's Provident Funds and Miscellaneous Provisions Act 1952; Industrial Disputes Act 1947; Industrial Employment (Standing Orders) Act, 1946; Maternity Benefit Act 1961; Minimum Wages Act 1948; Payment of Bonus Act 1965; Payment of Gratuity Act, 1972; Payment of Wages Act, 1936; Trade Unions Act 1926; Workmen Compensation Act 1923, which ensure the security, rights and welfare of the workers in the organized sector of the plantation industry.

The SAN standard refers to the labour contract in 5.4 and 5.6, and certain rights are protected under the law as explained above. However, temporary workers do not enjoy the same labour rights as permanent workers⁶⁷.

Overall, the majority of the workers on estates (both certified and non-certified) at the time of the baseline were employed on a permanent basis. With the exception of RA1 and RA6 which said that they employed temporary workers to the extent of 10% and 25% of the total workforce, all other certified estates had only permanent workers. At the non-certified estate we were given to understand by the management that all workers were permanent, but in the questionnaire survey 3 workers responded that they were employed on a temporary basis.

A comparison of the number of temporary workers before 2008 and in the baseline survey shows that the number of temporary employees with contract in the certified estates has remain unchanged while the number of workers who were temporary without contract has reduced from 16 to 7. In the case of the non-certified estate, the number of temporary workers with and without contract has reduced from 6 and 4 respectively before 2008 to 2 and 1 respectively in 2010. It is not clear if these changes can be attributed to RA certification as the law states that workers who have completed 440 days of service in two consecutive years (other than the list of holidays and Sundays) have to be made permanent⁶⁸ and other factors are at work such as labour shortages which can mean estate managers are keen to hang onto their workers.

The baseline survey found that there is provision in the Plantation Labour Act for social security. 12 % of the basic wage is deducted towards employees' contribution to the provident fund (PF). An equal contribution is made by employers also towards the PF. Both of these amounts vary whenever the basic wages are revised. This lump sum is provided to the workers on retirement. Workers can also take loans from this amount. There was no difference between the tea pluckers in non-certified and certified estate in terms of social security in the contract or in the contribution to social security. Similarly, there did not appear to have been any effect on other employment benefits, such as annual leave, sick leave and maternity benefits due to RA certification. Labour shortages are encouraging estates to extend the benefits enjoyed by permanent workers to temporary workers.

The light monitoring exercise found that except in RA1 and at the non-certified estate where there are still some temporary workers, at the other estates the management said that all the workers were permanent employees. Due to labour shortages, all the estates extend benefits such as provident fund, gratuity etc that are required under the Plantation Act to temporary workers in order to retain them.

The PLA provision for workers to become permanent after 440 days service is not strictly followed in all the estates. RA5 and RA6 offer permanent positions within six months and RA3 does so within a year. In RA3, a female factory worker said that she became a permanent employee after putting in 6 months of continuous service without availing of any leave.

⁶⁷The differences in the terms of employment between the temporary and permanent workers according to the non-certified estate are that: temporary workers are not eligible for sick leave or maternity leave; holiday wages and bonuses also are not available to them.

⁶⁸In RA7 the manager said because of the labour shortage workers who have worked for as low as three months have also been made permanent in their estate.

At RA7 we encountered some female workers who were paid Rs.150 for a day's work and who did not receive any benefits. However, they were included in the free lunch scheme at the estate. These female workers were both young and old, and came from a neighbouring village, approximately 4 or 5 kilometres away. We did not find this situation at any other estates, i.e. temporary workers with no contracts. RA standard 5.3 states that the farm must directly hire its workforce, except when a contractor is able to provide specialized or temporary services under the same environmental, social and labor conditions required by this standard. RA7 provides lunch to these workers also and pays Rs.150 per day, which is above the 138 Rs minimum wage, but does not offer them a contract or other benefits. Thus, these casual workers do not benefit from certification, although they are earning relatively good wages. Those working on a vegetable farm would earn Rs 300 to 400 per day as a casual worker, but those working on a construction project would earn between Rs 100 and 125.

In the final survey, managers at all the certified estates said that due to labour shortages and the need to ensure workers continue to work on the estate, they extend certain benefits to temporary workers, which are not required by law, such as the Providence Fund and bonuses. The management at RA1, RA2 and the non-certified estate said all the temporary workers enjoy all the benefits except paid and sick leave from the day he/she is inducted into the estate. There was also further discussion of the period worked by a temporary employee before becoming permanent (interview with the management, RA1, BS, LM, FS; RA2 and RA6, BS and FS). Management at RA5 and RA6 said the worker becomes a permanent employee within 3 months and they do not wait till the completion of the two year period for fear of losing the employee. Management of RA3 said workers are made permanent after a year. During the FGDs with men and women in RA5, we heard from the participants that they became permanent employee within or after 6 months. In contrast, a few male workers at the non-certified estate (men's FGD LM and FS), mentioned that they continue to be a temporary worker, even after being employed in the estate for more than 5 years and in some cases 8 years.

On a number of indicators relating to contract and employment conditions, the final survey data shows significant differences between the certified and non-certified estate, with workers at the certified estate in a better position. There are correlations between having a contract and performance on the other indicators (e.g. entitlements to paid annual leave).

The final survey data indicates that more workers on certified estates have **contracts** compared to those at the non-certified estate. A significantly smaller proportion of respondents at the estate without certification have contracts compared to the respondents at the certified estates (table 32). A significantly larger proportion of workers at the non-certified estate are casual workers compared to those on the certified estates.

No significant difference was found between the workers in the certified and non-certified estate, in terms of employees with permanent contracts, number of respondents who mentioned that social security is included in the current contract, workers and employees contribution to social security, membership status with the trade union, and duration (no. of weeks) entitlement to maternity/paternity leave (weeks) and other income benefits.

98 % of the workers said that social security is included in their employment contract. Hence, we conclude that the labour shortage issue has resulted in extending the social security to all the workers, though the leave benefits are restricted only to the permanent workers.

Table 32: Contractual and employment conditions for tea workers (2012)

	No certification	Certified	Sig
	25	26	
Year since respondent has been working at estate	1991	1992	ns
Employee has permanent contract (% respondents)	88%	96%	ns
Employee has temporary contract (% respondents)	0%	0%	ns
Employee has contract (permanent or temporary) (% respondents)	88%	97%	*
Employee is casual worker (temporary, no contract) (% respondents)	12%	3%	*
Social security included in current contract (% respondents)	96%	98%	ns
Current workers' contributions to social security - per month	263	296	ns
Current employers' contributions to social security - per month	263	295	ns
Current annual paid leave (% respondents)	80%	96%	***
Days of current annual paid leave (days)	13.6	14.3	*
Currently member of trade union (% respondents)	84%	81%	ns
Currently entitled to paid sick leave (% respondents)	68%	96%	***
Currently entitled to maternity/paternity leave (% respondents)	40%	79%	***
Currently entitled to maternity/ paternity leave - number of weeks	12	12	ns
Currently receiving other income benefits (% respondents)	100%	97%	ns

Sig = Significance of differences between groups (based on T-test and Mann-Whitney test): ns = not significant, *P≤0.05, **P≤0.01, *** P≤ 0.001

However, statistically significant differences exist between the workers in the certified and non-certified estates who are entitled to maternity leave (perhaps due to differences in ages of workers in relation to reproduction and whether workers avail themselves of maternity leave). Similarly since the respondents included temporary workers who are not entitled to paid sick leave as indicated by the percentage of respondents who are casual workers (temporary and no contract) - 12 % in non-certified and 3 % in certified - there is a statistically significant difference between the non-certified and certified estate in terms of workers entitled to paid sick leave. The casual workers interviewed at the certified estate work for 150Rs per day and are included in the free lunch scheme at the estate. They are invited to work on the estate when more plucking capacity is needed, but they do not have temporary contracts. The casual workers we interviewed were both young and old, and came from a neighbouring village.

There are uniform wage levels for everyone, with incentives based on productivity. We found no influence of the standards over this, because this is a sector wide agreement between government, the estates and the unions. In terms of freedom from discrimination, the Equal Remuneration Act is in existence and so the sustainability standards have not made any difference. Freedom to associate and collective bargaining is also not shaped by the standards, because of the historical presence of trade unions and the tripartite agreement.

- In terms of **maternity/paternity** leave a significantly smaller proportion of respondents at the non-certified estate are entitled to maternity/paternity leave than respondents at certified estates (Note: Entitlement to maternity/paternity leave is correlated with having a contract.) At the non-certified estate, the female workers (women's FGD) said that temporary female workers do not get maternity benefit. The

final survey results indicate that workers at certified estates report an improvement in maternity/paternity leave whereas workers at the non-certified estate report a slight deterioration; this difference is significant. The final survey results show that a significantly smaller proportion of non-certified estate respondents have **paid sick leave** than respondents at certified estates. (Note: Entitlement to paid sick leave is highly correlated with having a contract.)

- For **annual leave entitlements** in the final survey a significantly smaller proportion of respondents at the estate without certification are entitled to paid annual leave than respondents at certified estates. (Note: Entitlement to annual paid leave is highly correlated with having a contract).
- In terms of **social security and pension** the baseline survey found that 12 % of the basic wage is deducted towards employees' contribution to provident fund (PF). An equal contribution is made by employers also towards the PF. Both of these amounts vary whenever the basic wages are revised. This lump sum is provided to the workers on retirement. Workers can also take loans from this amount⁶⁹.
- There has been a positive and statistically significant change in the **workers and employers contribution to social security per month** for all workers at certified estates and non-certified estates. For the tea pickers this difference is not significant.
- 94 and 98 % of the workers in the entire sample said that **social security** was included in the past and present respectively. Interestingly, the difference in the percentage of workers reporting social security inclusion in the past between the non-certified and certified is positive and statistically significant, though currently there is no difference.
- The management of non-certified and RA6 observed that practically, there is no difference between permanent employees and the temporary employees as both enjoy the provident fund which earlier was not provided to the temporary employees. Though this is a strategy adopted by the estate to attract workers to work in the plantation, perhaps because of this, currently there is no difference between the workers with social security in the non-certified and certified estate. The management of the non-certified estate said that they had started extending the benefit to temporary workers to retain people to work in the garden. We could not explain the statistically significant difference in the employers' and the workers' contributions between the non-certified and certified.
- There is no difference between the tea pluckers in non-certified and certified estates in terms of social security in the contract or in the contribution to social security⁷⁰. In the case of tea pluckers in the non-certified and certified estates, there is no difference between them in terms of the social security extended.

The questionnaire included specific questions on **worker perceptions of changes in employment conditions** in the previous two years. They were asked to rank on a scale where 1 and 2 indicated a little and big improvement, 0 no change and -1 and -2 indicated a little and

⁶⁹We did come across this in two men (FGD RA6) where the men had taken loan from PF to buy a piece of land and in other to pay for the education of his child. In RA5 one of the participants in the women's FGD mentioned that her husband took voluntary retirement to avail PF to provide for their child's education.

⁷⁰Gratuity is available only if a person has put in 5 years of service as a permanent employee. Workers get a gratuity when they leave, which is equal to: 15 days of final salary x number of years worked (RA3). The government has also set a maximum pension payment. The maximum is something like Rs 6,500/month. A worker might get Rs1000/month as pension payment. The permanent workers are also eligible for 14 days of sick leave. Adhering to the government norms for paid leave, estates pay bus fare from the estate to the place of origin.

big deterioration respectively. Workers from both the non-certified and certified estates found no change in working hours, pension, leave and maternity leave. In none of the items did the workers observe big improvement.

4.4.3 Freedom of Association

Trade unions have been prevalent in the plantations for many years. Freedom to join a trade union is a labour right under the Plantation Labour Act. Trade unions have been engaged in wage negotiations⁷¹. There is a significant difference in the percentage of membership with the union between certified and non-certified estate both for all the workers as well as the tea pluckers⁷².

The SAN standard stipulates that 'Workers may organize and associate freely, especially for negotiating working conditions', but it is not clear if certified estate workers are more unionized than non-certified ones *because* of RA certification or for other reasons. Plantation workers in South India are more organized and members of the TU than plantation workers elsewhere⁷³. The GOI report (2009) notes, for example, that 59% of the women employed in the plantation sector are members of the trade union. All the estates have trade unions within the estate and we did talk to some of the members of TU in the FGDs (Men's FGD, RA1 BS and RA4, BS and LM). Most of the men and women that we interacted with were members of the TU.

The trade union charges a membership fee of Rs. 60 every year, but a few women said that they attend the TU meetings, which is mostly regarded as male territory (women's FGD at RA3 and non-cert, LM). But none of the workers/management of the estates mentioned the need for bringing in the TU leaders from outside to meet their grievances/requirements within the estate.

Overall membership in the union has increased from 78 % (3 years ago) to 81% during the baseline. This may be because of the wage hike achieved in the last round of collective bargaining, which may have convinced more workers that the union can be effective.

The non-certified estate owner said that mobile phones have made communications faster since whatever happens in other estates, the trade unions immediately pass it on to workers in all the estates.⁷⁴

⁷¹Membership in the trade union is voluntary. A worker becomes member by paying a small membership fee

⁷²We observed from the HH interviews and FGDs those workers participate in the election of office bearers of trade union. Two workers were also holding office positions in the trade union (RA1 male FGD, RA6 male HH interview). Most of the workers with whom we had interacted during the FGD or the individual interview were members of the trade union. Exceptions were there (at HH interview female RA1 and male, in RA3 and non-certified and all the men participants in the FGD at RA7). By and large, INTUC is present in all the estates, while in RA3, RA6 and RA7 union that has support from the Dravida MunnetraKazhagam (DMK), or All India Anna DravidaMunnetraKazhagam (AIADMK) is also present. Only in one estate, Communist Party Marxist was also operating. The prevailing wage agreement between the union and the estates have been accepted by INTUC, DMK and) or both were AIADMK, but the CPM has contented it in the court.

⁷³Hayami and Damodaran (2004), Towards an alternative agrarian reform: Tea plantations in South India, Economic and Political Weekly, Vol.39, No.36, pp 3993-3997.

⁷⁴RA2 manager said that since direct access to the management is always there, though trade union is there, workers approach him directly. Because of this, no notice has been served to any workers so far. The individual worker interviews in RA2 said that the trade union here works for the road maintenance, road lights and function arrangements within the estate etc.

During a management interview (baseline RA7) when the bonus level was very low as the company was incurring losses due to conversion from inorganic to organic cultivation, union leaders from outside came and discussed with the management. The union agreed to a lower bonus after the visit, having seen the estate's financial position.

In RA3, male participants at the FGD (LM) said that three years back when the wage level was at Rs.96, they sought an agreement with the management via the union. In the FGDs and the household case study interviews workers said they could approach the management of the estates either directly or through the worker. They said since then there has been no problem with the management to seek the union's intervention, but three years back they could have lost their jobs.

In the FGDs and the household case study interviews workers said they could approach the management of the estates either directly or through the worker committee representatives. On many of the estates relations between management and workers appear to be fairly harmonious, at least on the surface, although the relationships appear to have the characteristics of patron-client relations⁷⁵.

During the light monitoring exercise it was found that workers pay Rs.120 (\$2.7) a year to become a member of the trade union (TU). Membership is open to all the workers by law. While the Indian Nationalist Trade Union Congress (INTUC) has presence in all the estates, only in RA1 and RA3 we heard that trade unions were present with political leanings. Interestingly, while all the males who participated in the FGDs are members of the INTUC, in RA3 and non-certified we learnt that the females with whom we had interacted are not members of the union. When probed, whether they have been prevented by anybody to attend the TU meetings, the women responded saying traditionally, it has been only men who were actively employed in the TU activities and nobody had prevented them from participating in the TU activities.

In RA3 the male workers said before the present management came in 2006, there were occasions when they had brought the TU members to negotiate with the management on bonus issues. However, the new management cares very well for the workers and hence, they had not had an occasion to bring in the union for any kind of meetings with the management. Also, they could approach the management through the worker representatives.

In RA4, one of the male workers who attended the FGD is the TU leader of the workers. He has been selected by the workers and has been holding the position for the past 8 years. He said, if the fellow workers were unhappy with him, they would have elected another person a long back. Since he has been continuing for some years, he believes that the workers recognise his work. As a leader he had brought to the notice of the management, the bad quality of the rice that was distributed through the public distribution system and through the management ensured that good quality rice was distributed to the workers.

In the non-certified, the male workers said that through their TU representatives within the estate they have been talking to the management to repair their houses, provide better wiring in the houses, etc.

⁷⁵In RA3 and RA5, the managers observed that workers seek managers' help in solving their personal and domestic problems also.

In the final survey, it emerged that 81 per cent of the workers are members with the trade unions. There is significant difference between the groups as the percentage of workers with the trade union is 84, 91, 91 and 96 respectively for the non-certified, RA, RA/ETP, RA/ETP/FT certified groups. However, when we consider the certified and non-certified alone, the membership percentage is 81 and 84 and the difference is not statistically significant.

4.4.4 Freedom of Labour

There are no child labour issues in Tamil Nadu tea estate production. The working population is ageing, with an average age of 42.2 (FS). There is therefore no risk of child labour on these estates. There was no mention of women spouses being forced to work on the estate either by managers or workers.

4.4.5 Freedom from Discrimination

Access to promotion is an aspect of empowerment and is a route to higher incomes and is therefore important in identifying impact pathways. If there is gender-differentiation, this is also relevant in relation to observance of non-discrimination criteria in the PLA and in the RA standards. The baseline survey found that: According to both certified and non-certified estate managers promotion opportunities are not common (often only when someone in a position retires or dies). There are a limited number of women in supervisory roles.⁷⁶ Promotion tends to require certain levels of education^{77,78}.

During the light monitoring exercise promotional opportunities for workers were discussed. It seemed that there were limited opportunities and there appeared to be no set norms as a person moves from labourer to supervisor – this occurs only if there is a vacancy due to retirement or any other cause (Management interviews in all the estates). A person with sufficient experience may get a supervisor position, but such opportunities are limited in the estates.

During the light monitoring exercise one female factory interviewee at RA3 mentioned that she felt comfortable to work in the factory because her fellow male and female workers knew her family and treated her with affection and it was easy to learn the job also quickly because of this advantage.

All the women who participated in the FGDs in the different estates during the light monitoring exercise and in the final survey (RA1, RA3, RA6) uniformly mentioned that they did not face

⁷⁶We met two women who were promoted as field supervisors from their earlier position as pluckers (RA6, HH interview female, RA7 women's FGD). One of the women had studied up to 12th standard. She faced the interview and got selected as the supervisor. As supervisor her salary is higher than pluckers and she gets a bigger house with six rooms. The other woman is illiterate but apparently efficient and was promoted as supervisor (RA7, women's FGD). She noted that as supervisor, she gets an incentive of Rs. 10 if the collective average plucking exceeds 30 kilos and Rs. 20 if it exceeds 40 kilos and so on. For every 40 pluckers there is a supervisor (HH interview RA6, and FGD women RA7).

⁷⁷Apparently, we learnt from the management of RA5 that for promoting a person from the plucker to the field supervisor level, they look for whether the person has completed a minimum of five years of service in the estate, have education at least up to 12th standard and above 35 years. Education is ensured since they have started using easy-weigh machine in each of the weighing posts which is linked to the computer, and hence, the person should have some literacy to handle the computers.

⁷⁸We also met a man who participated in the men's FGD in RA2 who was earlier a sprayer and after he undertook the training at UPASI on pesticides he was promoted as supervisor. In RA4 (HH interview male) was not aware of the promotion policies

any gender discrimination or any other kind of problem as a female working under male supervisors.

4.4.6 Workers' knowledge of standards

Workers' knowledge of standards was explored to better understand whether workers are able to use the standards in order to claim their rights. Worker knowledge of the standards was relatively limited in the baseline survey: some workers have received training on environmental management issues at the estate and understood some of the reasons for improving ecosystem stewardship, but knew little of the RA certification per se despite signage around the estate and we observed on-going training. On three or four estates more workers appeared to know about RA certification and appreciated some of the improvements (e.g. hygiene and overall cleanliness of the estate). Sprayers were one group that were more aware of the standards, and this is because of the requirement to wear personal protective equipment (PPE). During our visits in 2011 and 2012 awareness amongst workers on the RA certified estates was associated with the overall cleanliness of the estate, waste management practices, protection of wildlife and use of PPE by sprayers and factory workers. The sprayers were more aware of the type of pesticides being used after the RA standards and the need for buffer zones.

Some direct observations were made of efforts on the part of estate managers to communicate to workers information of relevance to the SAN standards. It was observed in RA1, RA3 and RA6, the estates have put up the SAN standards in bold letters in English and the regional language near the office of the administration. They also displayed the signboards saying that the monthly wages are given on 7th of every month and to the effect that there is no child labour employed in the estate. In RA3 and RA6 management reported holding awareness-raising workshops and meetings on RA certification.

In the Light Monitoring Survey both men and women workers at RA1, RA2, RA4 and RA5 were aware of RA certification and also appreciated the fact that because of certification, the hygiene and overall cleanliness of the estate had improved. But in RA3 while male workers knew about certification, the female pluckers knew only about the Golden Leaf Award won by their estate. They felt the cleanliness and hygiene were always there in the estate.

During the Final Survey, we did not find any difference in the awareness situation, particularly among women, it was mixed. It should be mentioned that while a few of the relatively older women surprised their younger colleagues by attributing the positive changes in cleanliness and waste management to RFA (RA1, RA2, and RA4), the younger women could not immediately recall the 'name of the standard. Male participants in the FGDs in all the estates, particularly the sprayers, were aware of the RA standards, mainly because of the requirement to wear personal protective equipment (PPE).

One of the RA certified estates also obtained Fairtrade certification after the baseline visit. During the light monitoring workers at this estate had knowledge of Fairtrade, of the Joint Management Committee (JMC), of the election process by which workers are elected to the JMC and of the procedure for selecting projects for premium funds. Workers attended discussions of the premium funds and the JMC members explained to the wider group what Fairtrade is and how it works. During the final survey we met a different set of female workers, from the manner in which they articulated the usefulness of premium expenditure projects and the suggestions for the future, we could understand the on-going dialogue process between JMC and the workers.

4.4.7 Transparency and fairness in weighing of green leaf

During the light monitoring RA3 and RA5 managers reported that they had introduced a handheld electronic device for weighing the leaves collected and this information is brought in a memory drive and fed to the computer to calculate the pluckers' incentives which ensure maximum transparency. We did not ask about whether these had been introduced elsewhere.

During the final survey, we got to see the actual working of this in RA1 (female FGDs). The women brought their collection to the weighing shed, where the supervisor was waiting with the device. The woman states her employment number as her harvest is being weighed. Once the supervisor clicks on the number, the name of the worker appears along with the number and in the space for the morning/afternoon shift, the supervisor enters the quantity of leaves plucked by that particular worker. This data is fed to the computer in the office and the plucking incentives are calculated and added to the monthly salary. Workers could gauge approximately the weight of their harvest, even before it is weighed on the weighing scale. In the non-certified, we saw the device with the manager, who showed us the various codes that were stored in the device for the different types of workers.

4.4.8 Occupational health and safety

The most common occupational health hazards in the tea estate and tea factory are:

- pruning accidents
- constant exposure to all types of climate (particularly for the pluckers)
- exposure to pesticides while mixing and spraying
- exposure to huge noise of the machines and dust in the factory (according to FGDs with workers in all the estates and household interviews in all the estates).

To protect the workers from these risks, as well as to ensure the cleanliness of the product (particularly for the factory workers), safety gear has been provided according to the managers interviewed).

In the baseline survey Rainforest Alliance was found to have increased occupational health support measures in terms of provision of **new and better quality protective gear, phasing out of hazardous pesticides, and provision of facilities for washing particularly for sprayers** (qualitative data from household interviews, focus group discussions and management interviews). Here we observe the difference between the certified and non-certified estate also indicating the better provision of occupational support measures in the certified estates after RA.

The final survey indicates that a significant larger proportion of workers at the certified estates reported that they experienced positive changes in occupational health than workers at non-certified estates. A significant larger proportion of workers at the certified estates also reported that they received new types of protective gear than workers at non-certified estates. A significant larger proportion of workers at the certified estates reported that they received health education than workers at non-certified estates.

Women and men have received more protective gear and new types of equipment since 2008. Women respondents were 100% positive that they had experienced positive changes in terms of the phasing out of hazardous type of pesticides and facilities for washing after spraying pesticides in the entire sample and in the RA certified estate. We see the difference between the certified estates and non-certified estate on the provision of more and new types of protective gear which is positive and highly significant which indicates the clear role of RA. At all the estates (except for RA7 which does not have a factory), the male workers were seen in a khaki uniform by the research team (BS).

RA2 and RA5 managers say they have spent 2.2 and 4.4 per cent of their overall RA expenditure respectively on providing safety gear for the workers (BS). All the RA estates observed that the amount of protective gear used in pesticide application has increased significantly since RA certification. Most of the managers said that at the end of each day, the workers wash the protective gear in designated places where soak pits are located. The RA5 manager said they provide training on occupational health hazards, fire drills and first aid training to workers (BS).

At the non-certified estate, the men's FGD participants said that they washed their coat every week. After spraying they went home and had shower. The management of the non-certified estate provides one set of protective gear every year or alternate years depending on the damage of the coat (BS).

In phasing out hazardous pesticides there is no difference between the non-certified estate and the certified estates. The non-certified manager reported that following their participation in the ETP some years ago, they had phased out these hazardous pesticides to improve the tea quality. The qualitative research with workers also indicates these changes have occurred. For example, workers at the non-certified estate mentioned the use of pesticides with green and blue symbols and not the previously used red and yellow marked pesticides which are hazardous (Mens FGD at non-certified, baseline).

The factory worker engaged in processing and sifting wears an apron, face mask and a cap now (RA1, female HH interview) and she showed us the locker which is at the entrance of the factory where her protective gear is kept and which are worn when she enters the factory premises after washing her hands and legs.

Male workers at RA4 (FGD) said that they have always used safety gear, but now they get new types of protective gear and if something is damaged, it is replaced immediately. These participants did not know why the company has made these efforts (they did not link this with RA certification). They thought that if they are healthy and can work properly the company will prosper and the profits will be shared with them. On pesticides these men said that *"after the spraying, a yellow board is kept announcing that nobody should enter the field for 15 days. We don't spray near office, water sources, river, housing colony and school. These are called buffer zones"*. Again these measures were not associated in the worker's minds with RA, but were said to be a requirement for the safety of the workers and their children. The machine operators are provided with ear plugs, face masks, gloves, cap and foot wear (individual interview, RA4 male). Factory workers also wash their hands and feet before entering the factory and each time they use the toilet (HH interview RA4 male, RA1 female). RA4 management has also installed a blow dryer in the washrooms (HH interview RA4, male).

Before RA certification **buffer zones** (restricted areas) were not maintained and spraying near human dwellings, water bodies etc was not uncommon (Men's FGD RA3). But after RA certification buffer zones have been created near the factory, houses, schools, forest, water bodies etc in all the estates⁷⁹ as per the norms provided by RA standards. Participants in the men's and women's FGD at RA3 mentioned that sprayers do not spray near these buffer zones. The women who participated in the FGD and HH interview in RA3 also said that they are told about the garden in which pesticides have been sprayed and are not allowed to work for 15

⁷⁹While driving inside the RA estates, we did notice the big sign boards near factory, office, crèche, saying a particular area is a buffer zone.

days.⁸⁰ There are sign boards also kept indicating the spray area. Big signboards in yellow are used to inform the workers and others about the re-entry restriction period which we observed in RA4. Poinsettia has been planted to prevent the spray drift to buffer zone (RA5, RA2, RA3 and RA6).

The participants in a RA3 men's FGD said that before RA, *"we didn't use all of the protective gear and spraying used to be very troublesome. Our eyes used to burn, which prevented them from closing them and sleeping at night. We experienced a loss of appetite, stomach pain and gastric problems. We had to visit the hospital several times, but now we don't. Now we feel better"*. Earlier mixing of the chemicals was done with hands and the person got skin diseases. Now they use the relevant protective gear to mix the pesticides and if the protective gear is damaged they do not mix the chemicals. Now after spraying the workers have to go to the wash room to shower and change into our normal clothes before going home.

The men's FGD at RA6, have observed that after RA, their protective gear is changed immediately if any damage is found and each sprayer has a spare set of protective gear.

We observed that the women who participated in the FGD in RA2 and the woman who participated in the HH interview in RA1 (who were working in the factory) came in their protective gear when they came to talk to us. Both men and women change to their protective gear once they come to the factory. Each time they visit the toilet they wash their hands and blow dry (RA4, HH interview male).

In the garden, the women pluckers in RA3, RA7 and at the non-certified estate were seen wearing a plastic wrap to protect their sarees from getting torn (provided by the estate) and shoes (which they had bought themselves).

At the non-certified estate participants in the men's and women's FGD said that though there are no signboards kept, the supervisor informs them of gardens where spray has taken place and does not allocate that garden for plucking for 10-15 days. The men in the male workers' FGD said that they washed their coat every week. After spraying they went home and had shower. The management provides one set of protective gear every year or alternate years depending on the damage of the coat. There is difference between the PPE provided in the certified estate and the non-certified estate. While the certified estates provided gloves, face mask and boots etc for the spraying workers, the non-certified provided just the coat.

On the provision of health education especially HIV-AIDS, there is no difference between the non-certified and certified estate.

All the women in the combined sample as well as in the certified and non-certified estate have experienced positive changes in occupational health support measures, though the percentage for the non-certified is less than that of the certified estate.

In the light monitoring exercise in all the RA certified estates, the pesticide sprayers and the factory workers also reported that they wear the personal protective gear (PPG) routinely on their own accord without anybody reminding them about it. It is not possible for the research team to verify whether this is the case or whether workers were being told to say this – but

⁸⁰The non-certified owner said that the maximum residue limit would reduce after 15-21 days.

the research team did feel that the workers were fairly confident and seemed relatively willing to speak out. Though we could not see the workers wearing the PPE and spraying pesticides in any of the estates during our visits, yet we saw in RA2 during the LM the chemical storage room where only the minimal quantities of chemical containers were kept with appropriate signage and the washrooms. In RA7, the field supervisor showed us the washrooms near the administrative office and the soakpits behind the workers housing during the Final Survey.

In RA2, the female workers said that they experience pain in their shoulder because of handling of the shears, but are given medicines by the nurse at the dispensary when they need them. In RA7 also during the Baseline, relatively older women complained of the shoulder pain.

The pesticide sprayers at RA2 also said that earlier they used to carry a weight of about 20kg on their back to spray. Now they use a big pipe which weighs about 2 kilos, which reduces their burden, but this appears to have occurred as a result of mechanisation of the pesticide spray operation rather than due to certification.

Management of RA4 mentioned that the amendment made to the Plantation Labour Act (PLA) Chapter IV A (18th May 2010) which mentions provision of PPG to the workers, safe handling of chemicals and wash facilities for workers handling the chemicals.

In RA3, (LM, men's FGD) the workers said, they do not go to work in other estates because these estates do not provide the PPG and it would affect their health to work in such conditions. These workers wondered why such measures were not introduced before RA certification. If such safety measures existed earlier, perhaps they would have had still better health.

The RA2 manager said RA rule 6.1 talks about the critical potential hazard prevention measures. So they conducted the energy audit in 2011 and spent Rs.5,000,000 (US \$111,111.11) in making the factory fire hazard proof. It requires very little in maintenance costs after the initial investment has been made.

According to the RA4 manager, RA does not include specific criteria relating to health of the workers. But the estates have anyway started providing medical tests for HIV and TB to all the workers. The nurse at RA4 said that the blood samples are sent to National Institute of immunology for HIV/AIDS test and they would get the results shortly. After RA, every year, for the factory workers, tests for skin infection are carried out. Blood tests for the entire workforce are carried out. Women are screened for breast cancer. When a woman worker was diagnosed with cancer, the management bore the cost of the treatment (LM RA4).

All the estates have a female nurse as 70% of the workforce comprises of women. Except for RA3 which has a hospital, all the other estates have a dispensary and the doctor visits three times in a week. All the RA estates conduct annual eye check-ups for the drivers.

All the RA estates also carry out the specific blood test for the sanitary and the pesticide sprayers which costs Rs.400 (\$8.88) per person.

RA4 said that it has also put the fire system in place and fire alarm in different places is a legal requirement and the workers are trained in fire safety measures and emergency exits are marked in different colours in the factory.

RA1 sets aside Rs150,000 (\$3333.3) for the hospital and has spent nearly Rs.95000 (\$2111) till the end of February. The dispensary has two staff. Rs.178,500 (\$3966.6) was paid toward sickness allowances and workmen's compensation. There is no other coverage.

According to RA3 and RA7, the number of person days lost has been reduced due to the RA measures. The RA3 manager said they have reduced the number of days lost to ill health by 30%. The situation in RA7 appears to be different. The management of RA7 said though PPG has been provided to the workers, the workers do not wear it. Last time during the RA inspection, the auditors saw one person taking the chemical to carry it to his house to be used in the field the next day, which is a violation of the RA standards. This reduced the compliance rate.

The RA7 owner appears to have tried a number of strategies with his workforce to improve their attitude towards work. He had even organised a yoga class for about 21 days by a reputed organisation. But the efforts according to him all have been from the management and the workers do not reciprocate.

The non-certified estate said that while the dispensary took care of the minor illnesses, major illnesses are referred to the government hospital. He brought in medical insurance, wherein the sick leave pay would be paid as the premium, but after two years. A few workers did not pay the premium after two years, and because of the break in paying the premium, now it is difficult to claim when they actually needed when there was an accident. In one case where the worker had paid the premium, his wife benefited because she underwent a uterus removal surgery. Out of the Rs.12000 he spent, he got Rs. 8000 reimbursed. According to him, workers want to pay premium only when it is favourable to them.

Management of RA3 (LM) said now the workers are very vigilant about safety measures. If, for example, somebody is seen standing at the back of the truck that goes around the estate in collecting the leaves, the matter is immediately brought to the notice of the supervisor. Management of RA3 says there are risks in the job like pruning, working at heights. In providing PPG, there was no direct assistance from RA but through Unilever they got assistance (in the form of premium).

RA3 has a hospital. A doctor visits every day. In the hospital, including the doctor, there are two nurses, a midwife and a helper. In one unit of RA3 there is a dispensary. The hospital in RA3 is utilised by the neighbourhood community also. Eye camps, awareness program, screening for breast cancer, AIDS, TB are all done, not as a discriminatory measure but as a protective step for the workers. In all the RA certified estates, the workers said that the supervisor carries with him/her the first aid kit which is used in case of any illness, accidents in the work place.

A major improvement seen by the workers is in the quality of drinking water. Chlorinated water is provided by all the estates. Chlorination is done manually in all the estates except for RA5 where an automatic chlorination unit has been installed. Management of RA3 said 25 water samples are analysed every three months, which costs Rs. 2000 per sample.

At the non-certified estate, the workers said the water is very good from the stream water and is as good the bottled water that is sold in the market.

RA1 has incurred expenses related to replacing glasses by poly-carbonated material to cover the tube lights and realigning of the machinery in the 2010-11 fiscal year to reduce the hazards

in the factory which is more of HACCP requirement. We saw similar changes in the factory of RA4 (LM).

4.5 Health impacts

The baseline survey found that the reported changes in health of the workers at the four categories of estates are significantly different from each other. Workers at the non-certified estate report a slight deterioration in health which is significantly different from the improvement in health reported by workers at the certified estates

In the entire sample 54% of the female workers and 54% of the male workers said that they have experienced positive changes in their health. The corresponding percentage for the certified estates is 56% and 58% respectively. For the non-certified, the percentage drops to 40 % and 13% for females and males respectively.

For those workers who have experienced positive health changes they reported fewer days off work due to ill health and said they were able to work longer hours and were also feeling stronger and healthier.

This leads us to the conclusion that RA does have a direct health impact on women and men, although the difference is not statistically significant.

Nevertheless, in the certified estates, in spite of all the females saying that healthcare services have improved, only 71% of the females have said that they spent less money on health care, which is attributed to the better occupational health support measures and nutrition.

The data suggests that RA certification has not had statistically significant impacts in the study period upon:

- women's or men's employment
- the number of meals, type and quantity and the nutritional intake of food consumed
- by men and women
- annual income earned by women. The difference in the annual income earned by
- workers in certified and non-certified estates is positive and the difference is significant.

The difference in the annual income earned by tea pluckers in the certified and noncertified is also positive and statistically significant. This indicates that the workers in the certified estates earn more than workers in the non-certified estate, but this is thought due to the fact that some of the RA estates are higher yielding and thus workers can earn more.

4.6 Access to services

This section explores the changes made in access to services by certified estates and the role, if any, of the standards in driving these changes.

4.6.1 Training

Changes in access to training do not necessarily indicate a poverty impact. Instead it represents an output which could eventually lead to poverty impact. However, in the 'Fair treatment of workers' element of the SAN standard this does indicate that there should not be any discrimination (this is covered by the PLA Act) and so a gender disaggregation of the data might indicate that if there have been changes since certification on certified estates or a difference between the certified and non-certified estates then this would signify a) observance with the law and/or b) an impact of RA.

Generally speaking pluckers do not receive much training in their work and have to learn on the job. Factory workers might receive more training. Training for those working in the fields is not particularly in-depth⁸¹. The management of all the certified estates said that after RA, they provided training to workers particularly male workers in safe handling of chemicals.

The female participants in RA3 (FGD) said they were briefed about the importance of environment and maintaining ecosystems by the management and the workers committee after they got the certificate. The male participants in RA3 (FGD) said that they use the relevant protective gear to mix pesticides and have been trained in its' use. These men said that before RA mixing of chemicals was done without protective gear and that they got skin diseases.

The baseline questionnaire data shows high significance in terms of training education for workers and access to information. Though the scores for training education and access to information is less than 1 and marginally higher than 1 respectively it is interesting to see that the difference between the certified and non-certified is highly significant on these two parameters.

The light monitoring exercise found that factory workers (who are mainly male) receive more training generally speaking compared to tea pluckers, who are mainly women. Tea plucking, in which women predominate, is not an activity requiring high levels of skill. RA certification has increased training on the safe handling of chemicals, and this is directed mainly to men who do the spraying. In some cases women received training on ecosystem management by management and the worker committees. Training in prevention of fire and fire drill is again provided in all the estates with factory and aimed at factory workers.

RA3 said lots of training has been provided to the workers for maintaining hygiene, reporting sexual harassment, and they have also instituted grievance cell. Fire drill training is provided which was also reported by the RA 3 factory workers. RA3 said training and documentation and environmental awareness is because of RA certification. During the working hours, every month, couple of hours, workers are trained on various aspects. A female worker working in the RA3 factory also confirmed this and also mentioned about the fire safety drill conducted in the factory a week back.

At RA4, the women said that when they were new to the plucking job, their seniors taught them the type of leaves to be plucked. In RA1, the men said they learnt the job from their seniors. In the case of RA7 which supplies to RA5, RA5 has provided training for workers in RA7 on hygiene, waste management and pesticide management. The RA5 provides a list containing the monthly schedule which is adhered to by RA7. There are 45 records to be maintained by RA7 which is checked by RA5 every 15 days or 30 days. Final survey results found that workers on certified estates report a significantly larger improvement in training than workers at the non-certified estate.

⁸¹The pluckers do not have any specific training except in handling the shears which comes with practice (RA1, women's FGD). In RA4 participants said that they were given training for two months in pruning (women's FGD). For the factory workers the senior workers provide training in handling the machineoperation (HH interview male, RA2). Estates also provide training in fire drill, safety measures (RA6).

On the tea estates the majority of workers are women and they are engaged in plucking. Male workers are employed in the factory to do the tea processing related work and in the estate to do the maintenance of the tea bushes which includes pruning, fertilizer and pesticide spraying, replanting and so on. When required, these workers are also called to work in the tea gardens. Plucking is done by hand in some estates (RA1, RA4) during most of the days and during the season all the estates use shears for harvesting. RA7 was seen demonstrating a plucking machine. This machine can be handled with a help of 3 or 4 people. Use of this machine is also learnt on the job. While tea plucking does not require training, the male workers are basically provided on the job training in pruning, chemical applications and handling and in operating the factory machines.

The workers also said that they do not have time to learn any activity besides their usual work because they work from 8 am to 5 pm with an hour of lunch break at 1 pm. The Fairtrade certified estate has begun a skills development programme for the children of the workers, which is open for all. In collaboration with the Ministry of Human Resource Development, Government of India, this training centre teaches, tailoring, sewing, woollen knitting, basket weaving, cellphone repair, and training in soft skills etc.

4.6.2 Access to information

Final survey results indicate that workers at certified estates report a significantly larger improvement in access to information than workers at the non-certified estate.

4.6.3 Housing

All the tea estates involved in the study provide free housing for the workers which are uniform in size for all workers, (as set out in the PLA) except the supervisor who gets an extra room. All workers, including temporary workers, are provided with housing.

After Rainforest Alliance certification all the estates have started renovating worker housing, conducting this in a phased process to spread the costs. All the certified estates said that they will be able to complete housing renovations by 2013.

The baseline survey found significant and positive differences between worker satisfaction with housing provided by the certified and non-certified estate. This demonstrates that the certified estates provide better facilities. Comparing the results of the baseline survey on levels of satisfaction with services and the changes workers have observed since 2008, it is clear that certified estates have provided better services since 2008, but many of these services such as schools are required under the PLA, with some improvements may have been made as a result of certification. Final survey results found that workers at certified estates report a significantly larger improvement in housing than workers at the non-certified estate. The final survey also shows that workers at the certified estates are significantly more satisfied with their housing than workers at the non-certified estate.



Worker housing at the non-certified estate

Workers on RA estates reported investment in more leak proof roofing for worker houses and improvements in electrical wiring increasing communications and entertainment for workers. More individual toilets have been provided on RA estates – beyond the basic minimum requirements of the PLA and soakpits have been constructed at all the RA estates to filter sewage. Purified water is more readily available as RA estates have invested in chlorination.

For example,

- during the LM the RA2 management reported they had provided a cement floor in workers' residences and better housing. The wooden roof had been removed in all the repaired houses. Management estimated they had spent Rs 125,000 (2777.77\$) per unit for housing repairs (light monitoring). At RA2 the management has changed the roof of the workers' housing, as well as the electrical wires (FS).
- At RA3, electrical wires have been changed. Wherever possible the toilets have been provided within the house and in others due to space constraints, individual toilets have been built just outside each of the house and the workers have been asked to maintain these.
- At RA2, RA4 and RA5 roofing has been improved in places with zinc roof tiles, concrete flooring has been provided and re-plastering of the walls was also undertaken. The wiring done in the '70s could support only minimal lights. Now to accommodate more electrical gadgets, more plug points have been provided. There has also been a slow shift from firewood to gas is also happening and the kitchen is being remodelled to facilitate this (RA2, RA4, RA5) (LM).
- An open veranda has been converted as a room in RA1, RA4 and RA5 (LM).
- RA3 has a total of 750 houses on the estate, out of which 60 per cent have been occupied. 40 houses have been completely done which has cost Rs.1,500,000 (33333.3\$). Each house costs Rs.15000-Rs.70,000 (\$333.3 to \$1555.5) depending on the damage. For instance, though electricity was already there, wiring had to be re-done to support modern gadgets of which ownership is increasing amongst workers (LM).
- RA4 has a total of 172 houses on the estate, out of which 30 houses have been completed and 35-40 houses will be done in a year. They can work only from February to September. After this the rainy season starts, hence, they have to stop the work. RA4 quoted a cost of Rs 60-70,000 per house (1555 US \$ per unit) (LM).
- In RA5, there are 240 houses. Rs. 54 lakhs (\$120000) has been spent on housing and other improvements (LM).
- The management of RA7 intends to improve the workers housing this year also and is considering covering the roof with asbestos. When asked if this material could have a

harmful effect on human health, the owner asked us “if it is bad for health, then why the country allows the manufacture of asbestos in the first place?” (LM).



Worker housing at certified estate

In the case of the non-certified estate, the management said that under the PLA the workers houses are provided with electricity. If workers add modern gadgets, the system would not cope, so he told the workers to bear the cost as an additional deposit, which the workers have refused and instead they asked the management to bear this cost. The FGD with the female workers in the non-certified estate brought out that the workers are not very happy with their houses. They said while any repairs in the supervisors housing is attended to immediately, it takes a long time to get any repair work done in their houses. The walls require plastering and the floor needs to be tiled because in this region, they do not get cow dung which when applied evenly on the floor provides smooth flooring. Hence, the flooring of their houses is uneven and rough (LM). During the final survey the non-certified manager said that he has undertaken to renovate one division of worker houses completely, which involves changing the roof tiles, sewage repairs, and septic tanks. This has cost him almost Rs. 6 lakhs (\$10,909). The repair work can be undertaken only during December-March, when the weather allows.

The non-certified estate workers encountered a difficulty with the housing renovations. The workers reported that though the management did undertake to repair their houses, the work was given to a contractor who did not carry out the job satisfactorily, with the result that the so called ‘repaired houses’ started leaking the very day after the roof was changed. Similarly both the men and women on this estate complained about the sewage line, which is very close to the drinking water pipe and house, and emanates a strong stench. The workers complained that the management should not depend on builders, who use sub-standard materials. They further said when they complained to the management about the status of these ‘repaired houses’ the management has not acted.

4.6.4 Sanitation

Adoption of RA standards has resulted in the provision of improved sanitation facilities for the workers. The baseline data shows that both the workers at non-certified and certified estates are satisfied with the level of sanitation at work provided by the estate. The positive statistical difference in the changes in sanitation between the non-certified and certified possibly reflecting the changes instituted by RA, which managers also clearly identified. The final survey results also found that workers at certified estates report a significantly larger improvement in sanitation at work than workers at the non-certified estate.

For example, in 2010-11, RA1 started building one toilet per family. It has so far completed 49 and 40 more will be built this year. 60 that were built earlier did not have water.

While all the estates have taken efforts to renovate the toilets near/or inside the houses of the workers, RA1 has provided toilets for workers when they are in the field as well. No other estate reported this. RA1 has also built 18 toilets in the field for men and women.

RA1 has also constructed a few sheds near the weighing locations, where the workers can have their lunch and also rest under shade while taking short breaks from the work. Again no other estate reported of this. There are also 7 weighing shades which have been rebuilt and the workers eat there. Electricity is being connected to the bathrooms of the workers. It had also built a new canteen demolishing the old one which was near the toilet (LM; FS).

Management of RA5 added that certification has helped in improving the standard of living and economic status of the workers. Because of RA pressure, separate toilets and attached bathrooms have been provided to the workers. RA5 has demolished 25 old toilets and built new toilets.

At RA4, the nurse reported that since the workers work in gardens that are close to their home, the workers go home if they need to use the toilet. The nurse e said that other estates should consider providing the field toilets as the workers have long working hours from 8 am to 5 pm, with an hour lunch break (FS).

The management reported that they had undertaken repair of sewage lines and lain new sewage lines during 2011-12 (management interview at non-certified). But both the men and women on this estate complained about the sewage line, which is very close to the drinking water pipe and house, and emanates a strong stench. The workers complained that the management should not depend on builders, who use sub-standard materials.

4.6.5 Education

The baseline survey found significant and positive differences between worker satisfaction with education services provided by the certified and non-certified estate. Comparing the results of the baseline survey on levels of satisfaction with services and the changes workers have observed since 2008 it is clear that certified estates have provided better services since 2008, but many of these services such as schools are required under the PLA. It does not seem that RA has led to more school provision, but may have led to some improvements in the quality and scope of these services. The final survey results indicate that workers at certified estates report a significantly larger improvement in education packages for their children than workers at the non-certified estate. A significant larger proportion of workers at the certified estates reported that the estate provided schooling for the children than workers at the non-certified estates. Workers at the certified estates are significantly more satisfied with the schooling for the children than workers at non-certified estates.

Female workers at RA3 (FGD) said that the estates should provide financial incentives for children who do exceptionally well in their 10th and 12th board exams.

4.6.6 Access to water supply

The baseline survey revealed that workers from both certified and non-certified estates were satisfied with the service (4.5 and 4.6 respectively on a scale where 4 indicates 'satisfied' and 5 indicates 'very satisfied' and statistically there is no difference between the two ranks). Final survey results found that workers at certified estates report a significantly larger improvement in on-site water supply than workers at the non-certified estate. The final survey also shows

that workers at the certified estates are significantly more satisfied with the water supply than workers at non-certified estates.

RA7 has built a Reverse Osmosis plant to provide purified drinking water to the workers in a plastic container. The estate's vehicle is used to distribute the drinking water in the plastic container which holds 20 litres of water. At RA1 water is provided only in the mornings: Workers collect water and make it last until the next day.



New water purification unit at certified estate

The non-certified estate has placed a High density polyethylene pipeline for drinking water which would also avoid corrosion. It should be mentioned here that in spite of these changes, workers in non-certified estate, said compared to 2010, their satisfaction with water supply service provided by the estate has reduced (4.5 to 3.48). This perhaps because of the fact that the sewage line is close to the drinking water pipe and there is a strong stench. In the certified estates, satisfaction with water supply has reduced from 4.57(2010) to 4.44 (2012) and the difference is statistically significant.



Water purification unit installed at certified estate

4.6.7 Access to crèche and childcare facilities

All the estates provide crèche facilities, but the number of children in each of the crèches is very low, because of the aging profile of the worker population. For example, at RA7 there is

only one child currently being looked after in the crèche, with one staff member. Children attending this crèche are given rice and milk during the day and can attend for up to five years.

The baseline survey found significant and positive differences between worker satisfaction with crèche services provided by the certified and non-certified estate. Workers have observed changes since 2008 at the certified estates, but many of these services are required under the PLA. Changes are mainly in the realm of quality and scope of service improvement. The final survey results indicate that workers at certified estates report a significantly larger improvement in crèche/childcare facilities than workers at the non-certified estate. Further, a significant larger proportion of workers at the certified estates report that the estate provided childcare than workers at non-certified estates. Workers at the certified estates are significantly more satisfied with the childcare than workers at non-certified estates.

4.6.8 Access to transport facilities

The baseline survey found significant and positive differences between worker satisfaction with transport services provided by the certified and non-certified estate. When we juxtapose the results on levels of satisfaction on services with the changes that the workers have observed since 2008, it is evident that the certified estates have provided better services since 2008. However, many of these services such as schools, childcare and basic health facilities are required under the PLA. The final survey results find that workers at certified estates report a significantly larger improvement in transport facilities than workers at the non-certified estate. Workers at the certified estates are significantly more satisfied with the transport facilities than workers at non-certified estates. Four types of transport facilities are mentioned by the workers. (1) in a few estates like RA6 and RA7 provide vehicles to ferry the workers from their house to the garden and back particularly for workers in distant housing lines (2) estates allow the public transport to pass through the estate to facilitate connectivity (RA3, RA6 and RA7). (3) Ra 2 provides transport facility for the children to go to the school. (4) All the estates provide vehicles for the sick to be transported elsewhere. While in the certified estates this service is provided free of cost, in the non-certified which also used to provide this service free of cost, has started charging for the same with the decline in its finances.



Certified women workers travel home in estate lorry

4.6.9 Electricity

The baseline revealed that overall the workers satisfaction regarding electricity available in their housing stood at 4.4, indicating that the workers were satisfied. There was no statistically significant difference between the certified and the non-certified estate on this count. Final survey results found that workers are significantly more satisfied with electricity at their dwelling than workers at the non-certified estate and workers at certified estates report a significantly larger improvement in electricity in their dwellings than workers at the non-

certified estate. Satisfaction with housing is correlated with satisfaction with electricity. The improvements made (e.g. at RA2 and RA3) are described in the section on housing above. While the PLA requires the crèches to be properly lighted and ventilated, there is no explicit mention of the same regarding the workers housing. However, all the estates provide electricity connection from the main line to each of the workers housing.

The payment of the electricity bill is made by the workers. While the certified estates have undertaken to redo the wiring (free of cost) within the houses to support the modern gadgets acquired by the worker as well as provided by the government, in the non-certified estate, the management requires the workers to pay for such improvements. Perhaps due to this, the workers level of satisfaction in the non-certified regarding electricity supply has reduced from 4.5 in 2010 to 3.22 in 2012 and the difference is statistically significant. In the certified estates, there is no difference in the level of satisfaction regarding this service between 2010 and 2012. RA5, which has also achieved Fairtrade certification, provides reimbursement of the electricity bill to the tune of Rs.250 per year for every worker.

4.6.10 Access to credit

There is a clear difference between the certified estates and the non-certified estate regarding workers' access to credit. However, this is not the result of certification. Rainforest Alliance certification has not altered workers' access to credit. Workers suggested that the Fairtrade Premium should be used to provide soft loans or interest free loans to the workers for construction of houses or for the purpose of marriage in the future.

Participants in nearly all the FGDs reported that workers depend on credit to meet needs beyond their usual expenditure. Expenses such as health emergencies in the family, marriages, deaths and higher education can substantially derail the family's financial situation and lead to borrowing. Workers say they try to save, but it is not possible to save enough to cover large expenses. In all the estates the workers reported that they run revolving small savings group among themselves to help each other. However, a worker cannot take a second loan until the first loan is repaid.

There are various sources of credit. When workers resort to borrowing from formal sources of finance, they require the letter of support from the estate management - a sort of guarantee that the loan will be repaid. While the workers from the certified estates said that (except the supplier estate), their management provide them with this letter which helps them to obtain credit from formal sources. However, the workers from the non-certified estate said that their manager used to provide such a letter but will not now do so. As a result they have to borrow from sources in the informal sector at a very high rate of interest. According to the management/owner, previously an unscrupulous manager had taken the money involved in this transaction and so he felt he could not continue. The workers are extremely unhappy about the high interest rates that they incur which eats into their disposable income and leaves them perennially in debt. The male workers in the FGD said that they are tolerating the hardship and continue to be working on the estate, because they have housing provided on the estate for free. The participants in the women's FGD at the non-certified estate also highlighted the difficulties they are experiencing with low wages and an inability to buy physical asset such as gold for their daughters' marriages. The questionnaire survey however shows no statistically significant difference in the matter of access to credit between the certified and the non-certified estate.

4.6.11 Provision of food

RA7 has started a midday-meal scheme for all the workers including the temporary workers. This costs the estate Rs.2000 (\$40) per day. The non-certified estate lauded such an initiative

when told about it, but said that not every other estate can afford to run a scheme such as this. Also instead of tea or coffee, a health drink made of pearl millet is provided in both RA7 and RA5. At RA5, the management said this drink is provided using the Fairtrade Premium funds at mid-morning. The management said that they provide this health drink, because most workers do not eat anything in the morning before they go to work. RA5 also provides some snacks for the children going to school in the late afternoon when they are attending the coaching class arranged by the management (also a Fairtrade Premium funded initiative). They have extended the training program of the community development centre, where during the summer holidays, children who have completed their 10th and 12 are trained for vocational skills. RA4 provides a feast twice a year not only to the estate workers, but also for the adjoining villages on important occasions. The final survey finds that workers at the certified estates are significantly more satisfied with the food provided than workers at non-certified estates.

4.6.12 Access to health services

The baseline survey found significant and positive differences between worker satisfaction with health care services provided by the certified and non-certified estates, indicating that the former provide better facilities. As well as greater satisfaction, workers have observed changes since 2008 at certified estates, but many of these services are required under the PLA. Changes are mainly in the realm of improvements in the quality and scope of services. Though RA has not resulted in the provision of more housing, water supply, school, sanitation and medical facilities for the workers it has nevertheless led to some minor improvements. While basic health care services were provided on all tea estates prior to certification, RA estates have provided additional medical services (e.g. screening for breast and cervical cancer and HIV/AIDS). Similarly, the final survey found that workers at the certified estates are significantly more satisfied with the health care provided than workers at the non-certified estates.

All of the estates, including the non-certified estate, but apart from RA3, have a basic dispensary where a nurse is permanently employed and the doctor visits once every two or three days. This is a requirement under the PLA. RA3 has a large hospital and a doctor visits everyday (the female workers in the FGD told us that there should be a doctor available at all times to attend to any health emergency). RA3 also has an ambulance. In RA7 and the non-certified, the workers said they depend on the health facilities outside the estate as they do not feel better with the medicines provided by the estate health dispensary. All the estates provide a vehicle to reach the health service outside the estate in case of emergency. At the non-certified estate the management told us that they had already advertised for a doctor to visit the estate same and a suitable candidate would be appointed soon.

At RA4, the nurse said that the estate does the screening for Tuberculosis, HIV and cancer every year. Every March, full medical check is carried out for the workers at the government hospital, the charges for which are borne by the management. At both RA3 and RA4, the nurses said that they visit the labour line every day to personally ascertain the cleanliness of the surrounding. At RA1 estate the nurse said that she was visiting the labour lines regularly, but since she has a new born baby she has not resumed that yet. At RA4, the nurse also takes personal interest in displaying health awareness posters in the clinic, informing the workers with young children about the polio vaccination. She also personally goes to the factory every six months and provides the workers with a de-worming (albendazole) tablet.

At RA2 (men's and women's FGD), RA3 (men's and women's FGD), RA5 (women's FGD), workers told us that they contribute to their life insurance policy, which is deducted by the estate from their salary and sent to the insurance company. At the non-certified estate, the

management had initiated a programme in which sick-leave payments would be paid as a premium for health insurance. About 38 workers opted for this, but it could be seen that the workers had not been given a clear idea about the health insurance. For instance, workers were unhappy that they have to take responsibility for getting the reimbursement, and insurance is not available for all types of health situations.



Interviewing the staff nurse at a certified estate

4.6.13 Satisfaction with services

All workers report a lower satisfaction with services provided by the estates in 2012 than in 2010. Workers at non-certified estates report a significantly larger decrease in satisfaction with housing, health services, sanitation, water, electricity, crèche and food than workers at certified estates.

The workers in the certified estate have got used to the better standard of living by 2012. In 2010, when these improvements were made, their point of reference was the situation before certification, when things were far worse. So 2010 was a significant improvement period. But in 2012, the investments made by the estate are more focused on maintaining the improvement made in 2010 and not in making new investments and improvements. This is our interpretation of these results and why there is not an increase in satisfaction with the services between 2010 and 2012 for the certified estates.

Table 33: Satisfaction with services

Comparison of means	Non-certified estates			Certified estates		
	2010	2012	Sig	2010	2012	Sig
N	46	25		258	258	
Services provided by estate: housing (% respondents)	100%	100%	ns	96%	98%	ns
Satisfaction with service: housing (ranking)	4.43	3.32	***	4.53	4.45	**
Services provided by estate: health care (% respondents)	100%	100%	ns	98%	98%	ns
Satisfaction with service: health care (ranking)	4.17	2.96	***	4.45	4.46	ns
Services provided by estate: sanitation at work (% respondents)	98%	100%	ns	96%	98%	ns
Satisfaction with service: sanitation at work (ranking)	4.37	3.84	*	4.48	4.60	ns
Services provided by estate: water supply (% respondents)	100%	100%	ns	97%	98%	ns

Comparison of means	Non-certified estates			Certified estates		
	2010	2012	Sig	2010	2012	Sig
Satisfaction with service: water supply (ranking)	4.50	3.48	***	4.57	4.44	***
Services provided by estate: electricity (% respondents)	100%	92%	ns	97%	98%	ns
Satisfaction with service: electricity (ranking)	4.28	3.22	***	4.48	4.39	ns
Services provided by estate: schooling (% respondents)	46%	76%	*	74%	94%	***
Satisfaction with service: schooling (ranking)	4.05	3.58	*	4.38	4.27	**
Services provided by estate: child care (% respondents)	85%	88%	ns	71%	97%	***
Satisfaction with service: child care (ranking)	4.31	3.32	***	4.44	4.25	***
Services provided by estate: transport (% respondents)	63%	100%	***	84%	97%	***
Satisfaction with service: transport (ranking)	4.10	3.42	**	4.40	3.97	***
Services provided by estate: food (% respondents)	24%	8%	ns	37%	11%	***
Satisfaction with service: food (ranking)	4.18	2.50	*	4.15	4.07	ns

Values for satisfaction are means of a ranking exercise where: 1 = very dissatisfied; 2 = dissatisfied; 3 = neither; 4 = satisfied; 5 = very satisfied

Sig = Significance of differences between groups (based on Mann-Whitney test): ns = not significant, *P≤0.05, **P≤0.01, *** P≤0.001

Significantly larger proportions of workers at non-certified estates benefit from schooling and transport services in 2012 than in 2010. For other services the percentages of beneficiaries have remained more or less the same between 2010 and 2012. Significantly larger proportions of workers at certified estates benefit from schooling, child care and transport services in 2012 than in 2010. For other services the percentages of beneficiaries have more or less remained the same, except for food where there has been a significant decrease in the percentage of workers at certified estates reporting they benefitted from this service.

In 2012, workers at non-certified estates have become significantly less satisfied with all services provided by the estates than they were in 2010. The same can be said for the workers at certified estates (except for health care, sanitation services, electricity and food), but the decrease in satisfaction was less pronounced than for workers at non-certified estates. This is confirmed by the significant DD results.

Table 34: Satisfaction with services – Difference in Difference.

Satisfaction with services	DD	Sig
DD satisfaction with housing certified vs non-certified	1.028	***
DD satisfaction with health services certified vs non-certified	1.230	***
DD satisfaction with sanitation certified vs non-certified	0.652	***
DD satisfaction with water services certified vs non-certified	0.885	***
DD satisfaction with electricity certified vs non-certified	0.976	***
DD satisfaction with school certified vs non-certified	0.352	ns
DD satisfaction with crèche certified vs non-certified	0.800	***
DD satisfaction with transport certified vs non-certified	0.257	ns
DD satisfaction with food certified vs non-certified	1.599	**

Sig = Significance of DD: ns = not significant, *P≤0.05, **P≤0.01, *** P≤ 0.001

The DD analysis shows significant difference in the ranking of satisfaction with sanitation services by the certified and non-certified estates. On non-certified estates, while there is no difference in the type of sanitation services provided between 2010 and 2012, the satisfaction of workers with sanitation services is reduced in 2012. This was due to the low quality of the repair work of the sewage line running close to the drinking water pipe line.

4.7 Environmental changes and livelihood impacts

Workers were consistently positive in the qualitative research interviews about the environmental measures instituted by the RA estates as part of certification, particularly the changes in pesticide handling and water quality improvements (BL, LM, FS). They could not always attribute these changes to RA certification. The non-certified estate also seems to have reduced the use of toxic chemicals, protects the water sources, has planted *Vetiveria zizynoides* and has provided firewood to workers to reduce deforestation, but these measures are not on the same scale as those undertaken at the certified estates and are likely to be the result of its earlier engagement with ETP. Many of the managers of the certified estates said that the environmental measures were introduced and deepened on their farms as a result of engaging in RA certification. Because of RA certification, all the certified estates have appropriate environmental management systems in place, provide protective gear to the sprayers, conserve water, and protect the purity of water, support ecosystem management and soil conservation. All the estates have also reduced the number of pesticides that they were using prior to RA and have phased out specific less desirable pesticides.

4.7.1 Social and environmental management systems

RA certification requires monitoring and document of the following: i) monitoring of water use and recording (2) wild life visits and records (3) pest pressure and monitoring records (4) use of pesticides (5) waste management, segregation and disposal. All of this requires documentation which the estates had not done earlier. For pesticide spraying the estates follow the recommendations of UPASI. The managers generally concurred that they had had to conduct significant documentation, which helped to bring attention to these issues, but also incurred time costs.

4.7.2 Wildlife

During the baseline some of estate managers noted specific activities undertaken to promote wildlife conservation. At RA3 and RA5 teachers have been taught about wildlife conservation and environmental hygiene and they are encouraged to pass this knowledge onto the children that they teach. Wildlife spotting and registry is done at RA1, RA3, RA4 and RA7. Various estates said that one or more types of large mammals (Indian bisons, bears, monkeys, and leopards) live in the forests adjacent to the estates and are sometimes seen on the estates. As a result of RA the workers no longer harm the animals, which now move more freely. At RA5, RA7 and also at the non-certified estate the research team observed bisons moving freely and grazing in the tea garden. RA3 had also pictures of elephants visiting the estate. According to the managers at the estate, workers have been informed not to harm or hunt the wild life and cut trees in the forest in all the estates, although we do not have evidence on the actual impact on wildlife and deforestation. At RA2 and RA7, the management has constructed a water body for wildlife and other species which has been done after RA certification.

During the light monitoring, the management of RA3 said 100 per cent compliance has come in the wildlife management system. Actually RA3 could bring in more land under tea which is presently the migratory path of animals. They have not done that since it would lead to

potential human-animal conflict. RA3, like RA2, draws on the assistance of wildlife experts and NGOs in managing the ecosystem. For instance, Keystone Foundation is an NGO, which works to preserve the ecosystem of the Nilgiris. RA3 has taken their help and natural species have been planted in dedicated biodiversity spots. In return, RA3 sells the NGOs products along with its tea brands.

RA7 management said that their estate is rich with biodiversity and has a variety of birds. Poaching and hunting are banned within the estate after RA. Workers and the management told the sighting of bears, cheetah and elephants. But RA7 had its share of problems as replanting of bushes and shade trees failed due to the presence of wild animals. According to the RA7 management, RA does not have any suggestions for these issues, though the lapses like non-maintenance of the wild life register catches the RA auditors' attention.

During the final survey RA2, RA3, RA4, RA7 and the non-certified estate reported the free movement of wild animals in the tea plantations. Both RA3 and RA7 were visited by elephants which is a rarity as elephants normally do not climb to such elevations. RA3 also mentioned about the citing of peacocks which normally flock from very hot climates. RA7 has put up a barbed wire fence separating the plantation and the residential and office area to prevent wild animals crossing over into the estate.

The non-certified estate and RA7 mentioned about the new tea plants damaged by bisons which is a major concern. The non-certified estate had not conducted specific activities to raise awareness of environmental issues amongst workers.



Monkeys atop worker housing, certified estate

4.7.3 Soil management and conservation

Introducing soil management and conservation measures are part of the SAN standards. It has not been possible within this study to do direct measures of soil quality, but the managers reported investments in soil management & conservation, such as planting of *Vetiveria zizynoides*, and native species planting has been undertaken to prevent soil erosion and to improve soil productivity. Unfortunately we were not able to gain access to yields and productivity data from the estates in question.



Planting of *Vettiveria zizanioides* along borders of tea gardens at certified estate

Planting the grass called *Vettiveria zizanioides* was observed in RA1, RA3, RA4, RA5, RA6, RA7, but also at the non-certified estates because this grass holds the soil together and reduces erosion when there are heavy rains. Managers said it was effective during the exceptionally heavy rain in last November. RA5 also spent 2.4 % (of the various expenditures incurred to comply with RA measures) on planting silver oak and *Vettiveria zizanioides*. RA5's management said that *Vettiveria zizanioides* prevents soil erosion and helps to absorb rainwater thus improving soil quality over time. At the non-certified *Vettiveriya zizanioides* has also been planted. Some illustrative figures were obtained for expenses occurred at two certified estates from managers estimating the different costs incurred and how much was spent on one activity compared to another. These measures are expected to have a positive impact on the yield.

Table 35. Area, Production and Yield per Hectare 2009-2012 in kgs

Area, Production and Yield per Hectare 2009-2012					
			Production		
		Total area ha	Green Leaf	Made Tea	Yield per ha
RA1	2009-10	322.14	2892618	777155	8979.38
	2010-11	322.14	2942221	760370	9133.36
	2011-12	322.14	2480640	627642	7700.50
RA2	2009-10	123.99	11456260	2744464	92396.64
	2010-11	123.99	11526215	2688025	92960.84
	2011-12	123.99	10632849	2588042	85755.70
RA3	2009-10	209.42	5111847	1391955	24409.55
	2010-11	209.42	5346704	1460489	25531.01
	2011-12	209.42	6745275	1847447	32209.32
RA4	2009-10	138.88			0.00*
	2010-11	138.88			0.00*
	2011-12	138.88	3845831	923197	27691.76
RA5	2009-10	147.71	2823606	682748	19115.88
	2010-11	147.71	2727261	659179	18463.62
	2011-12	141.72	2746918	616683	19382.71
RA6	2009-10	569.42	7762000	1957000	13631.41
	2010-11	569.42	7564000	1861000	13283.69

	2011-12	630.42	8123000	1986000	12885.06
RA7	2009-10	80.9	348635	79314	4309.46
	2010-11	80.9	500000	111852	6180.47
	2011-12	80.9	390000		4820.77
non-certified	2009-10	150	1744000		11626.67
	2010-11	150	1400000		9333.33
	2011-12	150	1475000	26525	9833.33

*Not available

According to the management of RA7, soil erosion has been prevented due to vetiver planting and because they are not cutting the trees. RA7 has supplied vetiver to RA5 also. Rainwater harvesting is also done as they have constructed a huge pond which is frequented by the wild animals. But the planted trees were damaged by the wild animals.

Management of RA1 also said that vegetative requirement near hedges along water streams (to prevent soil erosion) is an RA requirement. Shade planting has also been undertaken. It would, however, take 7 to 8 years for the results to be visible.

4.7.4 Waste management

The baseline survey found that investments in waste management improvements were reported by managers and these in the long-term may impact upon worker health. In all the RA certified estates a distinction is made between degradable and non-degradable wastes. Degradable wastes are used as compost within the estate. Non-degradable wastes are given to the appropriate authorities for safe disposal. The manager at the non-certified estate said that they have constructed a pit near every workers colony for waste, but no distinction is made between degradable and non-degradable wastes in it. At the non-certified estate, bins and information boards were not found everywhere as on the RA certified estates.



Separating waste at a certified estate

The managers reported changes in waste management procedures which they have instituted as a result of engaging with RA certification. At all the certified estates systematic waste disposal was started only after RA certification. Prior to this waste management was poor. For example, according to RA3 and RA4 managers before certification no distinction was made at the estates between degradable and non-degradable waste and both were dumped into a common pit. The RA1 manager reported that in the past the pit was cleaned once in a year. At RA1 the manager said that the waste was simply buried in the ground in the past, but this has

now changed. The RA6 manager said in the past there was no effort to see how the houses on the estate disposed of their waste. RA2 spent 1.2 per cent of the total RA expenditure in between April 2007 and August 2008 towards kitchen waste and ash cleaning. Now in all the certified estates separate bins have been provided in housing and in the garden to segregate the waste into hazardous and non-hazardous, biodegradable and non-degradable. RA6 has taken efforts to recycle the plastic. Biodegradable waste is put in a compost pit which is later used as fertiliser in the tea gardens at RA3, RA5. The RA6 manager said when they segregate wastes, chemical containers and glasses are kept separately, but they actually produce more plastic waste and that this would not change in the region unless the government enforced a wider ban on the use of plastic bags (shops in the Nilgiris have been prohibited from using them by the state government as an environmental measure). RA6 management also said that the suppliers should take back the chemical containers and re-use them but currently they do not and this is therefore an issue for safe disposal.

The manager at the non-certified estate said that they have constructed a pit near every workers colony for waste, but no distinction is made between degradable and non-degradable wastes in it. At the non-certified estate, bins and information boards were not found everywhere as on the RA certified estates, but the research team did observe that the office, factory and the garden were clean.

According to the management of all the RA estates, awareness of RA has improved the living conditions of workers, by avoiding plastics and because appropriate waste disposal methods are now followed (LM). At the non-certified estate, wastes are put together and burnt. Plastics are not segregated. It is difficult to maintain separately according to the management. In the dispensary the hospital wastes are incinerated (LM & FS).

4.7.5 Water purity and conservation measures

The SAN standards comprise a) measures for preventing surface water contamination caused by run off of chemicals or sediments and b) farms should also ensure the rational use of water resources. In the baseline survey it was found that water purity and conservation measures had been instituted by all the RA certified estates. According to the managers, assessing the quantity of water used in the estate began after RA was adopted. After RA the estates know how much water they use and they have also identified, mapped and protected the water sources within the estate.

All the RA estates check the water quality both at the entry and outlet points. For this, water is collected from 6 points and sent to the laboratory and they get the written report. According to the management of RA3 reducing the pollution in the water sources, preserving the wild life habitats, reducing firewood use and increasing the biodiversity by planting natural species are being focused upon more as a result of RA certification. RA3 is working on making a mini-hydro project which would supply electricity to RA3, but this is not related to RA certification.

Some of the estates have installed automated chlorinating plants to purify the water, while others do it manually. Estates are aiming to conserve water better by planting native plant species in swamps. All the estates have also constructed soak pits near worker lines and at the chemical wash room where sprayers wash after spraying. These measures are likely to have positive health impacts in the near term but also others which would only become visible in the longer-term as a healthy environment provides ecosystem services, supports livelihoods, and should help to maintain yields, productivity and ultimately estate profitability and job security for workers.

Certain activities have been undertaken at the RA certified estates in the process of seeking and maintaining certification in relation to water purity according to the estate managers. For example at RA3 and RA4, the management said that they have covered the tank in which the stream water gets collected. The manager of RA5 said that chlorination of water was started only after they adopted RA. The RA4 manager said that they ensure that the undergrowth around the water bodies is not disturbed. The RA6 manager reported that they have installed automated chlorinating plants after RA certification. In RA1 RA2 and RA4 chlorination is done manually. In RA4, the nurse who is in charge of maintaining the register on details and regularity of chlorination also showed us the register. The management of RA2, RA4 and RA7 said that water quality at both points of inflow and outflow are monitored and the samples are sent to Coimbatore for testing. According to RA2 and RA3 managers water quality is monitored at inflow as well as outflow because water can be biologically polluted by wild animals. All the RA certified estate managers reported that they have constructed soak pits near worker lines and at the chemical wash room where sprayers wash after spraying to prevent the residues entering the ground water directly. RA2s' expenditure on this count is 0.47 per cent of the different expenditures incurred to comply with the RA standards. RA5 management said that there was intensive training on constructing soakpits and testing water samples. Two experts from RA came and provided training, and RA5 also hired an independent consultant to set up systems and familiarise themselves with the standards.

Management of RA3 and RA6 said that workers were given training in handling chemicals and waste management and have been given leaflets about RA which has raised awareness about environmental issues. RA2 paid 0.74 per cent of the RA expenditure to pay for a consultant for training. RA3 and RA6 are also shifting from iron pipes to HDP pipes. Management of RA 5 had already spent 6.78 % of the total RA expenditure on pipelines. The RA1 manager said that they have banned washing of clothes in rivers and other water bodies as it affects the water quality.

At the non-certified estate, we learned that after spraying, the sprayers returned home and had a shower. Here we saw the water sources have been covered and the place was clean. These measures were reported to the research team by management as well as by workers. These actions have resulted in improvements in water quality.



Upgrading of water pipes at certified estate

Measures to conserve water have also been implemented at a number of estates: The RA1 manager said that prior to RA certification the estate did not know the actual quantity of water that was used for different purposes. The RA5 manager said RA asked them to give an estimate of daily water requirements and also to have more control over water consumption (RA5). The

actual quantity of water used for irrigation is monitored and controlled and not used at all during rainy days.

RA1 and RA7 managers said that after RA certification the estate knows the amounts of water they use and that they have also identified, mapped and protected the water sources within the estate. The manager at RA3 said that they are aiming to conserve water better by planting native plant species in swamps. To prevent water wastage, most of the estates stop the water supply between 8 am and 5 pm. We were told by RA5 that a few other estates in Nilgiri also hired this consultant to understand and prepare themselves with the standards.

The non-certified estate mentioned that the waste water from the factory and the labour lines is absorbed in the tea garden itself (final survey).

4.7.6 Integrated crop management

The RA provisions on integrated crop management emphasises the safe and appropriate use of agro-chemicals. Estate managers reported having restructured their pesticide use as a result. There are four types of pesticides that are colour-coded. Under RA SAN standards, red-marked pesticides cannot be used, whereas Green and Blue are acceptable.

The baseline survey found that RA2 is currently using one pesticide in the Yellow category – Propagit – but they are required to phase this out by the end of 2011. Pesticides in the Green category may cost 10 times more than the traditional ones according to this management. The RA5 manager said that prior to RA certification approx. 25 different pesticides were used but this has now been reduced to four or five. *“We did blanket spraying earlier. Now we see the pests and then spray. Diaries are kept to record when and what they saw”* and *“pesticides on the ‘Dirty Dozen’⁸² list are not used”* (management of RA5)⁸³. Overall pesticide use has been reduced according to the managers at RA1, RA2, RA3, and RA4.

RA1 uses neem spray as pesticide. The key informant from the Advisory Services, Tea Research Foundation, said that before RA, toxic chemicals were used. Out of five rounds of pesticide spray, three rounds used to be toxic chemicals. Now after RA, pesticides are used only for the red spotted mites, which require 2-4 rounds. Of these, one round would be a synthetic pesticide and the other rounds natural products. He observed that because of these measures, pesticide residues in the RA estates have come down to below the maximum residue level and non-deductible limits. However, EU rules are also a driver of changes in pesticide use and maximum residue levels.

Table 36. Per hectare use of pesticide and fertiliser

		Total area of estate (Ha)	Per ha. use of fertilizer	Per ha. use of pesticide
RA3	2009-10	209.42	1.39	2.58
	2010-11	209.42	1.01	2.2
	2011-12	209.42	1.37	1.92
RA5	2009-10	147.71	1.28	0.82

⁸²A list of toxic agrochemicals first devised in 1985 by the Pesticide Action Network <http://www.panuk.org/>

⁸³RA5 uses Calixin and copper as fungicide; propagit and lime sulphur as pesticide; glyphosate as weedicide and soyabean extract as growth promoter

	2010-11	147.71	1.65	1.39
	2011-12	141.72	1.24	1.55
RA6	2009-10	569.42	634	8.32
	2010-11	569.42	1157	8.35
	2011-12	630.42	1143	9.41

Source: Estate managers

In the non-certified men's FGD participants revealed that they are using red colour pesticide only in floriculture. In tea production they reported only using green and blue marked pesticides: they used green colour marked pesticides for the red mites and in the rainy season they used blue colour marked pesticides which the workers told us were not very harmful. The management were not asked why they have made this switch in tea production and so it is not clear where to attribute these changes.

During the light monitoring exercise, the managers reported the following:

- Management of all the RA estates converge on this point regarding the use of pesticides which has reduced after RA. RA creates the buffer zone around school, roadside etc where chemical pesticides are not sprayed.
- In RA2 uses of pesticide propagate has reduced from 70 Kilos to none in 2010-11. No fungicides were used in 2010-11 by RA2. And it had not had an impact upon production. However, the management said they are yet to calculate the impact of this on their costs of production. Because, in India where the climate is unpredictable, pesticide and herbicide use depend on the rainfall. He said in the '70s, the scientific data on productivity increase due to pesticide application provided by UPASI, encouraged the estates to use pesticides. But now the cost benefit analysis has to be done.
- Management of RA4 said that they are exposed to more difficulties as no alternative pesticides are available. The option is to go to organic way of cultivation. But he would consider only if there is a demand for certification. Larger companies could turn organic because of resources.
- Management of RA4 added that the mandatory maximum residue limit (MRL) has restricted the number of chemicals to be used. There are however pests which cannot be controlled. So there is crop loss. But he also mentioned cumulative factors like shortage of man power to spray also acts on the pesticide use factor. Biological pesticides are not effective according to him.
- All the management of certified estates said that they have to be careful with the disposal of the pesticide containers also. The empty container cannot be re-used at all. It needs to be punctured and should be kept in a separate place and given back to the suppliers.
- RA7 has 50 acres under organic cultivation and is in the second year in the process of conversion. To provide for this, Desi cows were bought for their organic manure.
- Management of RA3 states that pesticide standards are difficult to follow. WHO Class1 and Class 2 pesticides are not allowed in tea by RA. These are hazardous chemicals which leaves residue in the food chain and they are cheap. There are only a few chemicals available now, and these could develop resistance – continual use of the same chemical would lead pests developing immunity. There is a fear of crop loss. Organic chemicals are expensive because more sprays have to be used when organic chemicals are used. The new chemicals are expensive (Management of RA3 and RA5). Management of RA2, RA3, RA4 and RA5 observed that estates shifted to safer

chemicals due to EU standards of MRL much before RA came in. The shift according to them had increased the cost and not the yield.

- The management of RA 1 said the costs of keeping the non-certified and certified tea separate is low because pesticide traceability is less in the non-certified crop also due to compliance with the EU norms.
- The management of RA4 has divided the factory in to two sections for RA and non-RA. The separation has to be maintained throughout - from the tea collecting point till the end. Traceability is maintained in both. This has cost Rs.4.5 to 5 (0.1 to 1.1 US \$) a Kilo of made tea.
- The management of the non-certified estate said though there would be a shortage of labour to spray pesticides in future, and he would not go organic because of the decline in the yield.

In the final survey all the certified estates said that they have shifted to safer pesticides as recommended by Rainforest Alliance standards. RA1 has recently tried spraying neem leaf paste on tea bushes and found it to be effective in controlling the pests and the bushes were healthy and green. The manager also showed as the fields sprayed with the neem paste and the visible difference between the fields that were sprayed and those were not was striking in terms of the fresh green colour. The management of RA1 said that they would continue to use the neem paste because it is effective and also they can procure it in required quantities.

However, RA2 commented that UPASI does the testing of different pesticides and recommends something suitable, but still may not be acceptable to RA standards. So RA2 has raised the internal standards to use only the RA recommended products. RA2 also pointed out the cost of pesticide spraying would be reducing for the estates as due to labour scarcity, many estates do not spray pesticides.

However, the maintenance of the buffer zones is difficult according to the estate managers. All the certified estates uniformly commented that the size of the buffer zones, which need to be maintained under RA rules, where the estate cannot spray any pesticide, is large and it is uneconomical for the estates to maintain. This is because it takes away nearly 30% of the area for cultivation thus reducing production. Hence, they have given a joint recommendation to Rainforest Alliance, that while no pesticides will be sprayed on the buffer zone, they be allowed to spray the fertilizers and weedicides (RA recommended ones). According to RA5 environment standards affect the yield since buffer zones near the road, jungle, water sources and human dwelling are protected from spraying and this reduces the yield.

4.7.7 Ecosystem conservation and energy conservation

Some steps towards ecosystem conservation were reported by several of the estates during the baseline survey. At RA1 and RA3 they have planted native species in small pockets of forest after certification. In the light monitoring exercise RA2 and RA4 managers said they had received support from the Nature Conservation Foundation, a local NGO, to plant the trees supportive of conservation. RA requires planting of natural species, but the managers said they cannot plant these types of trees in the tea gardens because the competition for nutrition would be too great and the shade would affect the growth of the bushes. Instead they plant natural species in other parts of the estate.

At RA5 there were no firewood sheds in the factory before RA certification, but now they have invested in the sheds which would improve fuel efficiency. If the wood is put outside, moisture is lost and wood consumption is more. They also installed a solar drying unit which has reduced firewood consumption by 15%. This will help to conserve forests by reducing the cutting of trees. These were the two largest RA-related expenditure items for RA5 during Oct.

2008 to November 2009; and the firewood shed work accounted for 48 % of the total RA-related expenditure at RA5 for the same period. The management of RA4 also actively encourages the workers to use gas stoves instead of firewood in the kitchen. The non-certified management provides firewood to the workers.

During the light monitoring survey the managers of the RA estates reported that cutting trees for firewood has reduced because the workers are told not to cut the trees. They also reported that the state government had in the last year provided free gas cylinders to the workers and now a majority of the workers use only the gas stove. RA2, RA3 and non-certified estates allow the workers to use the biomass from the pruning of the tea bushes for fuel. The region in which RA2 is located has lots of rocks and earlier quarrying was done in this region. But quarrying is not now allowed, because of increased awareness about environment, but this is due to government legislation.

RA3 management said that they do cut trees for firewood in dedicated areas after taking the due permission from the government and have also replanted new species. Their fuel use is dependent 50 per cent on groundnut waste. It is not cheaper and the absolute cost is higher. But there is fuel efficiency. At the workers' houses, since everybody has gas, the firewood consumption is reduced.

In the final survey all the managers of the certified estates said that they use wood for fuel consumption, but that this is sourced from plains. They are adopting measures like cutting the wood into small pieces (RA3 and RA4) to reduce consumption and to retain moisture and one estate manager plans to build a shed to prevent loss of moisture (RA5). This is the result of RA certification.

RA3 and RA4 said in order to reduce the energy consumption they have installed solar hot water boilers (LM). They accessed a government 25 per cent subsidy for this. RA1 has introduced a gasifier for fuel efficiency and to reduce firewood use. The results are visible. Tea board research had shown that a particular kind of bamboo planting would help in water conservation and the yields are good given proper conditions. If bamboo is used it would reduce the fuel cost as wood costs Rs.3500 (\$ 77.7) per tonne while bamboo costs only Rs. 700 (\$15.6) per tonne. Further incentives to the tune of 25 per cent for gasifiers are provided by the Ministry of non-renewable energy of Government of India. The subsidy is available on energy saving devices. It would reduce carbon emission and would result in 20 per cent saving in wood. There is a possibility of the estates buying carbon credit according to RA1. The managers told us about this in the context of RA introducing new standards in 2010. Energy conservation is one of the measures suggested. Hence the estates are undertaking these measures.

Reducing carbon emissions and using energy saving equipment are additional requirements under RA. Sale of carbon credit in plantations is not allowed, so the managers said they could not obtain funds in this way. RA2 has installed windmills in udumalipet (nearby district) which is fed to the main grid.

Management of RA2, RA3 and RA5 observed, citing the new version of RA standards which concentrate on energy use, that with any certification agency, the standards bar is continuously rising. However, in RA2 the principle is improvisation on a daily basis in all aspects concerned with production and this is not because of RA certification. Hence, even before the RA standards on energy came, in 2011, RA1 had installed gasifiers and RA2 had installed fuel

efficient heaters at the cost of Rs.6 million, for which the Tea Board provided a subsidy of 25 per cent.

4.8 Community relations

Only limited evidence was gathered on community relations – one of the standards of Rainforest Alliance. During the light monitoring it was found:

- in RA2, the primary school facilities are open to children from neighbouring villages as well as to the children of workers. This seems to be because the state government grant supports the schools and so the RA2 company cannot restrict the facility for the children of his estate alone. Hence, this cannot be attributed to RA.
- At RA4, the management pays a crèche worker in a nearby colony where a few of the RA4 workers live to look after their children while they are at work on the estate. This colony is treated as part of the RA4 ‘family’ according to management. RA4 management provides assistance to people living in this community (e.g. painting the temple, feeding all 90 of the colony’s school kids on the birthdays of each of the 8 RA4 workers who live there. Also in RA4 there is a temple within the estate. On one of the religiously important days in a year, the management feeds all the villages surrounding the estate and also provides them vehicle to reach the estate. As one of the villages can be approached only through the RA4 estate, RA4 has also constructed that road and extends medical facilities if needed. These activities have been on-going for many years, prior to RA certification, and the management say they would have continued these services regardless of the certification process and so are not attributable to RA.

The management of RA5 has started a vocational training programme in 2009 – prior to Fairtrade certification - for the children who have done their 10th and 12th standard. In this, children are trained in the use of computers and spoken English in Coonoor. The upper portion of RA5’s warehouse is being used for this. The managers say that this skill formation is not only helping their estate children, but also children from other estates. As a result of Fairtrade certification the estate has widened the vocational activities covered in this training and women and men in the locality can attend certification.

During the final survey, we learnt from RA 5 management about their visit to a nearby tribal community in the forest. The management conducted a health awareness program and eye check-ups. They also provided free reading glasses to those who required them.

4.9 Fairtrade impacts

During the course of the study one estate – RA5- has obtained Fairtrade certification (autumn 2010) after the baseline survey, in addition to its existing certification to Rainforest Alliance and various other standards. RA6 is preparing for Fairtrade certification.

4.9.1 Decision-making on the Fairtrade premium

According to the management of RA5, the Fairtrade requirement of ‘*spending the premium for the welfare of the worker*’ needs to be followed. The group manager attended a conference in February on this topic. The workers have through the Joint Management Committee (JMC) and said that they did exercise this right. For example, they suggested that the electricity bill repayment and tuition centres for the children came from the workers.

A corpus fund of Rs.50 lakhs (\$111111.1) has been set up at RA5. The management has also opened a forex account with Reserve Bank of India. All the premium money paid by Finlays, the Fairtrade buyer, goes to an NGO called ARCOD in Krishnagiri, which manages the Fairtrade

premium funds for all of the Fairtrade estates according to a manager at RA5. They have set up a joint management committee (JMC) to organise the premium spending activities. ARCOD will have to approve the JMC projects. The premium of each year should be spent within that year. If it is not spent within that year, it will have to be sent back and this would be provided along with the next year's premium amount.

The activity on which the premium is spent can be an on-going activity, but at the same time it should benefit the workers and should be more than the PLA requirements according to the group manager of RA5. 70% of the Joint Management Committee (JMC) is selected from the workers, with adequate representation of women. From each division of RA5, 2 workers (one male and 1 female) and 1 worker from Jharkhand have been selected for JMC. The management does not have the voting right - only the workers have the voting right.

The JMC reviews the list of priorities drawn up from workers on spending the premium and then prioritises the activities.

Fairtrade premium spending creates quite a lot of work for the estates according to the group manager. It has to identify each beneficiary and verify that the spending is correct. For instance, when the education fee was provided by RA5, it was found that 19 workers were using it for their relative's children and not for their own children. The workers will have to bring the bills for the books, shoes and school fee etc and they are reimbursed.



Women workers at the estate with FT & RA certification, including JMC members

4.9.2 Use of the Fairtrade premium

The Fairtrade premium money amounted to Rs 50 lakhs (USD 100,000). Fairtrade investments have either targeted workers or their children. Investments made relating to workers include:

- The provision of CFL bulbs that are energy saving;
- payment of electricity bill upto Rs.250 for each worker;
- provision of better street lights;
- raincoat for the workers;
- water filter in each workers' house;
- nutritious drink to all the workers by 10 am;
- a steel cupboard to keep valuables in;
- surgical expenditures for workers who had to undergo surgeries;
- life insurance premium.

For the children investments have included:

- rain coats;
- emergency light (to help children study during frequent powercuts);

- school bags;
- bus fares;
- uniform to the school children;
- college fees to the college going children;
- nutritious snacks for the children who go to the coaching centre.

During 2010-11 a total of Rs.33.4 lakhs (\$66800) was spent on various activities. In RA5, the MDs wife who also happens to be a social worker (met with, during the Final Survey) takes an active interest in the community development activities undertaken by the estate. She pointed out that the workers will have to first pay for the consumables like school bags and uniform and then they submit the bill to the estate. Once the details are verified, the money is disbursed through the supervisor to the mother (the estate managers prefer disbursing the money to the mother as the males spend the money on alcohol). Nearly about Rs. 8 lakhs (US\$14545) has been spent on this. She also noted that if there is a decrease in Fairtrade sales, the company will have to continue with the activity. Due to the Fairtrade premium RA5 has started a vocational training centre that is open for public. Although the team passed the venue several times, it was not open – therefore we have limited data on its operation. The funds are also being used for scholarships to both school and college going children of the workers, fees for medical treatment and provision of a female doctor.

When we talked to the workers, in the female FGD, in RA5, one of the female workers was on the Fairtrade JMC. She had studied up to 10th standards and is very articulate. In simple terms she explained the difference between the RA and Fairtrade standards and how the workers are getting benefits from the Fairtrade. She said their standard of living had gone up after FT has been introduced, since, the children’s school fee and other educational expenses are taken care of. The after school coaching initiative is helping the children to study well. The steel cupboard helps them in keeping their valuables safely.

The medical care assistance provided under Fairtrade had benefited one of the workers who had to undergo surgery in the spine. His wife who participated in the FGD said that the surgery expenses were fully taken care of by the company. It was a tough time for her – to try and manage the household with one income that she earns as a plucker. But because of Fairtrade, she is able to manage the expenses of bringing up her two children who have been enrolled in an English language school. We heard at one other estate that the management would have funded such medical expenses (RA2), but not at the other certified estates – although they do provide interest free loans (not at the non-certified estate). Another woman whose children have completed their studies and are now employed said that Fairtrade benefits should be extended not only to the present workers but also to the retired employees of the estate.

Table 37. 2010-11 expenditure of FT premium amount in Rs.

Item	Rs.	\$
MBVTC (Mathesan Bosanquet Vocational Training Centre)	500000	11111.1
Tuition centre	100000	2222.2
Female doctor	150,000	3333.3
Medical help for 5 patients	200000	4444.4
Bus provision	200000	4444.4
Electricity amount of Rs.250 per year per worker	150000	3333.3
Death burial expenditure	20000	444.4
Issue of plucking apron	120000	2666.6
Education fee, shoes and books for children	700000	15555.5
Issue of steel cupboard to keep the clothes and valuables	1200000	26666.6

Source: RA5 Management interview.

On-going projects in 2011-12 were:

- MBVTC: provides training in soft skills and skill formation in different activities for the women, children and youth of the estate workers and the local community
- Stipend for 431 school children as compared to 316 children benefitted last year.
- Regular visit to the estate by a lady gynaecologist to benefit the female workers
- Evening tuitions for the workers children conducted in 6 tuition centres
- Speciality medical treatment to the workers undergoing surgeries etc
- Financial assistance to the family members of the deceased worker.
- A portion of the yearly electricity bill is reimbursed every year to the workers.

New projects initiated in 2011-12 were as follows:

1. Every worker is given a health mix drink of 200 ml rich in fibre, vitamins etc every day in the morning and a steel cup (200ml) to drink the mix.
2. Each gang (a group of 40 workers under each supervisor) in the estates have been provided with a thermos flask to keep the health mix hot.
3. Provision of leech powder to the workers to protect them from leech bites
4. Milk biscuits to tuition going children- 4 per child below 5th standard and 4 biscuits per child below 6th standard.
5. Each tuition-receiving child is provided with an Eveready rechargeable torch light to enable them to attend the tuitions in the evening/night.
6. Every worker is provided with a water proof rain coat as protection against rains.
7. A corpus fund of rupees one crore (10million Rs or \$20000) has been deposited with a bank and all workers completing 20 years of service and completing 55 years with an attendance of 75 per cent after 2009 will be eligible for a pension ranging between Rs.750 (\$15) to Rs.1000 (\$20) per month. The pension amount would be paid from March 2012 with a retrospective date of September 2011.
8. Financial assistance to the deceased worker family increased from Rs.3000 (\$60) to Rs.4000 (\$80) from January 2012.
9. Speciality medical treatment extended to workers' children below 18 years from January 2012.
10. A community welfare development project of medical camps at Annaipallam, a tribal area near Coonoor.
11. Blanket and pluckers apron were also provided.
12. A rural development organisation under which three schools are functioning exclusively for the children of the workers from Jharkhand where Hindi is being taught.

(Source: RA5 manager, February, 2012).

4.9.3 Awareness of Fairtrade

Awareness of Fairtrade was higher compared to the RA certification as evident from the conversation with the workers (female and male FGD in RA5 during light monitoring and female FGD during Final Survey). This is as a result of the formation of the joint body, elections to the joint body and also the joint body takes the opinion of workers on the priorities on which the premium has to be spent.

Table 38: Q 15/16. Fairtrade benefits

	FT certified
N	26
Are you aware that this estate is FT certified?	100%
Do you know what FT means?	100%
Are you aware that FT leads to social funds?	100%
Are you aware of the joint body?	100%
Have you elected worker representatives for the joint body?	100%
Have you been consulted on how the fund should be spent?	100%
Do you know what these funds have been spent on?	100%
Use of premium: education for children	100%
Use of premium: training for workers	73%
Use of premium: health	96%
Use of premium: housing	88%
Use of premium: sanitation	88%
Use of premium: water supply	69%
Use of premium: electricity in residence	73%
Use of premium: cash payments	23%
Use of premium: income generating activities	12%
Use of premium: other	15%
Rank importance: education for children	1.54
Rank importance: training for workers	3.29
Rank importance: health	2.20
Rank importance: housing	3.13
Rank importance: sanitation	3.59
Rank importance: water supply	2.70
Rank importance: electricity in residence	3.11
Rank importance: cash payments	3.67
Rank importance: income generating activities	5.00
Rank importance: other	3.25
Did you benefit from: education for children	96%
Did you benefit from: training for workers	69%
Did you benefit from: health	81%
Did you benefit from: housing	77%
Did you benefit from: sanitation	77%
Did you benefit from: water supply	69%
Did you benefit from: electricity	62%
Did you benefit from: cash payments	23%
Did you benefit from: income generating activities	4%
Did you benefit from: other	12%

It is evident that the worker responses indicate that they have heard of Fairtrade, the Premium social funds and the Joint Body, with figures of 100 per cent arising in the survey. This was also evident from the research teams interaction with a few members of the joint body who could explain what Fairtrade was, the role of joint body, the decision making process and the benefits obtained by them. Since all the workers take part in meetings and discussions concerning what the Premium should be spent on, it is not surprising that there is 100 per cent awareness about Fairtrade in RA5. Worker representatives communicate the views of the workers in the JMC which then decides upon what to invest in.

Table 39: Use of the Fairtrade Premium

Uses	% of responses
Use of premium: education for children	100%
Use of premium: training for workers	73%
Use of premium: health	96%
Use of premium: housing	88%
Use of premium: sanitation	88%
Use of premium: water supply	69%
Use of premium: electricity in residence	73%
Use of premium: cash payments	23%
Use of premium: income generating activities	12%
Use of premium: other	15%

A proportion of the FT premium has been spent on education: 21 per cent of the premium amount has been directly expended on the educational expenses for the children of workers', which has benefitted all the workers with school or college going children. Medical help for those workers who had to undergo surgeries, eye check-ups and distribution of reading glasses, appointment of a female doctor particularly to take care of the women worker's needs have been appreciated by the workers very much (FGD with female workers RA 5 LM and FS).

Table 40: Importance of items of Premium expenditure

Items	Rank
Rank importance: education for children	1.54
Rank importance: training for workers	3.29
Rank importance: health	2.2
Rank importance: housing	3.13
Rank importance: sanitation	3.59
Rank importance: water supply	2.7
Rank importance: electricity in residence	3.11
Rank importance: cash payments	3.67
Rank importance: income generating activities	5
Rank importance: other	3.25

Ranking in order of importance. 1 Most important and 5 least important.

The concern of the workers that their children should be better educated and better placed in terms of income earning opportunities is reflected in ranking the premium expenditure on the education for children as the most important expenditure (Table 40). This is followed by expenditure on health, which can effectively derail the workers below the poverty line, if there is no health cover. Compared to these two expenditures, workers seem to rank other expenditures relating to housing or electricity to third place. Income generating activities are ranked the least, perhaps because of the fact that the workers do not have time to learn such activities and earn income out of such activities. This is also evident from the poor responses to the benefits derived from income generating activities mentioned in Table 40. While direct benefits like education for children, health, provision of physical assets for the workers (steel cup-boards and water filters) have got maximum responses from the workers, benefits by way of cash benefits have received only 23 %. This is because, as the workers reported during the FGD (male and female during LM and female FGD during FS), and confirmed by the RA5 management, while expenditures are reimbursed to the workers on submission of appropriate

bills, health expenditures are directly paid (like hospital charges, purchase of reading glasses etc).

Table 41: Benefits realised due to Premium expenditure

Benefits realised	% of responses
Did you benefit from: education for children	96%
Did you benefit from: training for workers	69%
Did you benefit from: health	81%
Did you benefit from: housing	77%
Did you benefit from: sanitation	77%
Did you benefit from: water supply	69%
Did you benefit from: electricity	62%
Did you benefit from: cash payments	23%
Did you benefit from: income generating activities	4%
Did you benefit from: other	12%



Focus group discussion with workers at RA/FT certified estate including a migrant worker

5. Impacts on the estates

5.1 Labour force

The ageing of the labour force in Nilgiris tea and among the study sample means that managers are under pressure to retain the workers that they have. However, many are turning to migrant workers from the North of India as well. There are many reasons for this phenomenon: (a) relatively low level of wages in the plantation sector (b) lack of any promotion opportunities (c) personal aspirations (d) urbanization and (e) industrialization. As the average age of the worker population in the estates is hovering around 42, the estates need to think of strategies to overcome a crisis situation in the near future. A few options before the estates are mechanization, bringing in migrant labourers, and re-employing the retired workers. Within this context Rainforest Alliance or other standards have not had any impact on the labour force at the study estates.

Table 42: Number of workers by gender, 2009-12

Estate	Year	Total No. of Men	Total number of Women	Total workers	% of women to total workers	% of migrant workers to total workers
RA1						
	2009-10	138	157	295	53.2	nil
	2010-11	146	170	316	53.8	nil
	2011-12	145	155	300	51.7	nil
RA2						
	2009-10	135	293	428	68.5	nil
	2010-11	135	293	428	68.5	11
	2011-12	135	293	428	68.5	11
RA3						
	2009-10	429	551	980	56.2	0.03
	2010-11	401	525	926	56.7	0.09
	2011-12	314	458	772	59.3	0.08
RA4						
	2009-10	53	250	303	82.5	nil
	2010-11	53	250	303	82.5	nil
	2011-12	53	250	303	82.5	nil
RA5						
	2009-10	123	190	313	60.7	10
	2010-11	128	195	323	60.4	7
	2011-12	111	183	294	62.2	11
RA6						
	2009-10	437	577	1014	56.9	6
	2010-11	565	642	1207	53.2	20
	2011-12	489	583	1072	54.4	24
RA7						
	2009-10	25	30	55	54.5	nil
	2010-11	25	30	55	54.5	nil
	2011-12	25	30	55	54.5	36
Non-cert						

	2009-10	190	190	380	50.0	nil
	2010-11	118	233	351	66.4	nil
	2011-12	53	160	213	75.1	nil

Source: Compiled from the estates, 2012

There has been a reduction in workers at the non-certified estate. The manager reported that he had lost workers through retirement and had not been able to replace them. RA3 has also seen a decrease in its overall workforce. – it is facing this reduction due to the retirement of workers.

As observed from Table 42, more than 50 per cent of the workforce consists of women. RA4 has more than 80% of the workforce as women workers. Shortage of women workers in the plantation would affect the tea harvest. We notice that except RA1, RA4 and the non-certified, all the certified estates have hired workers from Jharkhand to work in the tea plantations. RA7 which hired migrant workers just 4 months before the final survey has 36% of them to the total workforce. Household interviews with the migrant workers (e.g. in RA6 in female FGD, Baseline; male FGD at RA5 during LM; female FGD RA5 in FS) point out the fact that the migrant workers are happy in the tea plantations. They have also been better accepted by the local workers in the estate.

RA does not have any role in labour market or wage fixing strategies as tea plantations are already covered under the Equal Remuneration Act.

All the estates face serious labour shortages and nearly 50 per cent of the harvest is by shears (RA2). But mechanization is not possible in all the estates because of the locational constraints. For instance, RA2 is located in a rocky region where use of heavy machinery cannot be used. They are in talks with UPASI for experimenting with machine harvesting. Management of RA4 said that they tried machine harvesting but it did not work because the machine required male operators. But like all the estates, women form 75% of the total workforce and men find it easier to be engaged as a casual labour in government schemes than work for the estates. Management of RA6 had used one man operable machine, but had to discontinue due to difficult terrain. However, he said he could use pruning machines.

5.2 Strengths and weaknesses of certification

Managers of several estates reported that the introduction of the social and environmental management system had produced positive outcomes. The RA1 manager said that adopting the RA standards has increased their vigilance about their practices. The RA5 manager said that because they meticulously maintain records of various practices adopted, it in turn helps them to check their procedures and had helped to change attitudes as mentioned above. Further, because there is overlap between the standards it is easier to stack up certifications once you have followed one – particularly RA which is very detailed. Utz certification in comparison is much lighter and less burdensome.

In the baseline survey, discussions held with estate managers were wide ranging and a number of perspectives on the strengths and weaknesses of certification were outlined. Improved commitment to equitable and sustainable production was noted by some managers. The RA5 manager said that: *“RA has widened their interest from company improvement to social and economic improvement of the workforce and local communities”*. The RA6 manager said: *“it is a better feeling for the management that we are doing something to the environment. Earlier we focussed on profitability”*. The RA5 manager said in the baseline that RA certification has

changed attitudes: *“it is only after RA, the concept of corporate social responsibility has come; before that it was just business”*. The RA2 manager felt that adopting the standard has led to changes in the attitude of both management and workers on water, wildlife and waste.

The differing requirements of export versus domestic markets were noted. RA2, RA6, non-certified managers all made the point that certification is required to access the export market, but is not necessary for domestic markets. In this case the main buyer, Unilever, enters into a six month forward contract with the estates and buys between 75 to 90% of the production. The rest has to be sold on the domestic market auction where there is no differentiation between certified and non-certified tea. Thus there will be little change on the domestic market. The RA2 manager suggested that some companies may not be inclined to spend to achieve certification, unless there are financial rewards for the certified product in the domestic market. There is also the possibility that new markets for the tea will arise where standards are not required.

The burden of documentation was noted by several managers. The major flaw of RA certification noted by the estate managers at RA1, RA3, and RA7 is the burden of having to maintain as many as 40-60 records and documentation under the social and environmental management system. For example, the RA5 manager said that at the time of getting RA certification in 2008, they produced 1082 pages of documentation. Sustaining records can be difficult with limited staff and/or staff turnover. The estate offices usually only have a minimum staff and one person in the office has to be completely devoted to maintaining the records, and it can be a problem if this person leaves. At RA7 computers have just been introduced (2010) and so it is difficult to manually maintain documentation accurately according to the manager (for example their costs of production and wildlife sighting records were maintained for a few months and then have not been updated). The manager of the non-certified estate said that *“some people adopt certification. I respect them-but the procedures of certification are cumbersome”*.

The costs of certification were also raised. For example, the manager of RA5 reported both the burden of documentation and said the audit fees are high. We were given different audit fee figures at different estates. Several estates are certified to a number of standards which also raises costs. However one estate manager reported that their audit fee was to be paid by the buyer in 2011-12.

Table 43: Costs of RA compliance.

		Total area of estate and area under RFA certification (Ha)	RA Audit Fee	Cost of RA compliance
RA1	2009-10	322.14		374857
	2010-11	322.14		365353
	2011-12	322.14		209823
RA3	2009-10	209.42		163000
	2010-11	209.42		130000
	2011-12	209.42		18000
RA5	2009-10	147.71	2564.86	1032150
	2010-11	147.71	1790.18	1383487
	2011-12	141.72	\$ *	2289932
RA6	2009-10	569.42	330000	418000
	2010-11	569.42	330000	336000

	2011-12	630.42	270000	176000
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Note: RA audit fee for RA5 in US\$, for 2011-12, the fee was to be paid by the buyers.
Source: Data compiled from the estates in 2012.

We understand that this combined data on RA compliance is difficult for interpretation, since the details of the expenditure components are not known. Further, sunk costs like laying HDPE pipelines for drinking water is a one off investment and hence would escalate the cost in a particular year. In the following years, there could be a decline, which perhaps is what seen in RA1, RA3 and RA6. In the case of RA5, perhaps because of the costs incurred towards meeting the environmental standards, the compliance cost has shot up by 65.5 per cent in 2011-12

The need for harmonization of standards was raised by managers. All the certified estate managers said that they thought there should be a merger of the different standards so that estates would only have to deal with one standard and auditor.

The managers all noted challenges relating to achieving compliance with the environmental requirements of the SAN standards, especially the banning of the use of certain pesticides. The RA1 and RA3 managers said that few alternatives are available and those that are would have to be used in larger quantities to be effective (RA1, and RA3) and they could also develop resistance. The RA2 manager said that some alternatives available in the West are protected by intellectual property and the Indian companies do not have access to them. He also said that although UPASI is conducting research on pesticides and new tea varieties that research quality has been undermined by private sector companies poaching scientists from the public sector. Also because tea is a perennial crop it takes 10-20 years to assess new varieties, and continuity of the service of the research staff is required (RA3).

Affordability was a key concern. The RA3 manager felt that only the most profitable companies will be able to afford certification because of the costs involved. The estates have also suggested that they be allowed to use the safer pesticides because otherwise it is difficult to sustain the viability of production. The Government of India provides a subsidy on the cost of certification through the Tea Board for those estates which go for certain certifications. For instance, quality assurance certification for ISO/HACCP and organic tea, the Tea Board of India provides subsidy at the rate of 50% of the certification fee subject to the ceiling of Rs.1.lakh per certificate including renewals per annum. The Tea Board has allocated Rs.1crore for this purpose⁸⁴.

The non-certified estate owner said they had stopped selling to Unilever in 2009, because they could not afford to maintain the ethical trade practices. We have no verification of this from Unilever, because we were not able to secure an interview with Unilever. In particular the payment of minimum wages to workers was mentioned as a challenge, because the non-certified estate is at a higher altitude, and the leaves get burnt in winter and the production is less. He argued that he used to pay by the weight of the harvest, but has subsequently started paying minimum wages like the other estates as there is a labour shortage and workers would leave if they were not paid the minimum wage.

The non-certified estate mentioned that it would be difficult for it to trace the suppliers of the green leaf to them (i.e. the outgrowers).

⁸⁴<http://www.teaboard.gov.in/pdf/schemes/QUPDS%20XI%20Plan.pdf>.

The RA2 manager said that presently, the RA standards are not crop specific. They should be crop and region specific. The management of RA3 also thought this. Maintaining a buffer zone in different places causes reductions in the harvest. So, according to RA1 manager, the estates have asked the Rainforest Alliance to change the rules for the buffer zone (e.g. requesting that they be allowed to use some RA recommended chemicals there). The management of RA3 also mentioned that the 10 metre barrier between road and workplace, which means a 30 km distance wall, will not be possible and will reduce the output significantly. He also added why 10 metres is required and why not some other number?

The management of RA5 states that maintaining the buffer zone causes economic loss, but for human beings it is better. Since land is precious, the business mentality to get more money by utilising these buffer zone areas is reduced. The management of RA3 stated that tea grown in South India grows only if the temperature is below 30 degrees and it is a slope. In Assam, tea is grown on the plains and water has to be removed, because it does not drain away. There cannot be uniform global standards. Therefore, in his view standards for sugarcane and tea cannot be the same. He further stated that one of the requirements of RA is to provide shade trees. Silver oak (SO) is preferred by the estates, which is not a native species, but it has properties that suits tea. But the RA standard in 2009 recommends that 12 species are planted, and the forest department would not allow the estates to lop established trees. Also these species would compete with tea for nutrition and the shade would be on a larger area and hence are not suitable for tea (view shared by management of RA5 also).

According to the management of RA3, the tangible and intangible benefits need to be understood and realised: *“RA initially was thought of as an insurmountable wall. But a close look at it revealed RA is not iron curtain”* (RA3 management interview). He further added that *‘actually changing mindsets is difficult. If the RA standards are followed voluntarily then RA is won’*.

Management of RA1 says there are no weaknesses in the RA system. It could be a weakness if one is forced to do it and if the estate feels it is counter-productive and does not yield any returns. On the other hand RA1 states that RA standards are general standards to create improvements. In fact, he says that the RA authorities were surprised that RA1 was doing everything required under RA standards even within the framework of PLA itself. But documentation was not done under PLA.



Tea processing in a certified factory

5.3 Market Access

The tea estates are adopting certification because it widens their market scope and RA certification is required by their main buyer making it a *de facto* requirement. Most of the estates visited have more than one certification. The estates follow food safety standards as well as social and environmental sustainability standards (SEVSS). As most of the estates have their own factories in which the tea is processed, it is essential for them to have certification against the International Standards Organization (ISO) 9000, ISO 22000 certification¹⁶, and Hazard Analysis Critical control point (HACCP)⁸⁵. These three certificates deal respectively with (i) the quality of the process of production followed, (ii) food safety standards and (iii) critical points in food production where safety issues could arise and how they are addressed to prevent things going wrong.

The other certification schemes are voluntary in nature. Four out of the seven RA estates have been certified by the Ethical Tea Partnership (ETP).⁸⁶ ETP compliance was obtained by most of the estates in 2004 and 2006. The ETP aims to improve the lives of tea workers and ensure the tea consumers that the tea has been produced in an environmentally and socially sustainable manner⁸⁷. However, ETP is not a third party certification system, because ETP decided to work with other standard systems such as Rainforest Alliance, which do provide third party certification.

The non-certified estate is not exporting and therefore has not pursued certification, although it was part of the ETP previously. However, it dropped out of ETP prior to the study. The manager of the non-certified estate said that he was earlier supplying to Unilever when they were certified by ETP, but later he came out of it. Now they are trying to get the Good Agricultural Practices (GAP) certificate for which inspection is done by the Federation of Indian Chambers of Commerce and Industry (FICCI). Though this would not help him in the short term, except for improving documentation, the aim would be to secure market access in the future. It would not be too onerous for him to obtain GAP certification as the pesticide standards required under GlobalGAP are the ones he has been following because of his ETP certification (even though he has already left). The other requirement is to maintain fire safety, which was a new requirement he had not heard of previously. Unless there is mutual benefit, the non-certified estate manager said they would not join RA or Fairtrade.

The managers of the certified estates indicated that they would follow the certifications that their buyers required – on average about 60% of the tea is being exported. During the final survey all the estate managers said that they were entirely driven by the buyer's demand and this is why they adopted RA certification. All the estates except for RA5 (which has gone for Fairtrade and UTZ certification) have RA certification and Ethical Tea Partnership for the estate and ISO 22000 or (HACCP) for the factory. Managers of RA3 and RA4 said they are presently

⁸⁵ISO 22000:2005 specifies requirements for a food safety management system where an organization in the food chain needs to demonstrate its ability to control food safety hazards in order to ensure that food is safe at the time of human consumption. It is applicable to all organizations, regardless of size, which are involved in any aspect of the food chain and want to implement systems that consistently provide safe products. HACCP is an internationally recognised and recommended system of food safety management. This is sometimes referred to as 'controlling hazards'.

⁸⁶ETP is an alliance of tea packers and a member of the UK Ethical Trading Initiative. <http://www.ethicalteapartnership.org/index.asp>, accessed on 17th June, 2010

⁸⁷http://www.ethicalteapartnership.org/document_library/31155039_ETP_Global_Standard_-_final_version.pdf accessed on 22nd June, 2010.

not interested in Fairtrade as buyers are not interested in yet giving signals that they are keen to see their suppliers participating. If the buyers are interested then RA1 and RA4 would think of getting FT certification. Also if the principles of RA and FT complement each other, then RA1 would consider getting Fairtrade by '*passing their exam*'. Fairtrade requires minimum wages to be paid, but these are already being paid. The wage situation was different 20 years ago and the industry was not doing well.

RA5 is the first one to become UTZ Certified for tea in the entire Nilgiris. Obtaining certification to the UTZ Certified standard was a requirement for coffee exports and it has just emerged as a standard in tea. Unilever does not buy their entire produce, so they will have to look for a buyer for their rest of the product, hence diversifying the standards they are signed up to. The other reason is once the basic infrastructure is already in place it is not so difficult to stack up standards. RA5 also notes that Fairtrade pays a premium of 0.50\$ for every KG of tea bought which goes to the workers for their developmental activity and workers should be happy with that. The manager of RA5 expressed puzzlement that while all the standards are following similar rules and regulations, they cannot be combined to form just one standard. Unilever asks for HACCP and Rainforest Alliance certification. Finlays asks for Fairtrade and they do know to whom they would supply UTZ certified tea.

The non-certified estate manager has already thought of getting his estate certified by Utz. This agency has already done one visit and given them the manual. This would be a guide for the estate to see the conditions that can be accomplished in different timeframes. From this, the management got to know that they will have to pay attention to the details of the sourcing of tea leaves from different places, and track them which would be very difficult for him. He also mentioned that the GAP certification is not pursued for tea because though they did two audits, the external evaluation agency did not visit the estate so far. He added whichever is the certification the overall aim is on safety of the produced and consumed. Irrelevant to whether they follow any certification, following UPASIs recommendation, the management said that they follow the 'safe harvest period' of not entering the field where pesticide had been sprayed.

RA3 is also expecting to obtain Utz certification in the near future. RA6 has been preparing to get itself certified Fairtrade. RA4 has done the preparatory work to get the ISO 22000 for the factory.

RA2 said they cannot obtain Fairtrade certification, because of the different rules pertaining to the small growers that they buy from. As per the current rules, which are for plantation agriculture, all the smallholders would have to work on the farm and live on the estate for the estate to achieve Fairtrade certification. At present they have 165 small outgrowers all of whom are RA certified.

The other estate managers/owners reported that are not considering seeking other certifications at the moment, because they do not have surplus to be sold and because most of their produce is taken up by sales to Unilever, which is only requiring RA certification. They do not need to look for other buyers or markets that might require other types of certification. RA1, RA2 and RA3 said that if the buyers demand it, they will consider seeking other certifications. Similarly, RA4 managers said that the adoption of RA is due to buyer demand (RA4).

Management of RA4 pointed out there are differences of opinion within the EU market. Germany only insists on minimal pesticide residue. Switzerland and the Netherlands also insist

on stringent minimum residue levels. The US does not emphasize other standards and RA4 supplies to tea to Starbucks and Tazobrand.



Certified factory tea processing activities

5.4 Green Leaf Quality

In the case of tea the quality of the processed tea depends on the green tea leaves plucked. In the baseline survey it was found that the pluckers are told the type of leaves to be plucked which is '2 leaves and a bud'. Managers in RA2, RA3 and non-certified tea told us that in order to have good quality, harvesting has to be done every 10th day (hand plucking) or every 15 days (shear harvesting).

RA2 maintains the quality of the tea fiercely by pruning 25% of the estate. During the peak season 25% of the estate is not harvested because of pruning, which subsequently improves the quality. Traceability is possible with RA2's supplier estates, because of the continuous monitoring of the estates. RA2s' production and yield is the highest compared to other estates.

Management of RA5 said that, they have provided pamphlets to the suppliers and have instructed the suppliers that any spraying can be done only on the advice of the management of RA5. When they found that a couple of suppliers deviated from the norms, they stopped buying from them.

The official from Container Tea Commodities we interviewed and through whom all the certified estates export to Unilever said that the standards of Rainforest Alliance are part of the quality assurance of the product. However, RA does not impose standards on pruning schedules, but pesticide use conditions and soil conservation measures may contribute to better quality tea.

5.5 Tea production and sales

On average, the estates are producing a million kilograms of made tea, but more can be produced when the weather is favourable. All the estates except for RA1 are engaged in the production of orthodox tea.

Green tea is produced by RA1, filling a niche market. Even when the price of black tea is low, green tea fetches a better price. Green tea production in India constitutes 1% of the total tea production. With an estimated 800,000 kgs of made tea, RA1 constitutes around 7 to 8% of the total green tea production in India. Of this 20-25% is secondary grade which is sold locally to buyers who are interested in the tea's polyphenols for medicinal purposes. While 75 % of RA1 tea is exported through Unilever (for 40 years), a small percentage of RA1's tea that is more

whole leaf variety is sold to Amritsar in Punjab from where it might be sold to buyers in Afghanistan and other such places. The non-RA certified tea of RA1 is processed separately and sold to Morocco and decaffeinated tea is also sold in Germany.

CTC tea is produced by RA2, RA3 and RA5, as well as orthodox tea. The management of these estates said that 90% of the orthodox tea produced by their estates is exported, while the CTC tea is sold in the domestic market.

All the estates except for RA7 have a factory inside the estate itself. Only RA7 supplies tea to RA5 because it does not have its own factory.

RA7 suffered huge losses due to converting the entire estate in to organic farming, which in the initial period in any case results in lower yield and losses. In the final survey RA7 reported a decline in tea production from 5lakh kilos to 390,000 kilos in April 2011. This was due to a shift from inorganic to organic production and then again to inorganic cultivation.

Table 44: Production and sales figures

Estate	Year	Area HA	Production KG			Sales of tea KG		
			Green Leaf	Made Tea	Yield per hectare	Sales of tea domestic	Export Market	% of Exports
RA1	2009-10	322.14	2892618	777155	8979.38	167481	477200	74.02
	2010-11	322.14	2942221	760370	9133.36	223663	644800	74.25
	2011-12	322.14	2480640	627642	7700.50	169985	395200	69.92
RA2	2009-10	123.99	11456260	2744464	92396.64	644652.5	1884119	73.2
	2010-11	123.99	11526215	2688025	92960.84	755132	2002160	72.1
	2011-12	123.99	10632849	2588042	85755.70	826231	2059835	70.7
RA3	2009-10	209.42	5111847	1391955	24409.55	655968	1038553	61
	2010-11	209.42	5346704	1460489	25531.01	623317	1196496	66
	2011-12	209.42	6745275	1847447	32209.32	747015	1086612	59
RA4	2009-10	138.88						
	2010-11	138.88						
	2011-12	138.88	3845831	923197	27691.76	353678	546340	58
RA5	2009-10	147.71	2823606	682748	19115.88		424000	62.1
	2010-11	147.71	2727261	659179	18463.62		428000	64.93
	2011-12	141.72	2746918	616683	19382.71		572000	92.75
RA6	2009-10	569.42	7762000	1957000	13631.34	1024000	861600	44
	2010-11	569.42	7564000	1861000	13284.09	1022000	865100	46
	2011-12	630.42	8123000	1986000	12885.83	879000	1097800	55

Source: Estate managers

It is evident from Table 44 that yield has declined in RA1, RA2 and RA6, while in RA3 and RA5 yield has increased in 2011-12.

RA2 and RA4 were said by the managers to be better yielding estates, because they have under taken long term replanting, harnessing of water, the basic soil fertility and area specific soil quality, and rainfall have helped them. Also the family managed business ensures there is continuity in programmes and investment.

In the case of RA4 in the late '80s the management invested heavily in their fields, for example in changing the topsoil, strict new planting and pruning which is sustaining the estate now. According to him, all that RA wanted them to do for soil productivity, *'they had done 10 years back and are now sitting quietly'*.

5.6 Tea prices

It was hard to get the actual prices paid to the estates for their certified tea by their buyer. The estate managers were not willing to disclose this information, because of its commercial nature. The price varies according to the quality of the tea, but the buyers request certain strict quality standards as well. However, it was not possible to establish the price per Kilo received by the RA estates because the information was not made available.

In RA2, the owner said the advantage for them of trading with the buyer in question is that the contract price is fixed for a period of six months in comparison with the auction price which varies. The auction price may be above or below the RA price, but the Unilever contract is stable in terms of prices. The owner stated that there is no price difference between the RA and the non-RA tea purchased by Unilever.

In the beginning, the RA2 owner said that audit and certification fees were paid by Unilever to begin with, but this is not now the case. But he does not view it as a constraint. Over the years, he may even get out of the auction system and concentrate only on exports. Presently an average of 70 per cent is exported while 25-28 per cent is sold in the domestic market. Less than 2 per cent is sold through auction (information provided by RA2, 2012). He feels that he has been working with Unilever for many years and Unilever requires their tea for the required blend: thus Unilever would not like to disturb their trading arrangement. This is also the view of the management of RA3 as well.

RA3 says, the exports or the forward contract is based on present market and futuristic prices. For example, the RA3 manager said that 30 per cent of the sales may or may not be at a better price than the auction. But the price is based on global demand and supply. Domestic auction price could be advantageous. Management of RA3 said Unilever pays 5 cents more per KG on their purchase because of certification. RA3 also exports directly i.e. it does not sell via the auction.

According to the non-certified estate, CTC tea fetches a much higher price in the domestic market. Export prices are based on the grades of tea mainly and if the MRL limit is high then the consignment would be rejected.

Further, the auction, which used to take place on Thursdays and Fridays in the auction hall in Coimbatore, now is e-based. One drawback of this auction according to him is that it requires the buyer to make payment to the seller immediately after which the product is released by the seller. Earlier, two weeks grace period was provided to the buyer. If the buyer fails to make payment he is blacklisted from auction.

Unilever and Nestle made payment within 90 days and this should be reduced according to the non-certified estate manager.

5.7 Outgrowers

Except RA3 and RA7, all the other RA estates buy tea from suppliers who are RA certified and thus meet the total demand for tea. RA standards necessitate that the RA standards should be followed by the entire supply chain. RA1 said that they have 58 small growers with maximum

5-6 acres of land in 4 clusters of villages. But the area is continuous. RA2 has 179 suppliers of which 166 are certified. Because RA2 has been working with these small growers for long, it is allowing some more time for the 13 suppliers to adopt the standards.

The question arises as to how the managers of the estates ensure that their outgrowers maintain all the standards. Management of RA2 said the small suppliers do not provide housing as they depend on hired labourers to work for them. These casual workers would come for 3 or 4 days and finish the plucking and other jobs and come again after 15 days. So expenditure on providing housing, training and monitoring is less for the suppliers. They do not have a factory either. However, the suppliers are also trained in waste management. Suppliers should have separate store room to maintain chemicals and the use records according to the RA standards. Management of RA2 undertook the expense of providing PPG to all the suppliers which no other RA estate has done. This management also printed all the records and provided to the small growers for easy maintenance and uniformity. Also, the group manager and the agronomist of RA2 visit each of these estates every day to check the register maintenance and compliance and carry out the internal audit. They also carry out frequent visits to hot spots.

During the LM, the management of RA2 arranged to visit two of their outgrowers. Here we found that the pesticides were kept in a separate place and there was a separate washroom for the sprayers. Area under both these outgrowers was small (15 and 10 acres respectively) and hence they do not have any housing for the workers. Workers from the nearby villages are hired for plucking and spraying operations. These temporary workers are paid Rs.150 a day (\$3) and during the season time they are paid Rs.350 a day (\$7). The RA2 manager also mentioned that it is difficult to do the medical tests for the sprayers in the case of small outgrowers. This is because small growers often rely on the temporary workers and hence the same worker may or may not be available for spraying all through the year. But as mentioned in the manual the small growers provide personal protective equipment (PPE) to the sprayers.

According to the RA2 group manager, one of the small scale suppliers we met had 15 acres and the yield is 9000 KGs per acre which is higher than RA2 which produces about 6000 KG.

RA2 according to the owner is doing far better than the Kenyan producers. RA2 also mentioned that because some of the suppliers are very small that they do not spray any pesticides at all. RA2 is moving towards 100 per cent certification (out of 179 outgrowers supplying them with green tea, 166 are certified). RA auditors visit a random selection of certified outgrowers.

In the case of RA4, 35 per cent of the raw material comes from small growers. But his small growers have on an average 25 acres of tea and hence it is easy to convince them about the standards. He has to bring in 8 more of the suppliers under the RA fold. For the suppliers, training, maintaining spraying records and pesticide traceability in the tea are done by the agronomist, who has been employed by RA4 to maintain and to send the reports about the suppliers. Management of RA4 said they would not drop the suppliers if they are not able to comply with RA standards. On the other hand, they would focus on auction in the domestic market. 15 per cent of the total output in any case is auctioned.

RA5 quoted an incidence of removing one of the supplier estates from the list of suppliers for violating the chemical handling rule. Though it meant that they lose the crop, according to RA5 it sends a message to other suppliers that they have to be careful in these matters. According to RA5 awareness is getting created. If more small growers agree with minimum wages they can be brought under the RA fold. Besides the small growers should also stop hunting, provide

PPG and other standards should be followed. RA7 has been supplying to RA5 for long and it just continues after RA as well. Manager in RA7 told us about the spraying schedule provided by the RA5 group manager.



Smallholder suppliers selling to RA certified estate

5.8 Estate costs of production

A study conducted by the tea board cited in the CAG, GOI report 2011-12, finds that the costs of production of Indian tea are very high compared to the costs of other tea producers from Kenya, Malawi and Sri Lanka. In the absence of any recent estimate on the cost of production of orthodox tea, we have provided the cost of production of CTC tea in Table 45 in different states of India.

Table 45: Cost of Production of CTC tea

Details of components of cost of production (Rs Per kg)									
Particular	Sikkim	Karnataka	Assam	Tripura	Himachal Pradesh	Kerala	Tamil Nadu	West Bengal	India
Cost of green leaf	182.50	31.15	42.08	26.64	42.98	41.44	41.23	46.71	42.13
Wages & salaries	79.51	8.26	5.78	7.78	11.64	4.65	2.40	4.22	5.23
Cost including power, fuel, depreciation, packaging etc	65.89	13.25	15.62	12.61	13.00	11.90	11.73	18.30	15.23
Cess	0.37	0.26	0.61	0.13	0.23	0.30	0.23	0.27	0.45
Production cost	328.27	52.92	64.09	47.16	67.85	58.29	55.59	69.50	63.04
Admin overheads	22.52	0.34	3.06	1.52	0.00	1.83	1.31	8.52	3.63
Cost of selling including transport outward, warehousing, sampling cost etc	3.12	1.20	3.74	4.44	10.55	0.72	5.18	3.09	3.45
Interest on working capital	0.00	0.69	2.97	0.00	0.35	0.00	0.00	3.11	2.23
Total cost of sales	353.91	55.15	73.86	53.12	78.75	60.84	62.08	84.22	72.35
Average realization	239.18	54.78	65.78	54.21	87.04	54.77	62.41	83.78	67.41

Note: These figures have been compiled by the Tea Board from a study conducted to estimate the cost of CTC tea during 2004 -05 to 2006-07.

Source: Chapter 6, Development of Tea-Costs Reduction, P.50, Report on Role of Tea Board in Development of Tea in India, Report no.10 of 2011-12, Comptroller and Auditor General of India, New Delhi.

As shown in Table 45 the costs of production of tea in Tamil Nadu is relatively low compared to that of West Bengal, Kerala and the all India average. Interestingly, the wages and salaries is the least in Tamil Nadu and the cost of green leaf production is the highest (though the components of this cost of green leaf production is not mentioned, we assume, it could be the cost of fertilisers and insecticides).

However, in the present study where most of the estates are producing the orthodox tea (*“orthodox tea production is more labour intensive”* (Owner non-certified, Final Survey), labour is the main cost in production according to the estates (RA1, RA2, RA3 and RA6). Table 46 below also reveals that the percentage of labour expenditure to the total expenditure ranged from 11 per cent to 65 % in the case of certified estates. The RA3 manager said that most of the production costs in Nilgiris are higher than in Assam, because the wages are higher at the former. The Nilgiris Planters Association has been lobbying with the government to bear some of the social costs. Estates feel that if some of the social costs are borne by the government it would reduce their burden (RA1, RA3 and non-certified).

Table 46: % of Labour cost

	Year	% of labour to total cost
RA1	2009-10	26.91
	2010-11	22.36
	2011-12	24.75
RA2	2009-10	
	2010-11	
	2011-12	65.00
RA3	2009-10	67.14
	2010-11	71.52
	2011-12	65.46
RA5	2009-10	11.45
	2010-11	11.29
	2011-12	12.58
RA6	2009-10	37.99
	2010-11	36.43
	2011-12	33.35

Note:(1) % share of labor cost was provided by RA2, RA3 RA5, RA6

2. Calculated from the pluckers cost to the total expenditure in RA1

Source: Compiled from the estates 2012.

During the Final Survey, Management of RA2 said that they have taken measures to contain their costs of production and they have recorded lower costs compared to other certified estates (they have compared at meetings). However, this is not because of the RA standards. Wages account for 60% of the cost of production according to the RA2 manager. Costs are rising not because of RA standards, but because of the rising price of inputs, particularly labour and fertilizers (RA2), meaning that margins are reducing and he did not expect any changes from Unilever on price. The RA2 and RA4 managers said that no Sri Lankan estate had made a profit recently due to the rising costs. The managers at all the estates uniformly mentioned the rise in fertilizer prices of Rs.3.5 to 4 lakh, especially during Oct-December 2011. The manager of RA3 said that the cost of chemicals per hectare is Rs.3000. He did not mention the per

hectare cost for fertiliser, but he said there had been an increase in the cost of fertiliser. Owner of RA4 said if he were to hand over the estate to his son, his son would probably give up because it is too difficult to run under current conditions. He explained that there has been an overall increase in the costs of production with fertilizer rising in cost by 20 %, labour costs up 10%, electricity rising 10 %, and fuel up 20 %. Tea prices received from buyers have not increased according to this manager. Table 47 provides a glimpse of price of orthodox and CTC tea in the Coonoor tea market. As per this Table the comparison of two corresponding periods in 2011 and 12 show that prices have declined in 2012.

Table 47: Combined details on quantity and price of leaf and dust tea during 2011 and 2012*

Sales and price details of leaf and dust combined			2012		2011	
			Qty in KG	Average price inclusive of excise duty	Qty in KG	Average price inclusive of excise duty
Leaf and dust combined	Sale no.06#	Orthodox	53280	82.88	56583	87.52
		CTC	867575	71.74	798909	72.93
		Total	920855	72.38	855492	73.9
	Sale.no 01-06\$	Orthodox	413306.5	78.34	437765	80.41
		CTC	5714638	69.14	5054680	71.35
		Total	6127944	69.76	5492445	72.07

Notes# and \$ indicate the sale that happened on 10th Feb 2012 and cumulative sales that happened till 10th Feb respectively. Corresponding figures for 2011 are provided

Source: Coonoor Tea Market Report, 9th and 10th Feb. 2012.

5.9 Costs of certification

There are two types of costs associated with standards: a) administrative costs and payment for the audit, b) the costs of implementing the standards (compliance).

All the certified estates obtained their certification by Rainforest Alliance (RA) in the year 2008. The managers of the majority of the estates in the study (RA1, RA2, RA6) said that Unilever encouraged them to adopt the RA standards and provided support for this in the first two years. *“Unilever had introduced a premium for all RA purchases for an initial period of two years ending Dec 2009. The premium amount was 10 US Cents per kilo, over and above the contracted price; this was to basically help producers to offset the initial cost. They also supported the producers for the initial audit fees. All estates received the same amount. The logic behind this initial help was that producers would receive increased interest in their teas with progress of time, resulting in better prices which would help offsetting future costs”* (personal communication from CEO, Container Tea commodities). This same key informant also said that Unilever does not now pay this premium.

The premium provided by Unilever more or less paid for the various improvements that the estates had to undertake (according to the management of RA3, and RA2). Unilever is an important buyer of tea for these estates and, as RA3 noted, Unilever buys 18-20 % of the world’s tea and so it is ‘important and desirable’ to be linked to them. The preparation for RA certification began in 2007 or early 2008 and the final certification was awarded in November 2008 for all the estates under study.

RA certification does involve costs (according to the RA1 management) and is expensive to maintain but worth maintaining because of its benefits (according to RA4). The premium paid by Unilever has helped to cover the cost of achieving and maintaining RA compliance standards and of obtaining certification for the majority of the estates. While the certificate

itself is valid for three years, the audit is done annually. The estate has to pay the cost of preparing the report and for the cost of auditing, which is \$1500-2000 for an audit of an estate of about 200 hectares.

RA5 observes that the direct costs of US \$6274.65(5000 Euros) are not so much⁸⁸. But post-RA certification they now have to maintain 40 record books for sprayings, to wildlife sightings and line repairs. However, the main cost according to RA6 is infrastructure development (e.g. water purification hardware). RA6 feels that this capital expenditure would have to be incurred in any case. Recurring expenditures for a year would be around US \$27, 817. Total expenditure of RA6 is US \$ 2781787 (Rs.13 crores). RA certification process would be around 1 Rs / kilo. But because the capital expenditure is not recurring in nature, the expenditure comes down drastically. RA6 added that *“when you have a certification, you want to maintain that standard. Depending on the investment or profitability some investment would drop. But this kind of work will have to continue”*.

The manager at RA3 said that one or two estates have not continued with Rainforest Alliance certification after the initial certification and that RA certification is only required for the export market. He also said that there is no permanent relationship with buyers, and so the tea can actually be sold at auction.

The non-certified estate had an ETP certificate from 2004-2007, but did not opt to continue with certification after this. This estate manager said that they could not afford to pay the minimum wages at that time during the winter months when due to frost, the leaves get burnt and production is reduced. Temporary and casual workers were paid according to the weight of the harvest at that time, which was not acceptable according to the ETP standards. However, now the estate pays minimum wages because of concerns that workers would leave the estate and go to other estates which pay minimum wages (Management interview, non-certified estate). The management of the non-RA certified estate has begun to engage with the Quality council of India in April 2012, which certifies estates for good agricultural practices. There are a number of overlaps with RA criteria relating to energy use, agrochemical practices and conservation, including sourcing of fuelwood etc.

A premium price is not guaranteed by certification to RA, but some buyers would offer a better price. The owner of non-certified estate said that estates seek certification because the tendency is to export the best quality abroad and the next grade qualities are sold on the domestic market. Because he is focusing on the domestic market alone, he wants to provide the best quality to domestic market.

The management of RA6 observed that once the certification process has been initiated for one standard at an estate, then the process for getting certified to other standards easier⁸⁹.

It appears that organic certification is not popular among the estates. RA7 adopted organic cultivation on its entire tea acreage in 2004-05. In the following years the yield suffered and the estate started incurring enormous losses. It became financially unviable for the estate to continue, and so the management decided to revert back to conventional cultivation (in 2009).

⁸⁸Here as well as in subsequent places in the baseline report, the Indian rupee has been converted at the rate of 1US \$=46.78 as provided in the www.xe.com accessed on 5th July 2010. In the subsequent years, I have used Rs.50.

⁸⁹This is because there is overlap in the provisions of the standards and due to the new reporting systems in place.

RA5 is in the process of getting organic certification for 25 (14.7 %) hectares out of its total 170 hectares on an experimental basis. It notes that organic cultivation is expensive, but still fetches a higher price compared to the tea produced by the conventional method. Though the prices are higher, demand is thought by producers to be erratic reducing the attractiveness of the standard. In the previous year, RA5 did not sell any organic tea, but prior to this an American company bought organic tea from them. RA6 on the other hand observed that it is not interested in organic cultivation at all as the market is small and not attractive.

According to the key informant from Container Tea (final survey), organic tea market is not growing worldwide. Due to recession, prices of organic tea suffered a setback. According to him, the UK which is the biggest consumer is 'not showing any commitment for organic tea'. In the US, the market is growing but it is very small (final Survey).

Table 48: Profile of the selected tea estates, 2010

Estate	Size of estate (hectares)	Products	Total production (million Kg)	Export Market (%)
RA1	195	Green tea	0.8	75
RA2	185	80% Orthodox and the rest CTC	2-2.5	Most of it exported
RA3	404.8	Orthodox and CTC	1-1.5	50-60
RA4	182.88	Orthodox	1	70
RA5	170	Orthodox (99%), green, organic	2	90
RA6	Total planted area 569	Orthodox (90%), CTC rest	1.7	90
RA7	80.9	Supplies leaves to RA5	0.085*	
Non Certified	150	Orthodox tea	0.8	100 per cent domestic market.

*calculated from the made tea per hectare provided by RA7⁹⁰.

Source: Compiled from the management interviews

⁹⁰ RA7 yields dropped after it converted to organic production

6. Wider impacts

Given that the impacts of certification have not been extensive, as explained in the preceding sections, it is not likely that there will be wider impacts, e.g. on the local community or regional economy.

Maintaining buffer zones to prevent the drift off of pesticides, checking the water quality at the outlet points of the estate and construction of soakpits in the wash areas are important measures that the certified estates have undertaken are also part of the community related services, which ensure that the neighbouring communities to the estate have cleaner air and water. However, we were not able to directly measure water and air quality.

A few of the certified estates have been engaged in providing community services even before adopting RA standards:

- Management of RA2 had been running a school for the mentally handicapped for 6-7 years. He has also provided a big school bus to ferry the children back and forth to the school because they were going precariously in autos. In the primary school within the estate, of the three teachers, two teachers are paid by RA2 and one is paid by the government. When the Nilgiri planters Association celebrated 150 years, a polytechnic college was started with contribution from all the estates. RA2 has recruited a mechanical and electrical engineer from this college.
- Management of RA7 has donated land for the primary school which is just outside the estate. This is a primary school with classes' up to 5th standard.
- The management of RA5 has started a vocational training program in 2009 for the children who have done their 10th and 12th standard. This program is conducted in the upper portion of RA5's warehouse in Coonoor, where the children are trained in the use of computers and spoken English. According to the management, this skill formation is not only helping their estate children but also children from 50 other estates in the region. Again, it is not clear whether this is in any way related to certification.

7. Future challenges in tea production

7.1 Auctions, buyers and purchasing practices

The flaws in the auction system mean that direct sales are more attractive to suppliers, but at the same time they can be dependent on just one buyer, and therefore have little bargaining power in view of their purchasing practices.

Prior to certification the estates were selling their tea in the three (Coonoor, Cochin and Coimbatore) auction centres, from where the tea was then exported. After Rainforest Alliance certification the RA2 manager said that they sell most of their tea to specific buyers at a pre-determined price (forward contract) for a specific period (at the time the interviews were held, all the estates had entered into six month contracts with Unilever). Prior to certification they sold through the auction and a percentage to direct exports, but now the majority of sales are to Unilever and a small percentage is sold on the auction.

RA1 has been supplying to Unilever for the past 40 years. The green tea of RA1 purchased by Unilever is sold in North American markets and in the past directly to Morocco. Unilever buys the best grade orthodox tea (RA2, RA6). The next grade of orthodox tea is sold in the domestic auction centres and then it is exported. RA4 and RA5 managers mentioned that the tea sold to Unilever was shipped to Rotterdam, Trafford Park (UK), St. Petersburg and Poland. The RA5 manager also said that RA certification also means that they can compete in the international market with a smaller number of suppliers. He also said that the tea bought by Unilever and Finlays is sold in the UK while Mitsui sells in Japan. The manager of RA3 reported that their main markets are the UK, the USA and Taiwan. RA6's management observed that the tea sold to Unilever is sold in UK, Poland and Russia. They also mentioned that the export destination depends on what kind of blend is required in those countries and what they can supply.

The non-certified company manager (which dropped out of the ETP certification process in 2007) says that certification helps in export, but to export requires observance of very strict rules on product quality. *"If the density factor is not there then we can't export. Like the tea bags. If the granules are big and bulky and can't be fit inside the small little box, then it will get rejected⁹¹"* and *"Tea is hygroscopic because it absorbs the smell of the neighbouring objects"*. Because of these stringent quality requirements the non-certified estate has decided to focus on the domestic market which is large and competitive. Their tea is sold at the domestic auction where both the buyers and the sellers are registered. Within two weeks of the auction, the seller has to be paid – if the buyer defaults on his payment he gets blacklisted. Even if the seller is selling at loss, they benefit at least from the greater security of receiving their payments soon. However, the non-certified estate manager is avoiding the domestic *retail* market because a) they will have to extend long credit to the buyers and b) because it is dominated by TATA, a large diversified public limited company which can maintain consistency in quality throughout the year and has strong brand recognition. RA7 yields dropped after it converted to organic production, and this has since affected the financial viability of the estate.

7.2 Bargaining power

All the certified estates sell the majority of their tea to Unilever, with just a small portion of the tea auctioned on the domestic market. The managers said that the prices of the tea were

⁹¹India continues to export tea in commodity form whereas the demand is shifting towards tea bags. He observes though Indian teas are light, they do not easily infuse in tea bags (Asopa, 2007).

“OK”, but would not share further details. The managers of RA2 and RA4 said that they had travelled to the UK to talk to Unilever about the rising costs of cultivation and tea prices they are paid, but Unilever did not budge from its position.

7.3 Labour costs and tea prices

Labour costs alone contribute to around 50% of price realisation at the plantation. The owners claim they cannot afford to increase wages and also pay the benefits due to the workers under the Tea Act. The competitive pressures of tourism and urbanisation are an incentive to many owners to exit the business of growing tea. But while wages at the plantation level are 50% of the realisation, they constitute only 10-12% of the retail tea price (Fairtrade Foundation⁹²). The sector can afford to pay better wages by redistributing profit margins. The main hindrance to this is the stranglehold over tea prices at the auctions.

7.4 Demographic patterns in the labour market

The changing demographic pattern of the industry is another concern for the management of all the estates as the age profile of the workers is in the range of 45-50 and the younger generation is not interested in working in the tea estates.

All the workers said that their generation did not study and working in the estate came naturally, because their parents were also working in the estate. They have not learnt anything else other than working in the estate. But now, these workers do not want their children to work in the estate. They want the children to be educated and get good jobs and the majority of workers' children have migrated to other regions to find other work (LM).

All the estates face severe labour shortages and are extremely concerned for the future sustainability of their businesses. Absenteeism is a problem. The non-certified estate manager said that workers take leave from the estate and work for the MGNREGA or work as a casual labourer elsewhere to earn Rs.400 / day. The certified estate managers also reported high levels of absenteeism: *“We know about it. But, how do I prevent it? I cannot take any disciplinary action on the worker because he is availing his right”* (RA1 manager). This view was echoed by other managers as well (RA2, RA3, Ra4, Ra5 and Ra6).

The non-certified estate manager said he is buying leaves from other tea estates to contain the overhead charges of the estate, which are currently 20 to 30%. The estate produces approximately 4000-5000 kilos of green leaf a day, and this is supplemented by the purchase of closer to 2000 kilos from outside to run the factory efficiently. Because of the labour shortage, the leaves on his estate are not plucked on time. A dispute occurred when the workers did not agree to the incentives that he offered and in the process delays on plucking meant that the leaves became coarse. When these tea leaves were used in the production process, it reduced the quality of the tea and the prices obtained were very low. This situation has affected the bottom line of the estate since the financial year 2011-12. At the same time, fertilizer prices have increased Rs.3.5 to 4 lakh Rs. The manager has then reduced what he terms “fringe benefits”. He said that his estate produced 14.75 lakhs of green tea last year and averaged 2652 kilos per hectare (made tea). Further since April 2011 prices have declined which impacted the tea sector in general. Conflicts in Syria and Libya have affected the tea sector considerably (e.g. 20 to 30% of Indian tea goes to Syria).

⁹² Fairtrade Foundation (2010), “Stirring up the Tea Trade: Can We Build a Better Future for Tea Producers”, A Fairtrade Foundation Briefing Paper, February.

A critical and immediate problem for the tea estates is a shortage of labour. According to a small grower we interviewed: *'In two decades from now, labour will not be available to pluck leaves'*.

Hence, in order to overcome the shortage, efforts have been made to bring in workers from Jharkhand, Northern India. The Government of India (GOI) report (2009) notes that, more than 5% of the plantation workers are migrants from other states⁵⁰. Managers at RA3, RA5, RA6 and RA7 have already recruited workers from Jharkhand. The management at RA5 said that one of their managers goes to the village from where people have already come to their estate, and they make a presentation on the type of livelihood opportunities available at the estate and also shows a video of life on the estate. In order to facilitate the migrant workers' settlement process, the management of RA3 and RA5 said that they provide a train fare and fixed settlement allowance to the families to buy essential things to start their home in the estate. Both these managers observed that these workers quickly adapt to their new situation. At RA5, this group now represents more than 25% of the workforce. The management of RA5 has also introduced a teacher to teach Hindi in its school for the sake of migrant children. The management of RA2 had already scheduled a visit to Jharkhand and personally screened the workers, so that the existing peaceful atmosphere in the estate is protected. The management of RA4 said they are reluctant to bring in migrant workers as it would involve complex formalities like registering these workers with the police. The management of the non-certified estate is now currently exploring ways of bringing migrant workers to their estate (Final survey).

In bringing in migrant workers, the estates target those states which are relatively poor and have poor working conditions so that, workers from such states consider migration to be an attractive option. This was evident from our interaction with the migrant workers in RA6 (female household interview, BS), FGD with male workers (RA5, LM,) and female workers (FGD at RA5 FS), who uniformly stated that compared to the hardships that they had to undergo in their home area, the workers said, they are able to earn better and save better now, compared to their standards back home.

One estate said that they re-employ retired workers (RA3 management interview). Management of RA3 also said that migrant families bring more people when they visit their home town each time. Housing will become a problem too according to this manager. Earlier each house had more than 3 workers. Now each house has just 1 worker. For migrant workers it is also a different culture. This type of labour shortage existed in the 1960s and 70s according to this manager. The influx of labourers from Sri Lanka then addressed the issue. RA2 also recruited Sri Lankan workers by advertising in Sri Lanka and interviewing the workers there and bringing them to the estate. But the workers now want to work in the factory and not in the tea garden. On a lighter note he added that the estates actively promoted family planning in the '70s the implication of which they are facing in the reduced number of workers.

The management of RA3 also identified the shortage of labour as a problem. Workers can only be retained by paying them more. Last year RA3 had recruited 100 workers - both locals and from Assam. Actually these migrant workers came to Tatas' estate in Walparai region of Tamil Nadu and from there they have migrated. RA3 even gives Rs.3000 as assistance for settling down to buy dishes, a bed etc. The migrants' children study in the primary school located within the estate.

According to the RA5 management, the lifestyles of migrant workers have changed after working with the locals and living with them. These workers also have picked up the local

language and can even bargain in the local market. Initially, RA5 went to recruit people from Assam and Jharkhand. Now they come on their own.

But the RA1 and RA4 estates have a different position on bringing in migrant labourers. Both these estates do not want to bring labourers from outside because migrant labourers would not last for long and RA4 also said that it would only lead to more procedures as the management will have to bring in the police to establish the credentials of the migrant labourers. RA7 shares the same concern and indicated that there are language barriers.

The non-certified estate has a different problem about bringing labourers from outside the state. Though the management wants to bring in workers from Jharkhand, he does not know how to go about it. He says there should be an agency like the one in Kerala which provides domestic help to bring migrant workers to the region.

Mechanisation has been brought in through high pressure sprays. In harvesting according to RA3, mechanisation would not affect the quality, if it is properly done.

Absenteeism is very high and was pointed out by every other estate (RA1, RA2, RA4 and non-certified). Workers have become old and they want to visit their children. The manager of RA1 viewed stated that workers prefer to have more leisure time as they are earning more and get attracted to the non-farm employment. According to him, mechanisation may not be the answer as there are terrain differences. Unlike Africa, there are shade trees here, which are obstacles for mechanisation. In Africa mechanisation is also opposed because labour supply is abundant there.

Management of RA3 said absenteeism is very high due to the location of the estate which is very close to the city. So RA3 is planning to introduce monetary incentives for those workers who have 80 per cent attendance in a month.

According to the management of RA4, buyers are not concerned about the problems of the estates like, increasing labour shortage and input costs for the sellers and they would not be concerned about these issues in the future also.

Due to shortages of labour almost all the estates have adopted shear harvesting some time ago. Pruning is done every 4 years in RA4 to ensure quality. Mechanical harvesting with a simple machine that can be handled by women was also introduced by the management of RA4. RA1 and RA5 have also been trying mechanization in harvesting. According to the manager (RA5) if the machine is handled properly, then harvest could be better. RA5 also asks the workers to use shears.

According to the management of RA2 when they prune bushes, the biomass is given to the workers, because of inadequate manpower to bury the bushes which would be a good fertiliser for the plants.

Plucking machines were also introduced in RA7, but each machine requires at least 8 people. RA7 said that in contour lines, machines can be used.

RA7 faces multiple challenges as an estate. To recover from the financial losses, the owner of RA7 has leased out part of the estate. The shade trees planted by the estate have been damaged by the wild animals particularly the bison. There are not enough workers to do the weeding. There were lots of parthenium plants around.

The non-certified estate had resorted to 100 per cent hand shears. In the days of labour shortage they have to shift to machines. According to this estate, the quality of leaf gets affected because when the machine cuts for the first time leads to even coarse leaves being cut. But the second round of machine cutting, with new shoots emerging, the quality will improve.

Recently, the non-certified estate incurred a loss to the tune of Rs.5,000,000 (\$111111.1) because, the workers refused to work overtime and in the process of negotiation, the crop was lost. As a solution the non-certified management announced an incentive of Rs.2.25 (approximately \$0.04) Kilo per KG that is plucked over and above 40 kilos. He found that workers plucked more leaves during the overtime hours than the regular working hours. So he also raised the slab for from 40 Kilos to 45 Kilos. The non-certified management expressed anguish that that the workers do not appreciate the fact that they get paid the full wage during the lean season as well. Hence, he feels that the workers should be paid according to their productivity. The Ethical Tea Partnership (ETP) which they once engaged with and any of the other certificates bother much about worker productivity, according to this manager, but instead they focus only on how much the workers receive. He cited the example of Tiruppur textile mills where the productivity or the inclination to work more is there, when the workers are paid according to the piece meal rate.

The question facing the managers now is if mechanisation is the way to go to cope with labour shortages doubling the wage to match the wages prevailing elsewhere and to retain the workers. In Delhi, the non-certified manager had seen a spraying machine which reaches a height of 150 feet. But the problem in mechanisation is even the machine uses 5 or 6 people. A smaller harvesting machine that can be operated by women also uses 2 people and can harvest up to 150 Kilos. The bigger machines are available for Rs.100,000 (approximately \$1818) and the smaller machines are available for Rs.20,000 (\$363).

According to the non-certified estate, one way to overcome the crisis is to increase the value addition to the tea that is produced. Nestle buys the tea waste as to produce tea liquor (used in instant tea from vending machines).

7.5 Conversion of tea estates into real estate

According to the non-certified estate manager, the small growers are selling off their estates. A fortnight before our visit a tea factory plus estate was sold for 25 crores (approximately USD 4545,454). Estates are being sold to earn profit from real estate and are being used as holiday homes.

Management of RA3 commented that there is a law which states that more areas cannot come into plantation, but no corresponding law preventing conversion of plantation area to real estate. In order to contain the improper use of the land for real estate and such purposes, tea plantations which have any proposal on real estate will have to obtain permission from the Tea Board rather than from the local government (panchayats) (interview with Executive of Tea Board, Final Survey). One (or two) of the study survey estates are renting out cottages on their estates for tourism purposes. One estate runs outward bound courses.

7.6 Climate variability and change

While not raised by many managers, when probed about whether they had observed differences in climate variability, many of the managers did say that they had seen changes in weather patterns. The management of all the estates have observed changes in rainfall patterns and the longer winters which affects production. The managers attribute these

changes to climate change. For example one manager said: *“Climate/weather pattern changes seem to be taking place, although it’s not clear yet whether these are long term trends. The entire weather pattern changed in 2009, from January onwards – for the first time in 16 years. In August/September/October there was a shortage of drinking water. There was extremely heavy rainfall in October/November. This winter has been a short and mild one, which has had a negative impact on production of speciality teas”* RA4, RA6)8.

Changes in the climate in the Nilgiri district were reported by almost all the estates.

- RA1 noted that in March 2011 (end of March when we had visited), it was still hot and the incidence of pests had been high, which is unusual as there should have been more showers and the temperature should have reduced, reducing pests. In October 2010 there was less sunshine and the crop increased by 6%. In Nilgiris average reduction in tea production was about 12 per cent. The climate is unpredictable. Unusually, snow and sudden drops in the temperature in one day in Ooty caused heavy loss of crop for the small grower who had to employ labourers to remove the burnt leaves.
- RA3 said due to climatic changes, the Nilgiris has been experiencing erratic rain fall. Low rain fall delays the startof the season. Usually winter starts in November and ends in February. This year, winter days were less which had impacted the production and the temperature has been rising. Around the time of our visit, the temperature had crossed 30 degrees which is not good for tea.
- RA7 is in a rain shadow region. Here the managers reported changes in the climate for the past 6 years – they have been receiving a lot less rainfall. The yield has been only 165 Kilos per acre due to poor rainfall.

7.7 Diversification

While most of the estates are producing only tea, RA7 and the non-certified estate are also engaged in the production of other products, such as cut flowers (e.g. lillium flowers which are exported to the Gulf). RA7 and the non-certified estate have diversified into floriculture after being hit by the decrease in the price of tea. The non-certified estate manager says that they are growing flowers as a winter season coping strategy, because at this time frost reduced tea production and so workers are used elsewhere on the estate. It is important for some estates to consider diversification in order maximize productivity on the estate and to respond to climatic variability. This is not particularly affected by certification, although if more direct sales are possible with buyers seeking certification, this can provide additional stability to sales for estates.



Certified men's focus group discussion

8. Conclusion

This study focussed on understanding the poverty impact of the voluntary social and environmental standards adopted by the plantations. Tea production and processing are highly labour intensive and hence are regulated by the Plantation Labour Act 1951. The PLA is a comprehensive Act, which makes it mandatory for the estates to provide basic amenities and health. A comparison of the requirements of PLA and the basic principles of the standards, reveal that they overlap with each other in terms of the emphasis on the basic rights of the workers to basic amenities, health and freedom to associate and organise. In the Nilgiris the information gathered from workers, managers and key informants indicates that the PLA is widely observed on the estates in our study sample. Labour inspectors visit once every three months according to estate managers. In practical terms the estates had complied with the PLA, but RA has led them to pay greater attention to details in terms of services and labour conditions on the estate, and in particular has required improvements in the quality of some of these services and conditions. Managers themselves indicated the additional scrutiny of auditors has improved documentation and systematic observance of different elements of the PLA. The history of unionization and collective bargaining agreement over wages and incentives mean that workers' wages and employment conditions are relatively well protected. The ageing demographic of the workforce in the Nilgiris presents the estates with a significant challenge and also means that on many of the estates temporary workers are offered similar benefits to permanent workers and they are rapidly moved onto permanent contracts having completed a short probation period. There are some casual workers, but the numbers are limited.

Broadly speaking, the voluntary social and environmental standards adopted by the tea plantations in the study appear to have had positive impacts for workers and for the estates, but these impacts are not on a large scale, because of the contextual factors (legislative, demographic, union-related etc).

Plantation workers earn much lower than other workers in the organised sector in India. The lower income of the plantation workers as compared to other organised sector workers could be due to the following: i) working in the tea plantation does not call for specialist skills either in plucking the leaves or in the tea production process in the factory; (2) Besides the basic wages given to the workers, estates bear the social costs of employment (housing, drinking water, sanitation, creche and health facilities); (3) In the tea value chain, the returns earned by the tea producers is much less than the returns realised by the packers and retailers. Labour costs are relatively low in the tea plantations In the Indian context and the standards do not significantly upgrade the skills of the workers or challenge relationships and value addition in the tea value chain.

Though the estates are selling to Unilever, they do not have any assurance of a fixed quantity that would be bought by every year. The management in all the certified estates told us that this varies. By undertaking direct sales to Unilever allows the estates to circumvent the auctions and gives them greater stability of sales. The sales are set up on a fixed price which may be higher or lower than the auction price. But because the agreement with Unilever or Finlays is for a fixed period, the price variations may average sometimes according to managers.

The most direct way of addressing the poverty of the workers is through ensuring that they are paid the minimum wages. In the Indian context, the wages as well as the incentives for the workers are based on the tripartite agreement between the trade unions, estates and the

government and the standards do not have any impact here. But, while the agreement fixes the incentive levels, the capacity to earn higher income through getting more incentives depend on the work capacity of the workers and the yield levels of the estate.

Yields vary with the location of the estates. Estates in higher altitude areas yield higher than ones in lower zones. For example, RA4 is located in a higher altitude and thus has higher yields. However, yields are also affected by climate variability, which managers said is a factor, and which can impact different locations (e.g. frost may occur in some areas of the Nilgiris and not others). The yield data provided by the estates does not indicate a clear pattern of raised or falling yields. Therefore it is difficult to draw conclusions on the effects of RA certification on yields. Managers reported that some changes such as the establishment of buffer zones can negatively affect yields, and also reported concerns that yields may be affected in the future as the range of approved pesticides become resistant. However, other changes instituted by managers as part of RA certification could raise yields, such as soil and water conservation measures. A specific study would be needed to ascertain measure actual impacts of RA certification on yields from changes in management practices.

The productivity of workers may be increased by RA standards, because of the reduced exposure to occupational hazards and improved housing and sanitation, for example, but we cannot show this from actual sick leave data as workers use this facility to go and work elsewhere off the estate to supplement their incomes. Thus it shows high levels of absenteeism. Workers did report health improvements.

In terms of the health services provided in both the estates, there is no significant difference in the response of the workers (2012 results). But in the satisfaction expressed regarding health services, there is positive and significant difference between the two types of estates. The workers in the certified estate are appreciative about the health benefits of RA particularly the sprayers, because of the safe handling of chemicals and improved supply of PPE which has led to reduced direct exposure to chemicals and means they experience reduced eye and skin irritation, loss of appetite etc. There are specific blood tests for the sanitary workers.

Both the certified and the non-certified estate provide wages on a fixed day of every month and working in the tea estate is the main source of income for the family. Working in the tea plantation does not allow any free time for the workers to engage in any skill development or income earning opportunities.

Similarly, standards have limited impact on workers right to associate with a union as trade unions are historically associated with the plantation estates. Hence, the majority of the workers are already members of the trade union. However, though women workers are also members, some female and male workers consider this to be an activity for me and so they do not actively link to the union.

Adherence to the equal remuneration Act also means that there is no gender discrimination in wages. The study also found that there is no discrimination by the management between the workers from different regions of the country, or by caste. This is largely because of the shortage of labour and the fact that estates are increasingly drawing on migrant labour from the north of India to maintain their workforce. The majority of the workers belong to the socially disadvantaged groups.

All the workers have uniform access to all the amenities in the estate. The increasing shortage of the workforce in the estates has also led the plantations to extend social security to all the

temporary workers, who would become permanent after completing 440 days of continuous service in the estate (as per the PLA). But a few estates make their workers permanent in their positions to ensure that they continue with the estate.

It should be mentioned that adoption of standards is driven by buyer requirements in certain markets. Several managers indicated that they would follow the standards required of them by their buyers, and would be unlikely to sign up to other standards if these were not demanded. Several managers were unfamiliar with Fairtrade or Utz Certified standards, with Rainforest Alliance have the greatest reach so far in the Nilgiris. In the domestic market and some international markets, awareness of standards is limited, if not non-existent.

All the estates provide housing, drinking water, sanitation, medical, crèche and school facilities, because of legislative requirements and the presence of the unions, but the adoption of Rainforest Alliance standard has led the estates to focus more on the quality of the services provided. The workers at all the certified estates pointed out that after certification the quality of their life and standard of living has improved compared to the before certification, particularly in terms of a cleaner environment, hygiene and occupational health support measures. As standards necessitate elaborate maintenance of records and documentation which the estates have started doing only after they were certified, the standards and associated inspections have served as a mechanism for the estates to improve further in these areas (e.g. in the quality of electrical wiring in the worker's housing, quality of the drinking water and improved sanitation). In particular, workers associate waste management in the estate and occupational health support measures like improved provision of personal protective gear to certification. Maintenance of buffer zones, observance of safe re-entry periods after spraying, a shift to less toxic agrochemicals and safe handling of chemicals by the workers are the important contributions of certification.

A few of these measures like the safe re-entry period after insecticide spraying, the shift to less toxic agro-chemicals and handling of chemicals under trained supervision are also being followed in the non-certified estate because of its earlier engagement with the Ethical Tea Partnership (ETP). However, while the estate has continued with the measures which sustain or improve tea quality, such as in the use of certain agrochemicals and in complying with the law (e.g. providing statutory wages), at the same time it has not sustained investment in the quality of services to workers (e.g. maintaining good provision of PPE equipment or in the quality of house repairs).

Workers are very clear that they would not like their children to work on the estate as they do, because of the hardship involved in the work and so they place a huge emphasis on their children's education. Many of the worker's children are already grown up and working elsewhere in Tamil Nadu. In the Fairtrade and RA certified estate, much of the Fairtrade Premium activities are being invested in provision of better education and educational resources for worker's children and the soft skills course and vocational training courses are open to other members of the community.

Certification has not affected the food security of the workers and there no difference was observed between the certified and the non-certified estate.

One area where RA certification has made a significant impact is regarding creating awareness about the environment and protection of wildlife amongst workers and managers. Certified estates adopt measures to check the wastage of water, conduct energy audits and are adopting energy efficient practices, checking the quality of the water let out from the estate,

enhancing ecosystem conservation, the avoidance of plastics and the safe disposal of plastics. Documentation of wildlife sightings in the estates has increased awareness of managers and workers regarding wildlife and the importance of protecting them. These environmental and sustainable agriculture measures are important for protecting and enhancing ecosystem services and in the long term will be necessary for protecting workers' jobs. Some of these measures have direct benefits for humans in the near term as well. Certification has also not resulted in creating awareness about the supply chain for the managers or workers beyond their sale of the tea to the buyer, and does not have any role in fixing the prices of tea.

In the Nilgiris there are more RA certified estates than those certified to other standards such as Fairtrade or Utz Certification. The certification process has encouraged some of the managers to place more emphasis on corporate social responsibility generally. However, some of the certified estates were already undertaking expenditures that are socially relevant and community oriented and such activities were commenced even before certification and would continue regardless of certification status.

The estates are linked to one particular buyer. Since there is no guarantee or any agreement regarding the fixed quantity to be bought by this particular buyer, there could be uncertainties in future regarding the price and quantities purchased. Further, while some of the investments have already been made and so would not be undone, other practices might not be continued unless the managers felt they could afford them and that they brought benefits to the estate or might be required by other buyers (e.g. buffer zones). Further, the price of tea has been subject to cyclical rise and fall. In recent years, the prices have been good and the estates have been able to focus more on their corporate social responsibilities. But sustaining such activities in the long run would depend on the international movement of prices and the market for certified tea elsewhere. Initially, Unilever paid an additional premium to the estates to assist them to achieve RA certification, but this is not now on offer, which raises the question of how other estates will afford to achieve certifications. The estate with multiple certifications including RA and Fairtrade is in an advantageous position as compared to single certified estate because it can explore wider markets involving direct sales, which increase stability.

In sum it is clear that Rainforest Alliance and Fairtrade standard systems have positive effects where estates are achieving certification, but that the changes are not transformative, leading workers out of poverty or setting them on a path to empowerment. Nor has it changed value chain relations fundamentally. This is not to belittle the changes that have been achieved – e.g. the benefits to workers in housing quality improvements or improved water quality and sanitation. Nor does this study overlook the fact that some of the environmental benefits represent public environmental goods, and may support estates' sustainability in the longer term and ultimately protect jobs. However, there are clearly limitations in the Nilgiris tea context as to how effective standards can be in tackling poverty.

In the Indian tea context many of the standards were already being observed as a result of existing legislations concerning labour and remuneration and the historical presence of trade unions. The ageing profile of the workforce and the serious labour shortages affecting the industry as a whole are other reasons for the prior compliance with standards even before formal certification by the standard systems. But certification has helped to increase scrutiny of estate management practices and supported a shift to better monitoring and documentation. The fact that certification has been followed up by this study may also help to support continued changes.

However, more needs to be done to transform the lives of tea workers and outgrowers. Extension of certification to the smallholder sector is needed, but also the

standards should be more ambitious – going beyond the legislative framework, responding more closely to the local context and doing more to support worker’s economic and political empowerment (i.e. beyond worker welfare issues). This is necessary if workers are to be attracted to stay in tea work, given that many of the children of tea estate workers are now educated and leading lives in large cities in the lowlands, such as Coimbatore and to retain migrant workers and provide them with decent work. In the context of widespread socio-economic change in India, which also affects tea plantation workers, sustainability standards have limited influence and leverage.

Fairtrade has only recently been taken up in one estate in our sample. The estate now has multiple certifications. However, Fairtrade is positively regarded by the management and workers, who noted the investments made using the Premium and they welcomed their role in discussing how funds should be used. At the same time, the benefits are very limited in scale to date. More time would be needed to assess the impact of Fairtrade in this estate, and to look to other estates as well which are participating in Fairtrade.

FLO launched a new Workers’ Rights Strategy in early 2012, which aims to go beyond the ‘traditional CSR model’ based on standard-setting and auditing, to one in which workers become ‘active participants in the decisions that impact their lives’. Essentially, this means going beyond Premium projects and basic labour rights protection to ‘collective bargaining through an independent trade union’ as the ‘best way for workers to negotiate higher wages, benefits and better work conditions, as well as benchmarking living wage levels and providing a clear roadmap for employers to move towards paying their workers a wage that covers their basic needs’⁹³. FLO have been reviewing their hired labour standard and this signals a significant shift towards a ‘Mature Systems of Industrial Relations’ model. It is of course early days to know whether this approach will be effective – in the Nilgiris some of these targets have already been achieved (with collective bargaining, freedom of association etc) well established. However, there is still more that could be done to improve workers’ lives, particularly women workers’ lives and to sustain the profitability and sustainability of the estates and their environments.

Women are still trapped in plucking jobs, with very few women employed as supervisors or in the factory. They have very limited spare time to do further training, even if this were provided. It seems likely that much of the workforce will eventually be replaced with migrant workers from Northern India. This is likely to be younger in age than the current workforce. It is important to track developments over time regarding their integration into the estates to ensure they are not subject to discrimination and can benefit from certifications such as Fairtrade. Significantly changing gender inequalities currently appears beyond the reach of Rainforest Alliance in the Nilgiris as workers’ rights are relatively well protected due to the conditions prevalent in the industry, but Fairtrade could do more through investments of Premium funds in ways which support women’s skills training and promotion etc. Managers also need more training to raise their gender awareness and to encourage them to commit to action on gender inequality and women’s empowerment.

Estates can benefit from improved systems of documenting and monitoring environmental and labour issues on their estates, but there are also costs to certification and compliance. Direct sales are more assured due to certification. Prior to certification the estates were selling their

⁹³ Announcement of New Workers’ Rights Strategy, 26 April 2012. http://www.fairtrade.net/single_view1.html?&cHash=9c104bbd7e72514f65f3417a895ae30b&tx_ttnews%5Btt_news%5D=298

tea in the three (Coonoor, Cochin and Coimbatore) auction centres, from where the tea was then exported. After Rainforest Alliance certification (one estate) said that they sell most of their tea to specific buyers at a pre-determined price (forward contract) for a specific period (at the time the interviews were held, all the estates had entered into six month contracts with Unilever). Prior to certification they sold through the auction and a percentage to direct exports, but now it is majority sales to Unilever and only a small percentage is sold on the auction. This brings the estates greater stability and secures their access to international markets. Yet there are no major changes in value addition along the tea supply chain which would support (more extensive) investment in labour conditions.

Coverage of the estates by certification is fairly extensive in the Nilgiris, because of the sourcing decision of Unilever to source all its products from sustainable sources by 2015. In 2009-10, more than half (56%) of Nilgiris estates were certified to Rainforest Alliance or FLO standards – it is not thought this has changed significantly since then, although we found several estates were considering Utz Certification, and were interested in Fairtrade – although they would only take this up if buyers required it. This is a fairly rapid spread across the estate sector, especially since much of their tea is sold to export markets demanding certification. However, the non-certified estate in our study sells on the domestic market and there are few drivers in this market to tackle workers labour rights and to improve their working conditions and very little knowledge of sustainability and social justice standards such as Rainforest Alliance and Fairtrade. We are not yet aware of any activity relating to the smallholder sector, where livelihood challenges are significant and where real poverty impacts could be felt if certification were instituted. While certification can bring clear social and environmental benefits to workers in Nilgiris estate tea production, there are limits to what it can achieve in this particular context and a more transformative approach would have to go beyond standards and auditing to greater investment in workers' skills and education to open up promotion pathways, and in improving services and political empowerment (e.g. through stronger unions, stronger worker committees able to negotiate with estate management).

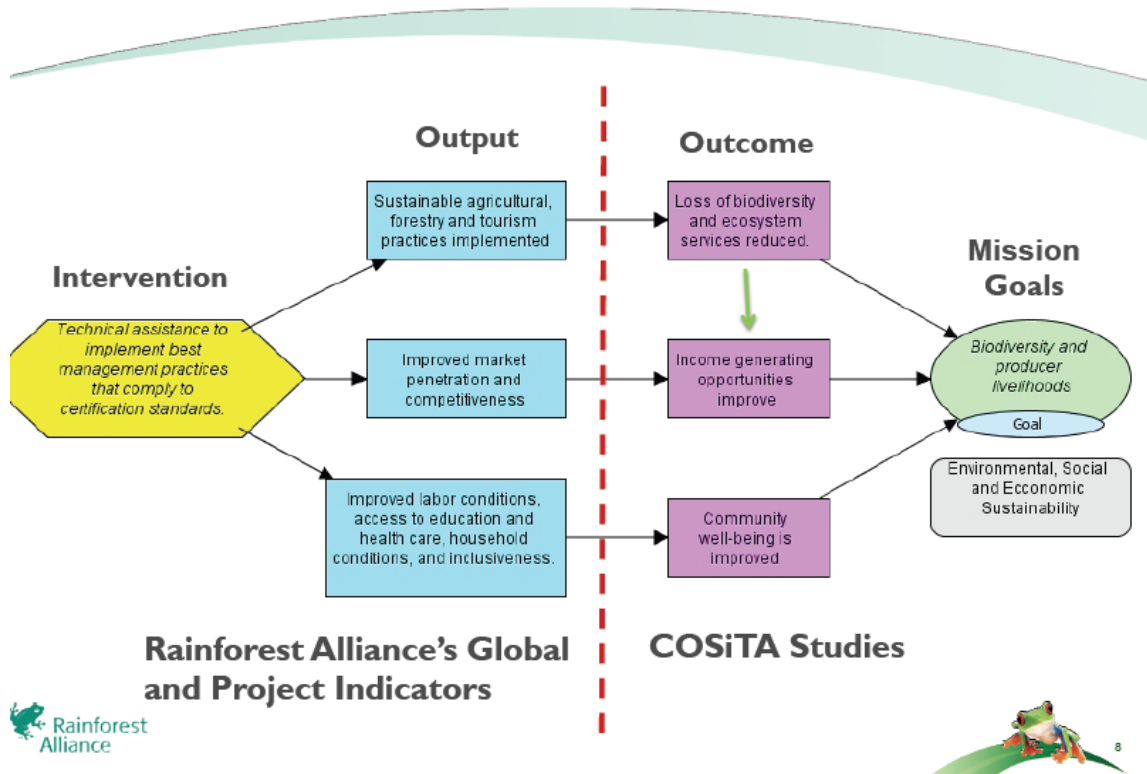


Certified men's focus group

Appendices

Appendix 1: Rainforest Alliance Theory of Change

VALIDATING RAINFOREST ALLIANCES' THEORY OF CHANGE



Assessing the poverty impact of social and environmental voluntary standards

Study funded by the UK Department for International Development (DFID)

Final Survey -Hired Tea Estate Workers Questionnaire, India and Kenya

(Greeting). I am representing Gujarat Institute of Development Research working on a project that aims to assess the impact of social and environmental certification systems, such as Fairtrade and Rainforest Alliance. We would very much like you to participate in this discussion, but your participation is entirely voluntary. All of the information from this conversation is entirely confidential- in no circumstances will your name be associated with the responses you give. The information will be used to provide evidence of impact to the British government and others who are thinking of supporting certification bodies more in the future. The interview should take about 40 minutes. Are you happy to participate?

1. QUALITY CONTROL	Supervisor name	Date (dd/mm/yyyy)	Signature
Was information collected correctly?		___/___/_____	
Has information been inputted correctly?		___/___/_____	

Comments

2. QUESTIONNAIRE IDENTIFICATION (to be filled by enumerator prior to interview)	
Date of interview (dd/mm/yyyy)	___/___/_____
Questionnaire number	[_____]
Enumerator code	[___]
Sex of interviewee (1=Male, 2=Female)	[_]

3a. LOCATION, ORGANISATION AND CERTIFICATION (to be filled by enumerator prior to interview)		
State/ Province		
District		
Block/ Division		
Estate where employed		
Estate Certification Status		
Does the estate have any of the following certifications?	1=Yes, 2=No	If yes, state year in which certification commenced
FLO Fair-trade	[__]	[_____]
Rainforest Alliance	[__]	[_____]
Other (specify): _____	[__]	[_____]

4a. HOUSEHOLD DATA (household members living in the house with the household head)							
Starting with the household head please answer the following questions for all individuals living in the house							
ID	Name	Gender (1=Male, 2=Female)	Age (in whole years)	Relationship to head of household (See code box 1)	Which province do you originate from (See code box 2)	Literate? (1=Yes, 2=No)	Highest education level (See code box 3)
1		[__]	[___]	[___]	[___]	[___]	[__]
2		[__]	[___]	[___]	n/a	[___]	[__]
3		[__]	[___]	[___]	n/a	[___]	[__]
4		[__]	[___]	[___]	n/a	[___]	[__]
5		[__]	[___]	[___]	n/a	[___]	[__]
6		[__]	[___]	[___]	n/a	[___]	[__]
7		[__]	[___]	[___]	n/a	[___]	[__]
8		[__]	[___]	[___]	n/a	[___]	[__]
9		[__]	[___]	[___]	n/a	[___]	[__]
10		[__]	[___]	[___]	n/a	[___]	[__]

Code Box 1 – Relationship to Household head			
1=Household head	3=Son/daughter	5=Mother/father	7=Other relation
2=Spouse/partner	4=Brother/sister	6=Nephew/Niece	8=No relationship
Code Box 2 – Provinces (KENYA VERSION)			
1=Central	3=Eastern	5=Nyanza	7=Western
2=Coast	4=North Eastern	6=Rift Valley	8= Nairobi
	9=Outside Kenya		
Code Box 2 –Caste/ethnicity (INDIA VERSION)			
1=tribal	3=other backward castes	5=upper caste	7=
2=scheduled caste	4=middle caste	6=	8=
Code Box 3 – Education Level			
1=no formal education	3=completed primary	5=completed secondary	7=University/college (completed)
2=some primary (not complete)	4=some secondary (not complete)	6=University/college (not complete)	8=too young for school

Code Box 4 – Location of other household members (KENYA VERSION)				
1=Central	3=Eastern	5=Nyanza	7=Western	9=Outside Kenya
2=Coast	4=North Eastern	6=Rift Valley	8= Nairobi	
Code Box 4 – Location of other household members (INDIA VERSION)				
1=	3=	5=	7=	
2=	4=	6=		

4b. In addition to the household members listed in 4a, please list any family members not living here but financially supported by you

ID	Gender (1=Male, 2=Female)	Age (in whole years)	Relationship to head of household (See code box 1)	Location (see code box 4)
11	[_]	[__]	[__]	[_]
12	[_]	[__]	[__]	[_]
13	[_]	[__]	[__]	[_]
14	[_]	[__]	[__]	[_]
15	[_]	[__]	[__]	[_]

5. WHAT TYPE OF WORK DO YOU DO ON THE TEA ESTATE?(tick all that apply)	
5.1 Tea production (pre-harvest work eg seedling, planting, weeding, pruning)	[]
5.2 Picking leaves/plucking	[]
5.3 Processing (eg spreading, cutting, fermenting, drying, sorting)	[]
5.4 Packing	[]
5.5 Transport	[]
5.6 Cleaning	[]
5.7 Administration	[]
5.8 Other (specify) _____	[]
Do you have any of the following roles?	
5.9 Supervisory role	[] ₁ Yes [] ₂ No
5.10 Managerial role	[] ₁ Yes [] ₂ No

6. CONTRACTUAL AND EMPLOYMENT CONDITIONS FOR TEA ESTATE WORKERS	
6.1 Since which year have you been working for this organisation?	[_ _ _ _]
<i>For the following questions please describe your current situation</i>	
6.2 On what basis are you employed? (1=permanent; 2= temporary, no contract, 3=temporary, contract; 4=other)	[_]
6.3 Is social security included in your contract? If yes, what are worker contributions/ month? And what are employer contributions/ month?	[] ₁ Yes [] ₂ No _____ _____
6.4 Do you get paid annual leave? If yes, how many days?	[] ₁ Yes [] ₂ No _____
6.5 Are you a member of a trade union?	[] ₁ Yes [] ₂ No
6.6 Do you get paid sick leave?	[] ₁ Yes [] ₂ No
6.7 Do you get maternity/ paternity leave? If yes, how many weeks?	[] ₁ Yes [] ₂ No _____
6.8 Do you get other income benefits? If yes, what type/s	[] ₁ Yes [] ₂ No _____

7. RESPONDENT'S INCOME FROM WORK ON TEA ESTATE	
7.1 On what basis are you paid? (1 = per hour, 2 = per day, 3 = per kg, 4 = other)	[_]
7.2 IF PAID BY HOUR OR DAY ASK (a) What is your typical wage per day, excluding overtime (KSh/Rupees) IF PAID BY WEIGHT OF HARVEST, ASK 7.2 (b) what is your typical income per day (KSh/ Indian rupees)?	Record answer in column 1, table 7 below
7.3 How many hours do you work per day for your typical wage/ income?	[_ _]
7.4 How many days do you usually work per week?	Record answer in column 2, table 7 below
7.5 How many weeks are you paid per year?	Record answer in column 3, table 7 below
7.6 Is overtime paid? If yes, (a) at what (hourly) rate? (b) Approximately how much per year do you earn from overtime?	[] ₁ Yes [] ₂ No _____ Record answer in column 4, table 7 below

TABLE 7 - FOR RECORDING ANNUAL INCOME FROM WORKING ON TEA ESTATE				
1. Typical wage/ income per day, excluding overtime	2. No. of days usually worked per week	3. Weeks paid per year	4. Overtime earned per year	5. Total estimated annual income
	[_]		[_ _]	

Note: (a) Multiply column 1 figure by column 2. (b) Then multiply total by column 3 figure. (c) Then add column 4 figure. This should give the respondent's annual income from working on the estate. Insert this value in column 5 of the table.

Explain calculation to respondent and present him/her with total figure.

7.7 Do you think this annual figure for your tea estate work is accurate?	[] ₁ Yes [] ₂ More or less [] ₃ No [] ₄ Don't know
If no, please enter the interviewee's figure".	_____

7.8a. In general would you say your income from working on the tea estate has increased or decreased over the past 2 years? (since Feb 2010)? <i>(tick one box only)</i>	[] ₁ Increased [] ₂ Decreased [] ₃ Stayed the same
7.8b. Has your overtime changed since your estate became certified?	[] ₁ Increased [] ₂ Decreased [] ₃ Stayed the same
7.8c. If it has reduced, by how many hours a week has it reduced since your estate became certified?	[__] hours/week

7.9 <u>If you have a higher income</u> (if 7.8a response = Increased) from working on the tea estate, what do you invest the income in? (Rank in terms of importance, (0=no, 1=most important, 2=second most important, etc.)	
List	
Children's education	[__]
Household durables	[__]
House Improvements	[__]
Land investments	[__]
Land improvements	[__]
Farming activities or inputs	[__]
Livestock costs	[__]
New livelihood activity	[__]
Other _____	[__]
Other _____	[__]

8. YOUR KEY HOUSEHOLD LIVELIHOOD INCOME ACTIVITIES & SOURCES during the past year <i>(complete only for household members of the age of 15 years and above) [each different income activity should be recorded on a different line]</i>		
ID of household member <i>Refer to 4a & 4b</i>	Activity / Income source <i>(See code box 5) If other, please specify</i>	Rank top 3 activities/income sources in order of importance to overall household livelihood <i>(1=most important, 2=second most important, etc.)</i>
[__]	[__] _____	[__]
[__]	[__] _____	[__]
[__]	[__] _____	[__]
[__]	[__] _____	[__]
[__]	[__] _____	[__]

[]	[] _____	[]
[]	[] _____	[]
[]	[] _____	[]
[]	[] _____	[]

Code Box 5 – Livelihood Activity		
1=Work on tea estate	5=Paid permanent position	9=Sale of collected forest products
2=Trade	6=Artisans/crafts	10 = Other
3=Sale of own crops/livestock	7=Unskilled wage labour	
4=Remittances, Pension, Gifts	8=Food production for subsistence	

8.1 What proportion of your total household income is the income you earn from working on the tea estate?	[] %
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9. Have you and/or your family members experienced any changes in the following aspects of your employment on the tea estate, compared with 2 years ago (Feb 2010)?
(Enumerator reads out list – tick only one box per row)

Benefit	Big Improvement	Little Improvement	No change	Slight Deterioration	Big Deterioration	N/A
Amount of income/day	[] ₂	[] ₁	[] ₀	[] ₋₁	[] ₋₂	[]
Stability of income	[] ₂	[] ₁	[] ₀	[] ₋₁	[] ₋₂	[]
Access to credit	[] ₂	[] ₁	[] ₀	[] ₋₁	[] ₋₂	[]
Sick pay	[] ₂	[] ₁	[] ₀	[] ₋₁	[] ₋₂	[]
Bonuses	[] ₂	[] ₁	[] ₀	[] ₋₁	[] ₋₂	[]
Working hours	[] ₂	[] ₁	[] ₀	[] ₋₁	[] ₋₂	[]
Pension	[] ₂	[] ₁	[] ₀	[] ₋₁	[] ₋₂	[]
Leave	[] ₂	[] ₁	[] ₀	[] ₋₁	[] ₋₂	[]
Maternity leave	[] ₂	[] ₁	[] ₀	[] ₋₁	[] ₋₂	[]
Training, education for workers	[] ₂	[] ₁	[] ₀	[] ₋₁	[] ₋₂	[]
Access to information	[] ₂	[] ₁	[] ₀	[] ₋₁	[] ₋₂	[]
Housing	[] ₂	[] ₁	[] ₀	[] ₋₁	[] ₋₂	[]
Sanitation	[] ₂	[] ₁	[] ₀	[] ₋₁	[] ₋₂	[]
Education package for children	[] ₂	[] ₁	[] ₀	[] ₋₁	[] ₋₂	[]

9. Have you and/or your family members experienced any changes in the following aspects of your employment on the tea estate, compared with 2 years ago (Feb 2010)? (Enumerator reads out list – tick only one box per row)						
Benefit	Big Improvement	Little Improvement	No change	Slight Deterioration	Big Deterioration	N/A
On-site water supply infrastructure (piped drinking water)	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0	<input type="checkbox"/> -1	<input type="checkbox"/> -2	<input type="checkbox"/>
Creche/Child care	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0	<input type="checkbox"/> -1	<input type="checkbox"/> -2	<input type="checkbox"/>
Transport	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0	<input type="checkbox"/> -1	<input type="checkbox"/> -2	<input type="checkbox"/>
Electricity in your dwelling	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0	<input type="checkbox"/> -1	<input type="checkbox"/> -2	<input type="checkbox"/>
Other	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0	<input type="checkbox"/> -1	<input type="checkbox"/> -2	<input type="checkbox"/>

9a In areas (note: see benefit column above) where you have seen a big improvement, what do you attribute that to?	
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10. DOES INCOME FROM WORKING ON TEA ESTATE COVER YOUR HOUSEHOLD'S BASIC NEEDS IN TERMS OF THE FOLLOWING? (tick one box per row only)					
	In its entirety	Half of it	A quarter	No contribution	N/A
Food	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	
Clothing	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	
School expenses	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/>
Health costs	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	
Energy	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	
House rent or mortgage (if applicable & worker has to make payments for this)	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/>

10a. If your tea income does not meet your basic needs? How are you managing to meet your basic needs? (probe for each type of basic need they aren't meeting in its entirety to see how they are managing)	
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11. SERVICES PROVIDED BY COMPANY		
11a. Which of the following services do you receive from your company?	(If answer to 11a is 'Yes' ask 11b.)	11b. How satisfied are you with the service?
Housing	<input type="checkbox"/> ₁ Yes <input type="checkbox"/> ₂ No	<input type="checkbox"/> ₅ Very satisfied <input type="checkbox"/> ₄ Satisfied <input type="checkbox"/> ₃ Neither satisfied nor dissatisfied <input type="checkbox"/> ₂ Dissatisfied <input type="checkbox"/> ₁ Very dissatisfied
Health care	<input type="checkbox"/> ₁ Yes <input type="checkbox"/> ₂ No	<input type="checkbox"/> ₅ Very satisfied <input type="checkbox"/> ₄ Satisfied <input type="checkbox"/> ₃ Neither satisfied nor dissatisfied <input type="checkbox"/> ₂ Dissatisfied <input type="checkbox"/> ₁ Very dissatisfied
Sanitation at work	<input type="checkbox"/> ₁ Yes <input type="checkbox"/> ₂ No	<input type="checkbox"/> ₅ Very satisfied <input type="checkbox"/> ₄ Satisfied <input type="checkbox"/> ₃ Neither satisfied nor dissatisfied <input type="checkbox"/> ₂ Dissatisfied <input type="checkbox"/> ₁ Very dissatisfied
Water supply infrastructure at your household level (e.g. piped drinking water)	<input type="checkbox"/> ₁ Yes <input type="checkbox"/> ₂ No	<input type="checkbox"/> ₅ Very satisfied <input type="checkbox"/> ₄ Satisfied <input type="checkbox"/> ₃ Neither satisfied nor dissatisfied <input type="checkbox"/> ₂ Dissatisfied <input type="checkbox"/> ₁ Very dissatisfied
Electricity at your household level	<input type="checkbox"/> ₁ Yes <input type="checkbox"/> ₂ No	<input type="checkbox"/> ₅ Very satisfied <input type="checkbox"/> ₄ Satisfied <input type="checkbox"/> ₃ Neither satisfied nor dissatisfied <input type="checkbox"/> ₂ Dissatisfied <input type="checkbox"/> ₁ Very dissatisfied
Schooling	<input type="checkbox"/> ₁ Yes <input type="checkbox"/> ₂ No	<input type="checkbox"/> ₅ Very satisfied <input type="checkbox"/> ₄ Satisfied <input type="checkbox"/> ₃ Neither satisfied nor dissatisfied <input type="checkbox"/> ₂ Dissatisfied <input type="checkbox"/> ₁ Very dissatisfied
Crèche/child care provision	<input type="checkbox"/> ₁ Yes <input type="checkbox"/> ₂ No	<input type="checkbox"/> ₅ Very satisfied <input type="checkbox"/> ₄ Satisfied <input type="checkbox"/> ₃ Neither satisfied nor dissatisfied <input type="checkbox"/> ₂ Dissatisfied <input type="checkbox"/> ₁ Very dissatisfied
Transport	<input type="checkbox"/> ₁ Yes <input type="checkbox"/> ₂ No	<input type="checkbox"/> ₅ Very satisfied <input type="checkbox"/> ₄ Satisfied <input type="checkbox"/> ₃ Neither satisfied nor dissatisfied <input type="checkbox"/> ₂ Dissatisfied <input type="checkbox"/> ₁ Very dissatisfied
Food (e.g. free lunch, subsidised food)	<input type="checkbox"/> ₁ Yes <input type="checkbox"/> ₂ No	<input type="checkbox"/> ₅ Very satisfied <input type="checkbox"/> ₄ Satisfied

11. SERVICES PROVIDED BY COMPANY		
11a. Which of the following services do you receive from your company?	(If answer to 11a is 'Yes' ask 11b.)	11b. How satisfied are you with the service?
		<input type="checkbox"/> ₃ Neither satisfied nor dissatisfied <input type="checkbox"/> ₂ Dissatisfied <input type="checkbox"/> ₁ Very dissatisfied

12. OCCUPATIONAL HEALTH SUPPORT MEASURES	
12.1 Have you experienced any positive changes in occupational health support measures in the last 2 years (since Feb 2010)? IF ANSWER TO THIS QUESTION IS YES GO THROUGH FOLLOWING LIST	<input type="checkbox"/> ₁ Yes <input type="checkbox"/> ₂ No
12.2 Provision of protective gear by the company	<input type="checkbox"/> ₁ Yes <input type="checkbox"/> ₂ No <input type="checkbox"/> ₃ N/A
12.3 Provision of new types of protective gear by the company	<input type="checkbox"/> ₁ Yes <input type="checkbox"/> ₂ No <input type="checkbox"/> ₃ N/A
12.4 The phasing out of more hazardous types of pesticides	<input type="checkbox"/> ₁ Yes <input type="checkbox"/> ₂ No <input type="checkbox"/> ₃ N/A
12.5 Better facilities for washing down after applying pesticides	<input type="checkbox"/> ₁ Yes <input type="checkbox"/> ₂ No <input type="checkbox"/> ₃ N/A
12.6 Health education, especially HIV/AIDS	<input type="checkbox"/> ₁ Yes <input type="checkbox"/> ₂ No
12.7 Other _____	<input type="checkbox"/> ₁ Yes <input type="checkbox"/> ₂ No
12.8 Other _____	<input type="checkbox"/> ₁ Yes <input type="checkbox"/> ₂ No

13. RESPONDENT'S HEALTH	
13.1 Have you experienced any change in your general health in the last 2 years (since Feb 2010)?	<input type="checkbox"/> ₁ Worsened <input type="checkbox"/> ₂ No change <input type="checkbox"/> ₃ Improved
IF ANSWER TO 13.1 WAS 'IMPROVED' ASK 13.2 How have you experienced the improvement? And GO THROUGH FOLLOWING LIST	
Less days off work due to ill health	<input type="checkbox"/> ₁ Yes <input type="checkbox"/> ₂ No
Able to work longer hours	<input type="checkbox"/> ₁ Yes <input type="checkbox"/> ₂ No
Feeling stronger, healthier	<input type="checkbox"/> ₁ Yes <input type="checkbox"/> ₂ No
Less money spent on health care	<input type="checkbox"/> ₁ Yes <input type="checkbox"/> ₂ No
Other: _____	<input type="checkbox"/> ₁ Yes <input type="checkbox"/> ₂ No
Other: _____	<input type="checkbox"/> ₁ Yes <input type="checkbox"/> ₂ No

IF ANSWER TO 13.1 WAS 'IMPROVED' ASK 13.3 What do you think caused the improvement? <i>And GO THROUGH FOLLOWING LIST</i>	
Improved occupational health support measures	[] ₁ Yes [] ₂ No
Improved health care services	[] ₁ Yes [] ₂ No
Better nutrition	[] ₁ Yes [] ₂ No
Other: _____	[] ₁ Yes [] ₂ No
Other: _____	[] ₁ Yes [] ₂ No

14. FOOD SECURITY	
How many main meals do you consume per day on average in each season of the year? (India: 1 = Rainy 2 = Winter 3 = Summer) (Kenya: 1 = Short rains, 2 = Long rains, 3 = Dry season)	Rainy season:[___] Short rains Winter:[___] Long rains Summer:[___] Dry season
How much protein and carbohydrate* do you consume compared with your spouse? <i>1=More, 2=Less, 3=About the same, 4=N/A</i>	Protein: [___] Carbohydrate: [___]
How satisfied are you that the amount of food you eat is adequate for your nutritional needs? <i>(Tick one box only)</i>	[] ₅ Very satisfied [] ₄ Satisfied [] ₃ Neither satisfied nor dissatisfied [] ₂ Dissatisfied [] ₁ Very dissatisfied
How satisfied are you that the quality of the food you eat is adequate for your nutritional needs? <i>(Tick one box only)</i>	[] ₅ Very satisfied [] ₄ Satisfied [] ₃ Neither satisfied nor dissatisfied [] ₂ Dissatisfied [] ₁ Very dissatisfied

15. QUESTIONS RELATING TO AWARENESS OF FAIRTRADE PREMIUM <i>(Note: only ask if the Estate/ Factory/Organisation is FLO Certified)</i>	
Are you aware that this estate participates in a fair trade scheme? <i>(1=Yes, 2=No)</i>	[___]
Do you know what fair trade means? <i>(1=Yes, 2=No)</i>	[___]
Are you aware that your employer's involvement in fair trade scheme leads to the provision of some funds to spend on socially useful investments? <i>(1=Yes, 2=No)</i>	[___]
Are you aware that a Joint Body of management and worker representatives has been formed to manage these funds? <i>(1=Yes, 2=No)</i>	[___]
Have you participated in the election of worker representatives to the Joint Body? <i>(1=Yes, 2=No)</i>	[___]
Has the Joint Body or members of it consulted you for requests/ suggestions as to what the funds should be spent on? <i>(1=Yes, 2=No)</i>	[___]
Do you know what these funds have been spent on? <i>(1=Yes, 2=No)</i>	[___]

If the answer to the last question was 'Yes', record uses in next table

16. FOR WORKERS ON FLO-CERTIFIED ESTATES, what has the premium been used for in the last 2 years?			
	Has the premium been used for any of the following: (1=Yes, 2=No)	Rank in order of importance, (1 most important, 5 – least important)	Have you benefited directly from this use of the Fairtrade Premium? (1=Yes, 2=No)
Education for children	[__]	[__]	[__]
Training for workers	[__]	[__]	[__]
Health	[__]	[__]	[__]
Housing	[__]	[__]	[__]
Sanitation	[__]	[__]	[__]
Water supply in or near workers residence	[__]	[__]	[__]
Electricity in workers residence	[__]	[__]	[__]
Individual cash payments	[__]	[__]	[__]
Income generating activities	[__]	[__]	[__]
Other (Specify) _____	[__]	[__]	[__]

17. Is plucking mechanisation occurring on the estate? (1=Yes, 2=No)	[__]
If yes, a) How many plucking machines are there?	[__] (number)
b) Since mechanisation, has there been any change in the number of pluckers employed on the estate? (Tick one box only.	<input type="checkbox"/> Pluckers have increased <input type="checkbox"/> Pluckers have stayed the same <input type="checkbox"/> Pluckers have decreased
c) If there have been changes in plucker numbers, give details and the perceived reasons	

Do you have any questions you would like to ask us?

THANK YOU FOR YOUR TIME.

