THE AGENCY OF GLOBAL SUSTAINABILITY CERTIFICATIONS IN DEVELOPING COUNTRIES: THE RAINFOREST ALLIANCE AND THE SRI LANKAN TEA INDUSTRY

by

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ABSTRACT

This study investigates how a private, voluntary North American-based sustainability certification, Rainforest Alliance, is implemented in the Sri Lankan tea industry. A case study is developed from an extensive six month period of fieldwork in Sri Lanka. The analysis is guided by Actor-Network Theory to understand the effects of the Rainforest Alliance certification as it is enacted and co-produced in the local context. The initial adoption of Rainforest Alliance by leading multinationals alters local tea market dynamics and creates market pressure that leads to the adoption of the certification by some local supply chain actors. Rainforest Alliance is inscribed in a local accountability standard that leads to changes in the management, accounting and agricultural practices of certified tea producers. Rainforest Alliance is translated locally primarily as a means for differentiating tea quality and ensuring commercial sustainability, rather than as an indicator of agricultural or environmental sustainability. Whilst investigating the local adoption of Rainforest Alliance, the study uncovers some unexpected consequences. Despite being the purported beneficiaries of sustainability certifications, tea smallholders are explicitly disadvantaged due to their inability to control growing conditions even though they are responsible for approximately three quarters of tea production. The study illustrates how local conditions and circumstances are often ignored as certifications are pushed onto local producers and local supply chains.

Keywords: certifications, supply chain, actor-network theory, Rainforest alliance

DEDICATION

To my daughters Sauni and Mihara

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This thesis was copy edited for conventions of language, spelling and grammar by Liz Dexter (appendix 5)

There are no words to explain how I am grateful to you, my father, for living alone in Sri Lanka at this age where you need me much for your life, but still always encouraging and supporting in all the ways and expecting me to come back only after completing the PhD degree. It is my inner consciousness that I am always blessed by the soul of my mother.

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LIST OF ABBREVIATIONS

ANT	Actor Network Theory
CSR	Corporate Social Responsibility
GRI	Global Reporting Initiative
ILO	International Labour Organization
ISO	International Organization for Standardization
MNC	Multinational Company
NGO	Non-Governmental Organisation
SME	Small and Medium Enterprises

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CHAPTER 1

INTRODUCTION

1.1 Background of the study

A key characteristic of globalisation has been the distribution of activity by multinational corporations to developing countries. This offers multinationals an opportunity to reduce costs but also offers developing countries opportunities for industrial advancement (Jenkins et al., 2002, Gereffi et al., 2005, Yu, 2008). The outsourcing process has created a distance between production and consumption and more complex, global supply chains pose challenges to organisations. Multinationals increasingly manage, control and are perceived to be accountable for activity beyond their own legal entities that takes place across parts of vertically oriented supply chains of which they have no legal ownership (Andersen and Skjoett-Larsen, 2009, Burritt and Schaltegger, 2014). The social and environmental conditions in which goods are produced are often distinct from the conditions in which the goods are consumed (Bebbington and Larrinaga, 2014). These changes have led to an increasing focus on multinational corporate responsibility and accountability for social, environmental and economic impacts across global supply chains (Bebbington and Larrinaga, 2014).[1] This is evident from the rise of anti-sweatshop movements against global supply chains from the mid to late 1990s that created pressure on multinationals to expand their corporate responsibilities beyond their own legal entities into outsourced, distant supply chains (Blowfield, 2003, Yu, 2008). Within the food and beverage industries, the distance between production and consumption has aroused consumer concerns about conditions surrounding the source of food, food processing, food quality and

[1] Impacts are widely described in terms of corporate social responsibility (CSR) and sustainability, closely related concepts (Hutchins and Sutherland, 2008) that lack commonly accepted definitions and meanings (Gray et al., 2014).

food safety. As a result, consumers have increasingly focused on corporate responsibility, accountability and sustainability issues in the supply chain (Banterle et al., 2013).

As the focus on multinational corporate responsibility and accountability has intensified, corporations have increasingly introduced diverse mechanisms in order to govern supply chain activity (Hutchins and Sutherland, 2008, Kolk, 2008, Andersen and Skjoett-Larsen, 2009). One such mechanism has evolved where different parties, such as NGOs, private-public alliances and industry associations have voluntarily engaged in formulating codes of conduct, standards and certifications governing production to reduce uncertainty and increase control over global supply chain operations (Giovannucci and Ponte, 2005; Child, 2015).

These mechanisms such as codes of conduct, standards and certifications will be commonly referred to in this study as 'accountability certifications', as an umbrella term as they are used in managing corporate responsibility, accountability and sustainability issues in the supply chain.

For developing countries, 'accountability certifications' can provide opportunities for local suppliers to access certain market segments and countries, participate in global value chains and introduce new forms of governance. Multinationals influence supply chain practices by promoting particular accountability certifications, and sourcing particular certified products. Certifications such as Fair Trade and Rainforest Alliance are generally 'private', being constructed without explicit government involvement and lacking regulatory enforcement (Gandenberger et al., 2011). These accountability certifications are generally constructed in developed, 'consumer' countries. Distance therefore exists between the circumstances and context in which certifications are created and the locations in which they are implemented, where they are exposed to the complexities of their local settings (Yu, 2008). Scholars

increasingly seek to examine the effects of these certifications across supply chains in developing economies.

Of these accountability certifications, certifications used in agri-food supply chains focused to improve 'accountability' through managing sustainability issues and sustainably transforming agricultural lands are distinguished in this study as 'sustainability oriented accountability certifications'(hereafter called 'sustainability certifications'). They specify and seek to standardise production conditions, health and safety, environmental conditions, and the measurement of social and environmental impacts. Generally, sustainability certifications specify general conditions that are expected to apply across different crops in different parts of the world.

This study seeks to examine the effects of one such sustainability certification, 'Rainforest Alliance', originating in a North American NGO, for promoting the social and environmental sustainability of agricultural activities. To do this, the study develops a case study of a developing economy food supply chain, the Sri Lankan tea industry.

The tea industry in Sri Lanka, known for producing 'Ceylon tea', is a primarily export-oriented, major Asian tea supplier. The industry is already populated with a number of international accountability certifications. Rainforest Alliance certification is the latest trend, and annual reports of quoted public tea companies have disclosed the Rainforest Alliance move as a sustainability initiative.

The prior literature has generally characterised accountability certifications as being 'pushed' by multinationals and powerful suppliers onto local firms in the supply chain. It is therefore silent about the agency of certification itself and underemphasises the agency of local firms and actors in how they choose to implement global accountability and sustainability standards in developing countries (Mzembe et al., 2015, Prado and Woodside, 2015, Knorringa and Nadvi,

2016). Other literature on certifications has tended to take an institutional/stakeholder theory and Global Value Chain approach, which emphasises the power of multinationals, but this study takes a different approach by using Actor Network Theory (ANT) to study the effects at the level of production. The Rainforest Alliance Certification is inscribed into a green frog logo as shown in Figure 1.1. The study was motivated to understand the agency of this certification: what does this label signify?

Figure 1.1: The Rainforest Alliance Logo

The chapter is organised as follows. Following the above background information and motivation for the study, the second subsection provides the aims and objectives of the study. The scope of the study is described in the third subsection and the last subsection provides an overview of the organisation of the thesis.

1.2 Aims and objectives of the study

This study aims to fill the gap in the sustainability and certification literature by showing how a new form of 'knowledge', the Sri Lankan Rainforest Alliance certification is co-produced. The Rainforest Alliance certification is inscribed into a Sustainable Agriculture Standard which has been developed by a member organisation of the Rainforest Alliance NGO, the Sustainable

Agriculture Network aiming at the transformation of agricultural practices towards sustainability. The main research question of the study is formulated as: **How does the Rainforest Alliance certificate translate a conception of sustainability within the local tea supply chain?** This will be examined through three research questions as follows.

Research Question 1: How does the Rainforest Alliance certificate enrol (or not) supply chain actors?

The first research question seeks to understand why and how local supply chain actors are interested in a sustainability certification in order to adopt it voluntarily and how Rainforest Alliance provides a solution to their interests and goals. This question was theoretically framed to understand their interests in Rainforest Alliance, how actors such as the plantation companies became motivated to obtain the certification. As illustrated in the theory chapter, the concept of 'goal translation', helps to understand whether and how Rainforest Alliance provides solutions to the local actors' interests and enrols them into the certification.

Research Question 2: How does the Rainforest Alliance certificate translate the local management, accounting and agricultural practices of certified tea producers?

The second research question aims to understand how far the Rainforest Alliance certificate performs a 'translating' function on producer practices and whether (and how) there is an 'enrolment' of producers that impacts existing accountability practices and the adoption of any new accountability practices. Here the term 'management and accounting' practices is used to understand the systematic process of identifying, recording, measuring (not necessarily in financial terms), analysing and summarising social and environmental information supporting the execution of Rainforest Alliance-specific social and environmental responsibilities.

With the theoretical focus on the notion of 'composition', the second research question was aimed to understand how a composite goal is reached between the Rainforest Alliance certification and the local actors to enable achievement of the different goals of different actors. Therefore, the interview questions were developed relating to how they adopt Rainforest Alliance requirements in order to understand how the certification is implemented and stabilised in line with the theoretical conception of 'composition'. Specifically, the questions focused on identifying the human and non-human actors involved in this process to understand how they interact and associate during the adoption and implementation of the Rainforest Alliance certification. These interactions provide data to understand the process of forming the Sri Lankan Rainforest Alliance.

The general focus of the second research question was refined during the engagement of the fieldwork to reflect the nature of Rainforest Alliance agency in terms of transforming management and accounting practices of the tea producers. Here, the theoretical notion of 'reversible blackboxing', helps during the data coding and analysis to trace whether implementation and adoption processes work to effectively black box the Rainforest Alliance certification as an acceptable standard in the local context.

As mentioned above, sustainability certifications, for example in the case of Rainforest Alliance certificate specify general conditions across different crops such as coffee, coco, banana, spices in different part of the world. This question was focused on to understand how such general standard is implemented and adopted in the local context revealing a co-production of a Sri Lankan Rainforest Alliance. This enables to identify the nature and direction of the interplays invoked and the role management and accounting practices would be playing in any shifts in modes of practices of accountability nor how it helps in seeking to understand their role to then

observe that 'accounting is shaped by social practices' (Lawrence et al., 1997, Alawattage and Wickramasinghe, 2009b) enacting accountability (Gibbon, 2012).

Research Question 3: How does the Rainforest Alliance stabilise its local network?

Finally the study aims to examine both the intended and unintended consequences of the certification to understand how those implications affect the stability of the Rainforest Alliance certification. The theoretical notion, 'matter of concern' is used to develop the third research question. Here, the wider implications subsequent to the Rainforest Alliance's implementation in the local context are assumed as 'concerns' for a number of local actors affecting the stability of the local Rainforest Alliance network. This theoretical conception helps to explore such concerns in the local context and actors attached to such concerns are traced to understand the impact on the (temporary) stability of the Rainforest Alliance network

In terms of the theoretical notion of technical mediation, it is assumed that in line with the aims of the Rainforest Alliance NGO, sustainably transforming agricultural activities is delegated to the Rainforest Alliance certification. Therefore, this theoretical notion is also used to understand whether and how these impacts and outcomes articulate different meanings in the local context, to that inscribed by the Rainforest Alliance NGO.

1.3 Scope of the study

This study examines a single certification, the Rainforest Alliance certification, for its impact on a specific context, the tea supply chain in Sri Lanka. Data was collected from a six-month field visit to Sri Lanka in 2015 when 72 unstructured interviews were conducted, documents

were reviewed and observations were made of the Colombo tea auctions, tea factories and estates covering all the tea-growing elevations.

Drawing on ANT, the study adopts an agency perspective on the certification itself, enabling examination of its role as a non-human actor and interactions with local actors in enacting the certification in the local context.

An interpretive case study is developed by following the supply chain actors who are interested in and associated with Rainforest Alliance certification locally, including tea producers, smallholders, tea brokers, tea buyers/exporters and local statutory bodies and an industry association that represents the unit of analysis. ANT enables the incorporation of a range of non-human actors such as tea auction catalogues and the standard operating procedure manuals and accounting and management information systems of the tea producers in forming the Sri Lankan Rainforest Alliance network.

1.4 Structure of the thesis

This study is structured in seven chapters. Following the introduction in Chapter One, the **second chapter**, the literature review, is organised into several subsections. The first subsection provides an overview of the concept of corporate social responsibility (CSR) and reviews how CSR has evolved in the supply chain and the how different accountability certifications have emerged such as codes and certifications as means of embedding CSR into the supply chain. The chapter proceeds by showing how private accountability certifications have impacted local supply chains and highlights how prior studies have underemphasised the agency of local actors and the agency of the certification itself, thereby revealing the research gap for this study.

Chapter Three, Theory, describes how sociomateriality provides the broad theoretical lens for the study in examining the certification as a sociomaterial network. Theoretical conceptions drawn from the Actor Network Theory are explained and the theoretical framework is developed. The four meanings of technical mediation provides the main theoretical conception together with the notions of circulating reference, matter of concern and inscriptions that provide a framework for analysing the research questions of the study.

Chapter Four, Research Methodology, provides the philosophical underpinnings of the study and justifications for the case study research method and strategy, describing how the chosen method and strategies help in understanding the research questions in line with the interpretive philosophical assumptions.

Chapter Five, Context, provides information to understand how the tea industry operates. This includes a brief description of the world tea industry and a detailed analysis of the Sri Lankan tea industry, the Rainforest Alliance NGO and the certification to understand the nature of their interests, interactions and associations in order to open the 'black-box' of tea industry certifications.

Chapter Six, Analysis, analyses the fieldwork data in three main subsections, each focusing on one of the three research questions. The chapter illustrates how Rainforest Alliance enrols a range of local supply chain actors beyond the first tier, the impact on the local accounting, management and agricultural practices and the wider impacts affecting the stability of the Sri Lankan- Rainforest Alliance network.

Chapter Seven, Discussion and Conclusion, provides an integrated discussion of the findings presented in the analysis chapter with the theory and literature. The chapter shows how the agency perspective helps in understanding its role in enrolling the local actors towards its inscribed sustainability standards as a means of providing solutions for local actors, the enactment of standard requirements (subprogrammes) and effects on local accounting, management and agricultural practices and wider effects stabilising its network. The chapter closes by summarising the findings of the study, its contributions and its limitations.

CHAPTER 2

LITERATURE REVIEW ON CORPORATE SOCIAL RESPONSIBILITY (CSR) IN SUPPLY CHAINS

2.1 Introduction

This chapter reviews the prior literature on CSR and sustainability of supply chain to understand how the CSR concept has evolved and extended beyond the traditional boundaries towards supply chains over which multinationals have no control or ownership, but responsibility. The literature review enables a summary of prior findings on the use of diverse accountability certifications in supply chain and the revealing of the gaps in the literature and areas for further examination.

The chapter is organised in two main sections. The first section gives an overview of the concept of CSR. Next, taking a more focused view on supply chain CSR, section 2.3 reviews the literature under three subsections. Subsection 2.3.1, 'Global supply chains and responsibility for supply chain activity' explain how multinationals are increasingly seen to be responsible for supply chain activities even though they do not own specific supply chain entities, subsection 2.3.2, 'The emergence of accountability certifications' explores how accountability certifications developed as mechanisms to control aspects of supply chain activity, their effects and how they fail to meet local needs and priorities. The chapter ends with a summary of the reviewed literature and highlights the gap that the study is motivated to address.

2.2 Overview of the concept of Corporate Social Responsibility (CSR)

As a concept, CSR has a long history deriving from the notion of social responsibility (Carroll, 1999). The concept has evolved as CSR in the modern era, but with no universally agreed

definition, hence the concept has needed to evolve to encompass a range of issues to make it a global concept (Blowfield and Frynas, 2005, Prieto-Carrón et al., 2006). In the literature, the meanings of CSR vary, however a commonly represented framework, the CSR pyramid by Carroll (1999) illustrates four types of responsibility: economic, legal, ethical and philanthropic. Some scholars (Frederick, 1987, 1998) analyse the development of the concept into three eras, each a transition from the previous. CSR was initiated as the ethical concept of CSR and transformed into a managerial concept oriented with actions; social responsiveness: CSR_2. The next era, CSR_3 was incorporated with moral-based actions through values and ethics and CSR_4, included consideration of the cosmos, science and religion as a reference to social responsibility issues in management (Garriga and Melé, 2004). Proponents of rational choice theory, economic neoliberalism and agency theory have challenged notions of corporate responsibility. For example, Friedman (1970) claims that CSR activities which are not in the interests of company shareholders should not be undertaken by managers as they conflict with the maximisation of shareholder value as pronounced by the proprietary theory of corporate governance with its emphasis on shareholder primacy. In contrast to this view, CSR researchers consider Freeman's (1984) stakeholder theory with its emphasis on a range of stakeholders. CSR generally refers to a firm's acceptance of being accountable for the wider impacts of its activities but due to the lack of a universal definition, a number of interpretations are available in the CSR literature. Several commonly cited definitions follow.

> a concept whereby companies integrate social and environmental concerns in their business operations and in their interactions with their stakeholders on a voluntary basis. (European Commission, 2011:25)

Recent scholars have followed a broad definition given by Blowfield and Frynas (2005:503):

> an umbrella term for a variety of theories and practices all of which recognize the following (a) that companies have a responsibility for their impact on society and the natural environment, sometimes beyond legal compliance and the liability of

> individuals; (b) that companies have a responsibility for the behaviour of others with whom they do business; and (c) that business needs to manage its relationship with wider society, whether for reasons of commercial viability or to add value to society.

The complexity of the concept is further evident through the prevalence of a number of theoretical approaches explaining organisational CSR behaviour differently. According to the classification by Garriga and Melé (2004) the CSR relations between business and society are diverse: for profits, political purpose, integrating the demands of society or for ethics. Therefore, they urge a single theory that incorporate all of these dimensions to enable the business organisations relation with society to be measured. With the understanding that CSR varies in definitions and purposes, the next focus is on the empirical arena in brief.

The empirical arena widely focuses on CSR reporting. This is because corporate social responsibility reporting is the main communication mechanism used to report an organisation's CSR policies and performance to stakeholders. But so far the term, CSR reporting lacks a common meaning (Guthrie et al., 2008) and CSR reporting is introduced as a vehicle which can be used for organisations to:

> engage, theoretically at least, in an indirect way with their diverse stakeholder groups. (Barone et al., 2013:163)

Reporting is broadly based on three main areas, economic, social and environment, which is generated from the concept of 'Triple Bottom Line Reporting' (Elikington, 1999:75) and links with the concept of sustainability, thus, eventually achieving CSR reporting's goal to change the organisation's behaviour in line with sustainable economic development (Hess, 2008). However, a main concern is on how prevailing voluntary CSR reporting practices really contribute towards organisation's social and environmental responsibilities, more particularly with a low level of comprehensive reporting (Bouten et al., 2011) and with the weakness of enforcing international CSR reporting guidelines, GRI.

With the emerging emphasis on environmental impacts by business organisations, the CSR concept is in the foreground of the current debates. The sustainable development approach of CSR is considered to have developed since the beginning of the 1990s with its promotion by a range of parties such as governments, NGOs and international organisations, notably the United Nations Development Programme and World Council for Sustainable Development (Barone et al., 2013, Srisuphaolarn, 2013). While sustainability is internationally emphasised by different United Nations agendas and in the Millennium Development Goals, various local and international organisations have already incorporated it into their organisational missions (Hutchins and Sutherland, 2008) and in 2015, agreed in the United Nations sustainable development goals (UN, 2016). Hence, CSR reporting by organisations embraces the broad concept of sustainable development, which is defined as:

> Development which meets the needs of the present without compromising the ability of future generations to meet their own needs. (Brundtland et al., 1987:8)

CSR and sustainability are closely related concepts (Hutchins and Sutherland, 2008) but neither has a commonly accepted definition and there is continuing confusion in the business and management research literature over how organisations can be held responsible for sustainability (Gray et al., 2014). Nevertheless, given the impact of corporate activity on the planet, CSR is increasingly considered as essential and as an immediate requirement to enable sustainability targets (Jones, 2010). Novel theoretical perspectives are called for to broaden the understanding of what sustainability does and what it means (Unerman and Chapman, 2014). These bring urgent challenges for CSR in global supply chains, and organisations are under increased pressure to consider their responsibilities throughout their supply chains (Hutchins and Sutherland, 2008).

With this overview of the complexity of CSR as a conceptual and empirical theme, more especially with its importance in the context of sustainable development, the next task is to review CSR in supply chains.

2.3 CSR in supply chains

This section first defines CSR in the context of supply chain. Supply chain CSR has been described as a:

> Continuum of social practices that reflect a firm's responsibilities towards the social and ecological environment in the firm's global supply chain [including] all the activities and associated information flows in the transformation of goods from the raw materials' stage through to the end user. (Soundararajan and Brown, 2014:85)

Next, the sections below review the reliance of multinationals on global supply chains and their increasing responsibility for supply chain activities.

2.3.1 Global supply chains and responsibility for supply chain activity

As stated in the introduction chapter, the major cause behind the growth of supply chains is globalisation, and CSR is demanded across supply chains. This section emphasises this growth of supply chains, multinational reliance on these global supply chains and CSR demands.

A key characteristic of globalisation has been the distribution of activity by multinational corporations to developing countries[2]. This offers multinationals an opportunity to reduce costs but also offers developing countries opportunities for industrial advancement (Jenkins et al.,

[2] Developing countries are generally characterized as those States that are relatively new, being formed or 're-formed' after the breakdown of colonial empires after World War Two. Market economies of those States are growing but are less advanced than those typified by the G8 nations. Quantitative definitions are also provided: 'A country of which per capita Gross National Income is less than $1035 is considered a low-income country, a developing economy' (United Nations Secretariat: 144)

2002, Gereffi et al., 2005, Yu, 2008). The outsourcing process has created a distance between production and consumption, and more complex, global supply chains pose challenges to organisations. Multinationals increasingly manage, control and are perceived to be accountable for activity beyond their own legal entities, that takes place across parts of vertically-oriented supply chains for which they have no legal ownership (Andersen and Skjoett-Larsen, 2009, Burritt and Schaltegger, 2014). The social and environmental conditions in which goods are produced are often distinct from the conditions in which the goods are consumed (Bebbington and Larrinaga, 2014). These changes have led to an increasing focus on multinational corporate responsibility for social, environment and economic impacts across global supply chains evident from the rise of anti-sweatshop movements in the 1990s. Within the food and beverage industries, the distance between production and consumption has aroused consumer concerns about conditions surrounding the source of food, food processing, food quality and food safety. As a result, consumers have increasingly focused on corporate responsibility, accountability and sustainability issues in the supply chain (Guthrie et al. 2008; Banterle et al., 2013). The pressure on multinationals to expand corporate responsibilities beyond their own legal entities into outsourced, distant supply chains raises important questions for accountability.

The distribution of activity by multinationals to developing countries is driven by advancements in communication technologies, transportation facilities, privatisation of state organisations deregulation, and the open economic policies of developing countries (Lund-Thomsen and Lindgreen, 2014). The activities of multinational corporations are subject to increasing scrutiny due to their globally spread operations (Kolk, 2012). Therefore, they also extend CSR practices towards their suppliers. However, an interesting aspect of supply chain CSR initiation by a multinational retailer has been revealed. A study based on the theory of governmentality of a UK supermarket supply chain's initiation of sustainability accounting shows that retailers

introduce, implement and transform sustainability accounting strategically in order to govern their suppliers' social and environmental issues, prioritising economic prospects rather than sustainability aspects. For them it is a means for reputation and to face competition through managing risks, showing how sustainability is economically framed and incorporated into business decisions (Spence and Rinaldi, 2014).

It is apparent in the literature that supply chain CSR is considered as dependent on supply chain governance; however, conventional types of governance are subject to challenge by recent scholars (e.g. Soundararajan and Brown, 2014). Given the prominence of the use of Global Value Chain framework in the supply chain CSR literature, the review moves to focus on the conception of 'Global Value Chain' and its different governance structures. Conceptions of 'Global Value Chain' been have prominent in studies since the 2000s (Gereffi and Lee, 2012) and reported as reaching maturity by 2010 with their heavy usage by Global Value Chain scholars (Neilson et al., 2014).

Global value chains are described as:

> a new form of industrial organization that is rapidly diffusing in many industries across countries. (Morrison et al., 2008:51)

The Global Value Chain framework facilitates an understanding of the form of value creation and diffusion in those globally spread industrial supply chains, through the lens of governance and upgrading (Gereffi and Lee, 2016). The term governance encompasses:

> The mechanisms with which some firms in the chain set and/or enforce the parameters under which others in the chain operate. (Humphrey and Schmitz, 2001:20)

The Global Value Chain framework[3] introduces different types of governance across supply chains. Of them an early developed form of governance - buyer driven supply chains and supplier driven supply chains was introduced by Gereffi (1994) as analysis approach of the Global Production Network and Global Commodity Chain and later merged with Porter's (1987) concept of value chains, changing to global value chains (Giovannucci and Ponte, 2005). These are considered as conventional forms of governance, which assume lead buyers and/or suppliers are powerful in the supply chain and can manage and control supply chain conditions, similar to how they dictate commercial conditions in international trade. A modified form of governance is introduced later in the Global Value Chain framework to help explaining governance complexities in supply chains. This includes four types of governance: hierarchy, captive, relational, modular and market (Gereffi et al., 2005) in which governance structures of captive, relational, modular also falls in between the conventional vertical form of power structures, hierarchy and market. That is, these new form of governance structures do not negate the power of the lead buyers and/ or suppliers in managing and controlling the conditions in global supply chains, but the degree of lead buyer and supplier power varies (Gereffi and Lee, 2016).

The term upgrading encompasses the initiatives taken by various stakeholders in different countries or contexts to maintain or improve their positions in the global supply chains (Gereffi and Lee, 2016). Those upgrading initiatives are of two types, economic upgrading and social upgrading. With respect to the economic upgrading, Global Value Chain framework offers four types; product, process, functions and chain upgrading (Humphrey and Schmitz, 2001). Social

[3] The term 'Global Value Chain' will be referred to in this study to illustrate the governance framework and research studies that have used this framework.

upgrading relates to the attending for worker rights and working conditions to ensure improved working environment and life (Barrientos et al., 2011).

Whilst private voluntary CSR initiatives are introduced and operated as a means of CSR embedding in the supply chains, in reality, CSR in the supply chain is complex and influenced by diverse stakeholders. Therefore, scholars require examination of diverse horizontal forms of governance as well in order to better understand the differing responsibilities for supply chain CSR. Nevertheless, as mentioned before, the use of Global Value Chain framework in the CSR studies limits this understanding only to the powerful buyers and suppliers and underemphasises the power and responsibilities of the other stakeholders beyond the lead buyers and suppliers and thus may impact on the upgrading capacity of global supply chains (Gereffi and Lee, 2012).

In this context, the next task is to reveal how supply chain CSR is dependent on other factors including the visibility of supply chains. Case studies analyses of CSR in Small and Medium Enterprises connected to the global supply chain reveal that local suppliers' CSR compliance and collaboration depends on the extent of their visibility in global value chains. One category, 'high visible' (Lund-Thomsen and Nadvi, 2010:3) is supply chains connected to leading brand/retailers whilst those in a 'less visible' are connected to small or medium scale buyers/retailers. The findings reveal that leading firms are subject to increasing CSR pressures from different sources such as international regulations, media and public and NGOs due to their visibility, and in turn their suppliers are motivated to undertake CSR to gain access to developed markets and gain permission to operate as their suppliers, working through industry associations. As the authors claim, the likelihood of locally organised actions helps in cost savings and localisation of CSR requirements and commitment. The strength and speed of

response to social and environmental impacts depends on the nature of visibility of the value chain. Studies in the context of cluster firms also highlight attachment to visible global supply chains as a CSR driver (Lund-Thomsen et al., 2016a). The findings of a study in the context of the Asian aquaculture supply chain support the above fact, but from a different angle of visibility; that is, retailers and branded processing companies are revealed as influencing supply chain CSR more than importers who engage in wholesale and catering in aquaculture produce (Jespersen et al., 2014).

In addition to those factors, a number of other studies reveal how CSR in the supply chain is context-specific and/or country-specific. The range of such factors revealed encompasses the legal system, culture, type of economic system and corporate governance arrangements (Campbell, 2007, Lund-Thomsen et al., 2016a). For example, a case study discloses the influence of both micro- and macro-institutional factors in the evolution of solid waste management practices in government bodies in Canada and England (Ball and Craig, 2010). In the context of Australia, a study reveals competitor actions and customer concerns as influencing the environmental disclosures of top Australian companies (Wilmshurst and Frost, 2000). Next, a study on three emerging economies (India, China and Brazil) finds significant variances in CSR experiences and practices between clusters of firms in these three countries and reveal they are differently shaped by a 'social contract' (Knorringa and Nadvi, 2016:55) influenced by both formal and informal institutional factors. As the study shows, in India, owners of clusters are not motivated towards CSR standards as the social context does not pressurise them for such. However, this is different to Brazil where CSR is implemented through national laws helped by enforcing local laws, while when it comes to China, its social context lies between these two countries.

The above review illustrates that globalisation is the key driver behind the extension of CSR across supply chains. The globalisation-led growth of supply chains has created a distance, physically as well as in terms of social and environmental conditions. In addition, the vulnerability of certain supply chains, particularly the food supply chain, demands CSR across the supply chain.

As mentioned in Chapter 1, multinational corporations have responded by introducing mechanisms to govern and control supply chain activity (Hutchins and Sutherland, 2008, Kolk, 2008, 2012, Andersen and Skjoett-Larsen, 2009). Mechanisms such as codes, standards and accountability certifications, are used to specify standards and codes governing production to increase control over global supply chain operations (Giovannucci and Ponte, 2005, Child, 2015). The next section explains what these mechanisms are and why and how they have emerged.

2.3.2 The emergence of accountability certifications

This section sets the aims of the study within existing research on the development and implementation of accountability certifications across global supply chains.

Research on accountability certifications documents the emergence of an increasing number of private initiatives over the last three decades. The section begins by introducing accountability certifications in general before the second subsection moves the focus on sustainability certifications in particular. The third subsection then reviews research investigating the effects of sustainability certifications.

2.3.2.1 Introduction to accountability certifications

As discussed in Chapter 1, these codes, certifications and standards governing supply chain activity are described as 'accountability certifications'. This subsection introduces the different types of accountability certification that are often described as 'private regulation' (Yu, 2008, Egels-Zandén, 2014), 'self-regulation' (Kolk and Van Tulder, 2002, Sethi, 2016) and 'soft law' (Wells, 2007, Adeyeye, 2011) mechanisms voluntarily adopted by multinational corporations and leading retailers with their overseas suppliers. The subsection begins by focusing on 'codes'. An early study describes a code as a document developed by the managers of buying companies:

> specifying standards of employee welfare which suppliers are expected to adhere to. (Emmelhainz and Adams, 1999:56)

A later study defines a code broadly:

> International responsibility codes encompass guidelines, recommendations or rules issued by entities within society (adopting body or actor) with the intent to affect the behaviour of (international) business entities (Target) within society in order to enhance corporate responsibility. (Kolk and Van Tulder, 2005:3)

Codes commonly cover aspects of child labour/forced labour, working conditions/rights, follow-up mechanisms and noncompliance handling procedures (Emmelhainz and Adams, 1999, Kolk and Van Tulder, 2002). A number of studies show that labour codes vary in terms of the age limit of child labour, monitoring processes and how they refer to the provisions of the International Labour Organisation (ILO). Not all labour codes include even the standard requirements of the ILO (Jenkins and Unies, 2001).

Labour-related codes are common to several industries, for instance, toys (Egels-Zandén, 2014), garments (Kolk and Van Tulder, 2002), sports equipment and retail. Labour codes are generally unique to labour-intensive industries and are not used in business-to-business

industries but in end-consumer markets (Kolk and Van Tulder, 2005). Codes of other industries such as chemicals, oil & mining and forestry cover environmental aspects. Similarly, some company codes includes various other aspects such as consumer protection or bribery (Jenkins and Unies, 2001).

Codes are classified into "company codes, trade association codes, multi-stakeholder codes, model codes and inter-governmental codes" depending on who adopts them (Jenkins and Unies, 2001:20). According to a similar recent classification, codes are of four main types, with one type relating to codes adopted at the level of the individual company and the next two types industry-wide codes (Sethi, 2016). For instance, Sainsburys, a UK supermarket group, initiated a private, company-level code of conduct on responsible purchasing in 1998 (Leigh and Waddock, 2006). Table 2.1 illustrates some industry-wide codes. Examples include the Fair Labour Organisation, UTZ, Fairtrade, Organic, Bird Friendly (agriculture and food); ICTI-CARE (toy industry); Forest Stewardship Council (forestry) and Accord Business Social Compliance Initiative (garment industry).

Table 2.1: Industry Wide Codes of Conduct

Code title	**Number of signatory companies**
Forest Stewardship Council and the Criteria Forest Management	120
Equator Principles	37
Extractive Industry Transparency Initiative	83
UN principles for Responsible Investment	123
Fair Labour Association	44
Marine Stewardship Council	9
Fair Trade International	5

Source: Developed by author based on website details

Of these industry codes, one is governed by industry collaboration and the others by civil society organisations. The universal multi-industry and multipurpose code is the fourth type of code (Sethi, 2016). The following table (2.2) represents examples of universal codes.

Table 2.2: Universal Codes of Conduct

Code title	**Number of participating companies/ countries ***
United Nations Global Compact	4333
UN Declaration of Human Rights	193*
International Labour Organisation	187*
World Business Council for Sustainable Development	199
Ethical Trading Initiative	63

Source: Developed by author based on website details

With an understanding of what codes are, attention is next given to certifications. Certifications are based on standards compliance, therefore the first process is to introduce standards:

> Standards are agreed criteria … by which a product or a service's performance, its technical and physical characteristics, and/or the process, and conditions, under which it has been produced or delivered, can be assessed. (Nadvi and Waltring (2002) cited in Giovannucci and Ponte, 2005:286)

As Timmermans and Epstein (2010:70) state,

> Standards and standardisation aim to render the world equivalent across cultures, time and geography.

Thereby they seek mobility, stability and combinability of actions universally (Timmermans and Berg, 1997). Accordingly, standards are of three types: product standards, process standards and behavioural standards. While the first type of standard concentrates on product attributes, the second type is about the process of production. Behavioural standards specify accepted and unaccepted behavioural aspects of the organisation such as avoidance of child labour (Mueller

et al., 2009). As per another classification (Giovannucci and Ponte, 2005), standards are grouped into three main types: mandatory, voluntary and private. While mandatory standards are set by states and private standards at individual company level, certain standards are introduced by industries as a collaborative response to external pressures. However, scholars acknowledge that in the context of sustainability standards (coffee industry), this distinction between private and voluntary is arbitrary. For example, both of these standards also have become de facto mandatory, and some private standards have benchmarked voluntary standards. In some cases even voluntary standards reflect the use of certain contents of private standards. Another standard classification is based on four main functions, development of standards, their adoption, implementation and then assessment of compliance and enforcement. This categorisation illustrates four main types of agri-food standards: public-mandatory, public-voluntary, private standards mandated by law and private-voluntary standards (Henson and Humphrey, 2010). This classification avoids making a distinction between private and voluntary, instead all non-mandatory standards are grouped under private and called voluntary, which is common in the CSR literature. Based on who constructs those private standards, they are classified into (1) set by retailers and adaptation is required for their supply chain, (2) collectively formed by NGOs and industry associations, (3) set by international collective bodies such as NGOs, e.g. Rainforest Alliance. Popular sustainability certifications in the tea industry are shown in the Table 2.3 below.

The above review of codes of conduct and certifications show that have arisen responding to external pressures on multinationals and global retailers as means of private regulation that they adopt voluntarily across their supply chains. It is mostly labour aspects in the apparel and footwear industries that have been researched, placing the focus on company codes of conduct. Compared to codes, certifications have widely emerged as means of social and environmental

sustainability initiatives and are popular in the supply chain of food and beverage industries. A significant aspect is the presence of third-party auditing, supplier certification and product labelling. As per the review, standards and certifications are mostly developed by a third party and adopted by companies, and whereas codes of conduct are customised standards benchmarking industry or third-party standards, where compliance is generally subject to non-independent auditing.

The chapter proceeds by specifically concentrating on sustainability certifications, the focus of the study.

Sustainability certifications specify and seek to standardise production conditions, health and safety, environmental conditions and the measurement of social and environmental impacts (Henson and Humphrey, 2010). For an example as illustrated in the table 2.3, Organic certification specify four main areas; health, ecology, fairness and care through its standard (IFOAM) in enabling an accountability of organic farming. Standard is used as a guide to identify and measure indicators relating to health of soil, plants and people. Similarly, Shade/Bird friendly certification's accountability revolves around organic farming and helping to preserve the birds from unsustainable farming activities. As appear from the table 2.3, Rainforest Alliance certification and UTZ certification use its standard to specify, measure and control aspects of biodiversity and environment.

As the table 2.3 illustrates these certifications apply across different crops/products, across different contexts/parts of the world. Although certifications initially occupied niche market channels, some have grown to offer global scale, such as Rainforest Alliance, Fairtrade and Organic, whereas others remain limited to specific geographical areas. Within a fast growing field, multiple certifications exist in many areas, so they must compete for both adoptions by suppliers and support from buyers (Prado and Woodside, 2015). However, consumers have

been found to be confused by the presence of a multitude of certificates, and consumer preferences for certifications differ between countries (Giovannucci and Ponte, 2005, Banterle et al., 2013). On the other hand, sustainability certifications are generally constructed in developed, 'consumer' countries without explicit government involvement and lack regulatory enforcement (Gandenberger et al., 2011), thereby representing forms of 'soft law' based on private or self-regulation (Kolk and Van Tulder, 2002, Wells, 2007, Yu, 2008, Adeyeye, 2011, Egels-Zandén, 2014, Sethi, 2016). Distance therefore exists between the circumstances and context in which certifications are created and the locations in which they are adopted and implemented, where they are exposed to the complexities of their local settings (Yu, 2008). Thus, provides the opportunity to understand the nature and reality of the accountability underlined in these certifications in those different contexts and the next section reviews such impacts reported in literature.

Table 2.3: Popular International Tea Certifications

Certification	Commencement	Production/Trading of certified products	Certification characteristics
Organic	In 1972 commenced as an International Federation of Organic Agriculture Movement (IFOAM) in France to coordinate organic interested global actors. IFOAM works with UN organisations (Food and Agriculture Organization (FAO), International Fund for Agricultural Development (IFAD), **United Nations** Framework Convention on Climate Change (UNFCC) and countries to promote organic agriculture.	Major organic markets include the US, Germany and France. Major producers include India, Uganda and Mexico.	Certification based on IFOAM standards. Standards are based on four principles: health, ecology, fairness and care. Aims to promote the health of soil, plants and people through organic farming.
Fair Trade	As the second phase of development of the Fair Trade movement, organisations developed certification systems as a means of introducing 'fairness' in international trading that supports marginalised producers in developing countries.	Certified Products are traded and the main producers reside in Asia, Africa and Latin America.	Fair Trade International own and licence the Fair Trade mark; Fair Labour Organization (FLO) sets the Fair Trade standards. The Fair Trade standard is based on three principles to support developing country suppliers to access international markets, fair trading treatments and capacity building of producers. Producers are paid a minimum guaranteed price and in addition a Fair Trade premium is paid to a fund to improve community welfare activities.

Shade/Bird Friendly	In 1991 initiated as a State/NGO wildlife conservation body in Washington called the Smithsonian Migratory Bird Centre	Certificate relates to coffee farms and certified farms in North America. Certified coffee importers are from USA, France, UK and Japan.	Coffee farms are required to be organic and standards require natural shade covers to protect birds' habitats.
Rainforest Alliance	In 1996 a North American NGO was initiated to conserve forests vulnerable to economic activities. Currently certifies more than 170 products.	Initiated in North America and certified products are now traded globally. Main producers reside in Asia, Africa and Latin America.	Certification is based on the Sustainable Agriculture Network standard which covers 10 principles to ensure agricultural sustainability through improving health and safety of workers/community and conservation of biodiversity and the environment. No assured premium. Price depends on market determined quality.
Ethical Tea Partnership	Formed in 1997 by UK tea companies to improve tea supply chain conditions and currently more than 40 international tea companies and retailers from Europe, North America, Australia, New Zealand, and Sri Lanka are members of this NGO.	Certified tea is traded globally with membership with tea MNCs such as Unilever, Twining, and Tetley.	The ETP standard (ETP Global) is based on the Ethical Trading Initiative (ETI) base code mainly covering ILO conventions and environmental standards.

UTZ Kapeh	In 2002 certification originated in the Netherlands as a sustainability certification for tea, coffee, cocoa and hazelnut. UTZ planning an alliance with Rainforest Alliance.	UTZ certified products are globally traded. Main producers reside in Asia, Africa and Latin America.	Operates through codes of conduct on social and environmental requirements and a chain of custody certification. A premium is paid depending on certain market conditions and is not mandatory. Price depends on market determined quality.

Developed by the researcher based on secondary information

2.3.2.2 The effects of sustainability certifications

There is emerging scholarly attention on how these accountability certifications impact on distant supply chains. Despite the acknowledgement of certain common, positive benefits, the impacts are generally found to be negative. This section reviews these effects under several sub-headings as follows

2.3.2.2.1 Lack of MNC accountability beyond the first tier of the supply chain

A review of the literature finds that multinationals cannot identify all entities in their supply chain due to subcontracting and hence fail to improve the social and environmental conditions of their suppliers beyond first tier. As a study reveals even if actors beyond the first tier, such as some subcontractors, adopt accountability certifications, compliance is faked through bribery and the manipulation of records (Soundararajan and Brown, 2014). However, positive aspects of accountability certifications are reported in specific circumstances. Country specific factors such as the presence of laws and regulations, and the importance of a particular industry to an economy affect the impact of certifications. For example, a study of four Asian countries' in the aquaculture supply chain contrasts the safe and quality production conditions of Thailand with Bangladesh which is affected by poor laws and enforcing weakness (Jespersen et al., 2014).

Accountability certifications requiring responsible purchasing, are found to help in improving relations between buyers and suppliers in terms of long-term trust building, commitment towards suppliers and improvement in the quality and speed of the supplies (Carter and Jennings, 2002a). Similarly, both first-tier and second-tier suppliers in the Turkey textile industry perceive it is positively affected by accountability certifications. Findings reveal that the successful implementation of accountability practices depends on mutual understanding,

support and the nature of the relations between suppliers and buyers beyond imposing accountability on local suppliers (Aßländer et al., 2013).

Another study examining the formation of a local accountability certification assuring food exports in a developing economy reveals the important of local actors who are outside the supply chain (Tallontire et al., 2011). Actors outside the first tier of the supply chain are found to be involved in the debate on the content of the certification and its governance emphasising the existence of both horizontal and vertical governance in accountability certifications.

The next subsection addresses practical difficulties in adopting accountability certifications.

2.3.2.2.2 Practical difficulties in adopting accountability certifications

As revealed in the literature, the implementation of accountability certifications, even by the local first-tier companies are constrained by poor resources, lack of skills and outdated production techniques and issues related to compliance audits (Welford and Frost, 2006, Silva-Castañeda, 2012) In addition they can be constrained by diverse local, national and industrial factors (Yu, 2008). A study of CSR in supply chains in Asia (China, Malaysia, Cambodia, Taiwan, Vietnam and Indonesia) reveals that global brand-named companies require different types of sustainability certifications. Hence, Asian suppliers have to comply with a number of different sustainability certifications, having to confront contradictory compliance requirements for working hours, minimum working age and defining hazardous activities. Another implementation problem is that while buyers demand suppliers comply, they also pressurise them to meet commercial targets, which negatively affects workers (Soundararajan and Brown, 2014). A case study on a UK retail market's banana supply chain reveals supermarkets, as the key governing actors of the banana chain, demanding suppliers' compliance to promote their products and brands. However, in practice, the supermarkets' pressure on suppliers for quality,

speed delivery and low prices adversely affect the conditions of the workers at the supplier's production sites (Robinson, 2010). A recent study based on transaction cost theory analysed the nature of implementation issues in the supply chain which shows strategic use of accountability certifications and reveals that the implementation in the supply chain is complex and negatively affected by economic and behavioural issues despite the existence of a premium return on certified products. One reason is that upstream actors have to incur costs for implementation. Implementation costs are of three types: one type of cost relates to making changes in products and processes to meet the required sustainability certification requirements; the next relates to costs incurred in the creation or change of business relations with stakeholders to effectively implement the certification requirements; and the final cost is in monitoring and evaluating these certification requirements to ensure continued compliance. The other reason is behavioural issues: these costs are not shared by the downstream actors in the supply chain and the distribution of market benefits for the certified products is not transparent between the supply chain actors and hence negatively affects the success of accountability certifications in supply chains (Acquier et al., 2017).

2.3.2.2.3 Neglect of local priorities

In addition to the factors discussed above lack of attention to local priorities is another common criticism on sustainability mechanisms. Deegan and Islam (2014) highlight the pressure exerted on export-focused textile companies in Bangladesh over CSR practices and whether such external influences really bring benefits to local industries and communities. A number of other studies show how those external sustainability certifications ignore local priorities. A descriptive study on the impact of ethical trade on smallholders in the supply chain in the food industry (cocoa, coffee and tea in Asia, Africa and South America) shows small growers' unique requirements such as land security, a transparent and fair legal system, and fair prices

for smallholder produce (Blowfield 2003) are not addressed by sustainability certifications which can lead to the exclusion of small-scale suppliers from the supply chain (Welford and Frost, 2006, Soundararajan and Brown, 2014).

A recent study in the context of Fairtrade and organic certified coffee smallholders reveals that even though these certifications have given them an access opportunity to the international coffee markets, their livelihoods have not become sustainable due to their continued dependency on local intermediaries in the coffee supply chain (Lanka et al.,2017). These facts are further confirmed in another study based on multiple cases in the Bangladesh garment industry implementing required measurable standards such as health and safety, improvement of working conditions under the Accord[4] and Business Social Compliance Initiative-BSCI,[5] by medium sized garment producers after the Rana Plaza disaster. The study reveals company owners are externally pressurised to adopt such sustainability mechanisms voluntarily for their survival, and fail to meet the real needs and priorities of workers. For example, the elimination of unskilled workers from the factories, even from the labour market, and the stoppage of overtime led to increased work pressure and non-affordable monthly pay. As is further reported, the high implementation costs of production automation have led the workers to be deprived of their most valued social needs such as free food and praying facilities (McPhail et al., 2016). Another study on the soccer ball industry in Pakistan describes local suppliers' adoption of sustainability certifications to be 'Western imperialism' and further reveals how the absence of local voices brings negative impacts. The study reveals several problems encountered in meeting the imposed requirements. For example, due to local workers being unfamiliar with using toilet facilities that were reconstructed in Western styles in their Indian style factory, the

[4] A collective five-year legally enforceable agreement entered into by NGOs, retailers and the ILO for fire and building minimum safety requirements.

[5] Existing compliance requirement by the Foreign Trade Association before Rana Plaza collapsed.

toilets have been blocked every day (Khan and Lund-Thomsen, 2011). On the other hand, the initiation of Forest Stewardship Council certification (private international forestry certification) unexpectedly led to producing countries around the world developing alternative local certifications. As the study reports, the decision of whether it is a positive or negative outcome depends on how one looks at it (Auld et al., 2008).

This is because they have been mostly designed targeting only the first tier of suppliers. They lack a supply chain approach and even though they require adherence to the host country's laws, many tend to ignore the host country's contextual factors. Therefore factors such as high cost, resources, skills and capabilities limit implementation ability to the large companies (Kolk and Van Tulder, 2002, Kolk and Van Tulder, 2004, Andersen and Skjoett-Larsen, 2009). For instance, one study framework suggests considering diverse supplier level factors such as history of organisations, culture and firm-specific factors such as size, image, reputation and brand protection in accessing CSR implementations in supply chains (Andersen and Skjoett-Larsen, 2009).

2.3.2.2.4 Limited accountability in the supply chain

Several studies infer that adoption of those sustainability certifications is mostly limited to compliance and hence does not improve CSR practices at the level of the supplier factories. A case study on the impact of accountability certifications used by Chinese Reebok footwear suppliers from 2002-2005, reveals Reebok's code as a "race to ethical and legal minimum" (Yu, 2008:524). The implementation of certifications mainly benefitted brand-owned companies enjoying long-term profits and avoiding anti-sweatshop allegations for which the supplier workers have to work hard and fast for a minimum (rather than living) wage. Another study exploring factory managers in garment sourcing practices in Sri Lanka shows ethical sourcing is considered an essential competitive strategy. Thus, they comply only with the minimum

regulatory requirements, balancing retailers' pressure for lower costs and shorter lead times. This has led to benefits to the company in achieving labour efficiency, retention and enhancement of reputation, enabling them to meet buyers' requirements strategically through certifications rather than improving workers' rights. However, the study shows the contribution of local factors in the successful implementation of imposed CSR activities, despite their bringing limited benefits to local workers. For instance, several factors including the presence of strong labour laws, education level of workforce, nature of garments produced and the long-established positive relations with buyers positively influenced implementation at local factories (Perry et al., 2015).

As some scholars have mentioned, local actors' implementation of CSR practices to a minimum level is influenced by the nature of the certification itself. A study analysing the governance and certification characteristics of several coffee certifications reveals that Rainforest Alliance and UTZ certifications only help to maintain social and environmental conditions as these certifications only guarantee compliance with minimum criteria. In contrast, some other certifications such as Fair Trade, Organic and Bird Friendly are helping to improve social and environmental conditions with their emphasis on improvements beyond minimum levels. Nevertheless, large-scale producers create market pressures for them to strategically opt for certifications requiring minimal compliance and enjoy the benefits without really improving local conditions (Raynolds et al., 2007).

2.3.2.2.5 Positive impacts of accountability certifications

Prior studies note how positive benefits from sustainability certifications, such as the ability to enforce labour law relating to forced overtime and a minimum legal wage, are often observed in the presence of external pressure. In addition, certifications improve aspects that most

Western consumers are interested in such as child labour, health and safety aspects and discipline through company punishments but do not contribute to non-measurable aspects such as collective bargaining, freedom of association rights of workers and a living wage (Yu, 2008). A study on the tea industry, from the perspective of a single tea supplying company from a developing country, Malawi, shows external pressures have contributed in changing the scope of company CSR from philanthropic towards the integration of social and environmental considerations (Mzembe et al., 2015). Another study reports how certifications helps reinforcing state regulations (Amengual, 2010).

Nevertheless, a recent longitudinal study of Chinese toy suppliers' compliance with multinational retailers' certifications reveals positive changes occurring gradually over the years. As the study shows, although certifications had only been complied with initially as a means of meeting a requirement, overtime, workers' rights and conditions had improved and CSR has been incorporated into business policies and practices. However, weaknesses relating to the education of workers on health and safety issues and in the use of personal protective equipment only during code audit periods, were observed. This study supported by the 'new' institutional theory finds two factors contributing towards this improvements: the establishment of trust between the suppliers and retail buyers through increasing demands for code compliance and increasing demands for improving worker issues from external sources such as Chinese labour law, buyers and supplier code compliance industry requirements (ICTI-CARE) (Egels-Zandén, 2014). A similar supporting study shows private regulatory mechanisms and state regulations as hybrid systems help in improving workers' standards, yielding complementary benefits. This is revealed in a review of the operation of multinational accountability certifications and labour inspection at a supply factory in the Dominican

Republic, and suggests "private-voluntary initiatives can reinforce, rather than displace state regulation" (Amengual, 2010:405).

2.3.2.2.6 Reliability of accountability certifications

The credibility and reliability of certifications is discussed in prior literature. A comparative study of two developing economy certifications shows the Fair Labour Organisation certification increasingly including smallholders; however, in the case of the Forest Stewardship Council certification, the certified majority are large companies from developed economies and not producers who generally reside in developing economies (Auld et al., 2008). Thus, not all of the certifications primarily operate in a way to bring justice to suppliers in developing economics instead of impacting negatively on these producers, limiting their access to Northern markets. As further reported, there are concerns about both certifications only acting as labels representing sustainable consumption and production, representing no real market transformation (Gandenberger et al., 2011). Certifications are often promoted as encouraging consumption and production in the market from a commercial perspective rather than helping to achieve the underlying social and environmental goals (Auld et al., 2008). A number of scholars reveal how the Fair Trade certification, which originally aimed to provide justice to marginalised producers, has failed to meet its original purpose in its mainstreaming process by large retailers and corporations (Moore et al., 2006, Child, 2015). As Child (2015) shows, the sale of Fair Trade labelled products by Starbucks and Costco selling primarily offers a means for these companies to show their legitimacy (Child, 2015). Common concerns over certifications can be summarised as offering a lack of clarity over the distribution of benefits over the supply chain, the possibility of buyers refusing to pay extra when certifications become an accepted practice, poor attention to real sustainability needs at the local level, and even

repercussions if they do not adopt the demanded global standards. There are instances where certified suppliers in developed economies have failed even to save the lives of workers despite being certified as CSR-compliant suppliers. A recent study related to the garment industry context in Bangladesh questions the reliability of private governance mechanisms as they failed to avoid the destruction of many lives of workers in a garment factory at Rana Plaza and highlight the poor local regulatory system (McPhail et al., 2016).

As studies show, different actors perceive the credibility features of sustainability mechanisms differently. A study of credibility perceptions between two types of actor, media and experts in sustainability certifications, finds that while experts rely on the involvement of third parties such as NGOs in setting up standards, what matters for media actors' credibility is accreditation of certifications (Castka and Corbett, 2014). Mueller et al. (2009) analyse and note the differing levels of legitimacy of various certifications. Where multinationals' opt for certifications with low legitimacy, there is a risk of losing stakeholders' trust in the certifications in the long term.

Studies report that multinationals initiate accountability certifications for their own economic sustainability rather than for the sustainability of the local supply chains. Initiations of sustainability accounting by a UK supermarket supply chain show it as a means for managing risks to reputation and competition, thus being economically framed and incorporated into business decisions (Spence and Rinaldi, 2014). As revealed with respect to the Fair Trade certificate, retailers interpret the certification as per their goals and depending on their relations with the Fair Trade organisations (Nicholls and Huybrechts, 2016). This may be due to their awareness about positive consumer responses to proactive CSR strategies rather than being passive.

2.4 Identifying the research 'gap'

This section summarises the literature review and highlights the gaps that motivated the researcher to study how Rainforest Alliance certification is translated, and how it acts in the local context. As mentioned before, with the growth of supply chains, multinational corporate responsibility and accountability has intensified. They have increasingly adopted accountability certifications governing production to control aspects of supply chain operations.

However, certifications are generally found to inscribe the concerns of Western consumers whilst voices of those at the bottom of the supply chain are often ignored. For instance, some studies opined that even though child labour is prohibited within Western-based accountability certifications, it provides an informal education and a means to sustain life in areas of some countries in South Asia (Khan, 2007, Ruwanpura and Roncolato, 2006). Consequently, certifications are often critiqued as form of 'Western imperialism' (Khan and Lund-Thomsen, 2011) being based on conventions prevalent in Europe or North America, and failing to address local needs and priorities (Yu, 2008).

The practical implementation of accountability certifications across distant supply chains also reveals difficulties such as the absence of genuine *commitment* to CSR beyond *compliance* with local labour-related regulations. Implementations are also affected by a lack of resources, problems with compliance audits based on inaccurate data and the absence of reward or punishment by global buyers (Welford and Frost, 2006, Leigh and Waddock, 2006, Locke et al., 2009). As, mentioned above, such concerns are typified by the Rana Plaza garment factory, where certified CSR-compliant suppliers have failed to safeguard workers (Clean clothes campaign/SOMO, 2013, McPhail et al., 2016).

Prior studies therefore question the distribution of benefits over the supply chain where certifications are generally imposed on those developing country suppliers connected to leading

global value chains with potential repercussions if suppliers do not adopt the demanded standards (Lund-Thomsen and Nadvi, 2010).

It is often assumed that both multinationals as certification adopters can manage and control suppliers' sustainability-related activities in a similar way to their power in dictating production and commercial conditions as buyers (Locke et al., 2009). However, as revealed above assumptions regarding the traditional governance and power relations within supply chains are challenged (e.g. Aßländer et al., 2013, Soundararajan and Brown, 2014, Acquier et al., 2017) with no real improvements, for example in workers' rights (Perry et al., 2015).

Scholars therefore emphasise the need to gain insight from local perspectives beyond the perspective of buyers to gain an improved understanding of both vertical and horizontal forms of accountability and governance (Lund-Thomsen and Lindgreen, 2014). As a result, prior research highlights the necessity of further investigations into the impact of sustainability certifications to better understand how local practices are shaped in conjunction with external pressures (Carter and Jennings, 2002b, Walker and Brammer, 2013, Jespersen et al., 2014, Mzembe et al., 2015).

In summary, sustainability certifications regularly specify common production conditions without considering the real context in which they are actually implemented. Therefore, certifications are mostly criticised as failures due to non- attention to local needs and priorities. This gives an opportunity to pursue further ways in which such needs have been marginalized or ignored.

Therefore, this study seeks to examine local needs by investigating how a local variant of one such global sustainability certification, Rainforest Alliance, is constructed in the Sri Lankan tea industry. As prior studies have critiqued the availability of theoretical bases that can incorporate local dimensions (Tallontire et al., 2011, Lund-Thomsen et al., 2016a) this paper draws on

theoretical conceptions of sociomateriality and technical mediation to consider how the Rainforest Alliance framework and local practices interact and become entangled at the local level. The study poses the research question, How does the Rainforest Alliance certification translate a conception of sustainability within the local tea supply chain?

The next chapter proceeds by explaining the theoretical concepts used to understand the construction and impact of accountability certifications at the local level.

CHAPTER 3

THEORETICAL FRAMEWORK: SOCIOMATERIALITY AND ACTOR NETWORK THEORY

3.1 Introduction

The previous literature review chapter revealed that multinationals and powerful suppliers voluntarily use accountability certifications aiming to get supply chain organisations to account for social and/or environmental performance and impacts. Thus, their success in the supply chain of developing economies is controversial, mainly due to the distance between origination (in the developed economies) and the real place of practice/context exposed to it (in the developing economies). Moreover, the nature of accountability and its significance depends on the type of the industrial supply chain. The food supply chain is a key industry that is increasingly demanding better food safety, quality and sustainability, and the number of private certifications is growing to address those concerns. This study focuses on an agricultural sustainability certification, Rainforest Alliance operating in the tea industry.

Accountability certifications are mainly focused on as being 'pushed' by powerful actors in the supply chain, therefore underemphasising the agency of local firms and actors in how they choose to implement them in developing economies (Knorringa and Nadvi, 2016, Mzembe et al., 2015, Prado and Woodside, 2015) and furthermore studies remain silent about the agency of the certification itself. Hence, drawing from the conception of sociomateriality and more particularly from Actor Network Theory (ANT), this study aims to contribute to an enriched perspective on certifications and the agency of the certification itself. The agency of the certification is perceived as being enacted through a network of relationships in which the relationships of local actors can construct or modify a local version of the certification that

meets their needs and shapes local practices. This contributes calls for a new theoretical perspective to better understand the role of accountability certifications in the supply chain of developing economies beyond frequently used perspectives of the governance-Global Value Chain framework (Knorringa and Nadvi, 2016, Mzembe et al., 2015, Prado and Woodside, 2015).

The chapter develops a theoretical framework for examining the agency of Rainforest Alliance certification. It begins.by giving an overview of ANT and then introduces the conception of 'sociomateriality' as the broad theoretical conception of the study. Drawing from ANT, as among the most popular theoretical applications of sociomateriality, the conception of 'Technical mediation' is introduced in subsection 3.3 1 as the main theoretical notion. Section 3.4 then introduces the ANT concepts of Circulating Reference, Inscriptions and Matter of concern. Together, the theoretical framework is used to examine the main research question of the study: How does the Rainforest Alliance certificate translate a concept of sustainability within the local tea supply chain in Sri Lanka? and ends with a chapter conclusion.

3.2 Actor Network Theory (ANT)

ANT is a label given to a collection of work developed by Bruno Latour and Michel Callon (Justesen and Mouritsen, 2011b, Briers and Chua, 2001) and also known as a 'sociology of translation' (Latour, 2005:106). This has been widely used in accounting and the social sciences to offer a specific ontological perspective on how (accounting) technology, knowledge and practices are constructed (Lowe, 2001, Justesen and Mouritsen, 2011a). Rather than perceiving accounting objects (the material) and the people who use them (the social) to be separate entities, ANT adopts a relational ontology whereby 'reality' is constructed from the relations between the social and the material. Hence, reality is not viewed as existing 'out there' or as

being socially constructed; ANT proposes that reality is constructed from a network of relations (Latour, 1999).

That is, on one hand, the Rainforest Alliance standard is not considered as stable or taken for granted by the local actors as an objective reality disregarding the agency of local actors in its transformation. On the other hand, Rainforest Alliance certification is not treated as socially constructed; that is, local supply chain actors give it a different meanings to that of its Northern inscribed interests and adapt it to suit their interests, disregarding the agency of the certification itself in changing the interests of local actors and practices. Instead, ANT enables viewing the certification as a sociomaterial construction with its unique definition of 'social'.

In ANT, 'social' represents associations or relations that are not limited to human actors but also include non-human actors, thus referred to as 'networks' (Murdoch, 1998), which co-produce a 'Sri Lankan Rainforest Alliance certification'. Networks are created through 'transformation'. This notion represents a change in a human due to an association or a relation with a non-human and vice versa. Transformed actors form the actor network in ANT. Whilst networks may stabilise over a particular time, changes in the sociomaterial network of relations become changes in 'reality' (Latour, 2005). Therefore, ANT requires us to follow these relations or associations to understand the nature of the reality.

> ANT seeks to analyse how social and material processes (subjects, objects and relations) become seamlessly entwined within complex set of association. (Murdoch, 1998:359)

These relations or associations are not limited to a geographical space, but instead, "act at a distance" (Latour, 1987) towards a common goal, creating a point 'centre' towards which each act forms a distance. This concept is helpful to represent the Rainforest Alliance in an overall context of a certification system acting at a distance by its Northern originators (the standard setters) on Sri Lankan tea supply chain for sustainability. This study will argue that the success

of acting at a distance depends on the agency of the certification itself; in the ability of enrolling actors, changing local accountability practices and furthermore the strength of the sociomaterial network (as explored through the three research questions) in the local context. Accordingly, the centre becomes the notion of 'Rainforest Alliance-certified', a common recognition for sustainability attracting interested parties (e.g. NGOs, buyers, competitors, growers, brokers) from any distance.

Given the fact that Rainforest Alliance certification is a Northern NGO standard, created from a distance with a particular meaning (sustainable agriculture), its reality, or in other words, what it means for the local supply chain, is not known and has to be explored, hence Rainforest Alliance certification itself is perceived as an 'artefact' in this study, where a user can give a meaning or a force about what it can mean/does and does not mean.

Under this perspective, the Rainforest Alliance is viewed as a form of 'technological artefact', as being constructed by the dynamic interplay of a network of human and non-human actors (Latour, 1987). For example, it is constituted by the relations between actors having some association with the certification, such as NGOs, local supply chain actors and various material devices/systems in the local tea industry such as tea auctions. As the nature of these associations change across time and space (from, say, New York in 1986 to Sri Lanka in 2015), the nature of the Rainforest Alliance changes. Therefore, a local meaning or translation of the Rainforest Alliance is constructed by the relations between, for example, local actors, market conditions and local laws. ANT is therefore used in this study to understand how the Rainforest Alliance certification acts and becomes translated in the local context.

In ANT, power is not treated as a cause; instead, the power is the outcome. Therefore, while some scholars argue that ANT disregards the discretionary power (Munroe, 1999), others show

absence of such a discretionary power when stronger networks emerge through translation (Funck, 2015). Use of ANT in the study enables studying the agency of Rainforest Alliance certification as the outcome of its interactions with local actors.

In utilising ANT for the study, emphasis is placed on attempting to trace and identify networks of actors. Thus, the focus is to follow the relations not only with the human actors, but also how non-human actors intervene in the process. It is recommended to follow the actors in action making the network of relations before being black-boxed (Latour, 1987). The term black box is used in ANT to represent the facts which are not subject to suspicion and hence are taken for granted. For example, MacKenzie (2009) illustrates how the black-box mechanism operates in a carbon reduction markets, where certain calculative mechanisms (conversion of greenhouse gas emission to a measurement of carbon dioxide) through an input and output conversion table become acceptable by market participants with no controversies. This study on Rainforest Alliance certification is engaged as fieldwork within its early years of emergence in the local context before Rainforest Alliance becomes a black box.

With this overview of ANT, the next section discusses the theoretical conception of Sociomateriality, of which ANT is considered as the popular theoretical application of this conception (Leonardi, 2013, Orlikowski, 2007).

3.3 Broad Theoretical Conception: Sociomateriality

'Sociomateriality' is an 'umbrella term', representing the field of research which challenges the conventional conceptualisation of 'technology, work and organisation' as distinct and thus provides an advanced conception; the technical and the social are inherently inseparable (Orlikowski and Scott, 2008:p.434). It emphasises that:

> the social and the material are considered to be inextricably related – there is no social that is not also material, and no material that is not also social (Orlikowski, 2007:1437)

This proposes a new means of conceptualisation for organisational practices as 'sociomaterial practices' where both social and material interactions are considered as a 'constitutive entanglement' (Orlikowski, 2007:1438). In the context of the Rainforest Alliance certification, the term 'entanglement' is used to represent that the Rainforest Alliance certification requirements have become associated and related to the accountability and agricultural practices of the local actors, who are Rainforest Alliance certified. In fact, this sociomaterial conception is inspired by the writings of several authors, for example, Latour, Callon and Law (1987, 1992, 2005) [Actor Network Theory] and Barad (1996, 2003, 2007), who deduce relational ontology by challenging the conventional ontological separation of the 'social' and the 'material' (Leonardi, 2013:61).

The use of sociomateriality as the broad theoretical conception enables the study of a sustainability certification starting from initial interactions with no pre-conceived notion of what the Rainforest Alliance certificate is until it has been followed in the study and analysing how asymmetry is build up, established and stabilised (Latour 1986, 2005).

Thus, examining Rainforest Alliance interaction with firms/actors in the local supply chain, this study contributes to revealing the effects on a specific agricultural food supply chain, the tea supply chain, and of a specific context, Sri Lanka. With these prospects, the next section provides a detailed insight into the main theoretical conception drawn from ANT, 'Technical Mediation'.

3.3.1 Main Theoretical Conception: Technical Mediation

As shown above, whilst sociomateriality provides the broad theoretical conception, Actor-Network Theory provides a toolkit to analyse the certification agency as a process of negotiation

between the certification and local actors during which the Rainforest Alliance certification is enacted and co-produced in the local context and becomes translated.

ANT enables one to explore the agency of non-humans, particularly of technology. Latour (1999) presents technological artefacts as a "full-fledged actor in our collective" (p.174) The term 'collective' represents both the human and non-human and the term 'full-fledged' represents their equal agency.

A number of ANT studies are evident for studying non-human agency; for example studies on the role of accounting in enabling action at a distance (Robson, 1992, Preston, 2006), the role of calculative practices in making commensurability in carbon markets (MacKenzie, 2009), the role of accounting in corporate strategy (Skærbæk and Tryggestad, 2010, Kastberg and Siverbo, 2016). A review of the ANT literature shows that studying the agency of an accountability certification is an opportunity for a contribution to ANT from the emerging field of CSR in supply chains, more particularly from the specific field of sustainability certifications as they are often viewed from the perspective of the powerful buyers/suppliers, the human actors. To fill the gap, this study incorporates the perspective of the certification itself to explore the agency of the certification by framing the main research question as 'How does the Rainforest Alliance certificate translate a conception of sustainability within the local tea supply chain?' Here, the agency of the certification is expressed with respect to a particular related action keeping in line with ANT,

> agencies are always presented in an account as doing something that is, making some difference to a state of affairs, transforming some As into Bs through trials with Cs. … If you mention an agency, you have to provide the account of its action. (Latour, 2005:52-53)

With the emphasis that ANT has been a popular theory for studying about non-humans as actors, next I discuss how Rainforest Alliance certification is perceived as a technology, a technological artefact.

As explained earlier, Rainforest Alliance certification is a sustainability certification based on a sustainable agriculture standard developed by the Sustainable Agriculture Network, focused on making supply chain actors account for social and environmental performance and the impact of agricultural activities. There, the use of ANT enables the study of the particular nature of these technologies while highlighting their significance within interactions in sociotechnical networks. The Rainforest Alliance certification, like other accountability standards and devices, is viewed as a technology (Rowbottom and Locke, 2016, Vinnari and Dillard, 2016, Hansen and Flyverbom, 2015, Funck, 2015, Briers and Chua, 2001, Lowe, 2001, Mouritsen et al., 2001). These studies show that 'technology' can be used to represent systems such as accounting, auditing and management accounting. In keeping with these studies, Rainforest Alliance certification can also be perceived as a technological system; a technology of making supply chain actors account for their social and environmental impacts.

3.3.1.1 Illustration of four meanings of Technical mediation

In line with the above discussion, the Rainforest Alliance certification is perceived as such a technological artefact. Hence, in order to understand what the Rainforest Alliance means or forces in the local context, we have to follow its interactions in the local context. Three research sub questions of the study provide specific accounts of Rainforest Alliance agency to investigate whether and how the Rainforest Alliance certification mediates in the collective of local actors in the supply chain. These research questions are notionally linked to the four meanings of technical mediation; 'goal translation, 'composition', 'reversible blackboxing' and

'delegation' (Latour, 1999:178-189). The chapter gives an introduction to the meanings of mediation and explains how this study makes use of these four meanings as a theoretical framework to answer the research questions of the study.

The first meaning, 'goal translation' illustrates the mediation role of the technological artefact in forming a composite goal, which is different from those actors' original interests (prior to associations with technology). The second meaning, 'composition' illustrates the mediation role of the technological artefact in creating a single or series of subprogrammes enabling the composite goal/goals. 'Reversible blackboxing', the third meaning, illustrates how a technological artefact which is considered as a black box becomes visible in a controversial situation revealing its former translations The fourth meaning of technical mediation, 'delegation' offers a broader meaning to the process of translation taking place in technical mediation, where non-human actors mediate not only in translating human actors' interests but can also transform the attached matter of expression. So, the next task is to illustrate the theoretical framework in detail and describe how it helps to investigate the research questions of the study.

- **Goal translation**

This notion is linked to the first research question of the study: **'How does the Rainforest Alliance certificate enrol supply chain actors?'** This will be explored by analysing the motivations/interests of local supply chain actors to understand how Rainforest Alliance provides a solution (or not) to their interests/goals and for them to enrol (or not) into the certification. Those whose goals are met by the certification are 'enrolled' into the Rainforest Alliance network.

This notion is based on the ANT central concept of 'translation' and represents the manner in which associations and relations are formed in the form of a network (Latour, 1987), which are sociomaterial. In relation to the technical mediation, translation is defined as:

> displacement, drift, invention, mediation, the creation of a link that did not exist before and that to some degree modifies the original two. (Latour, 1999:179)

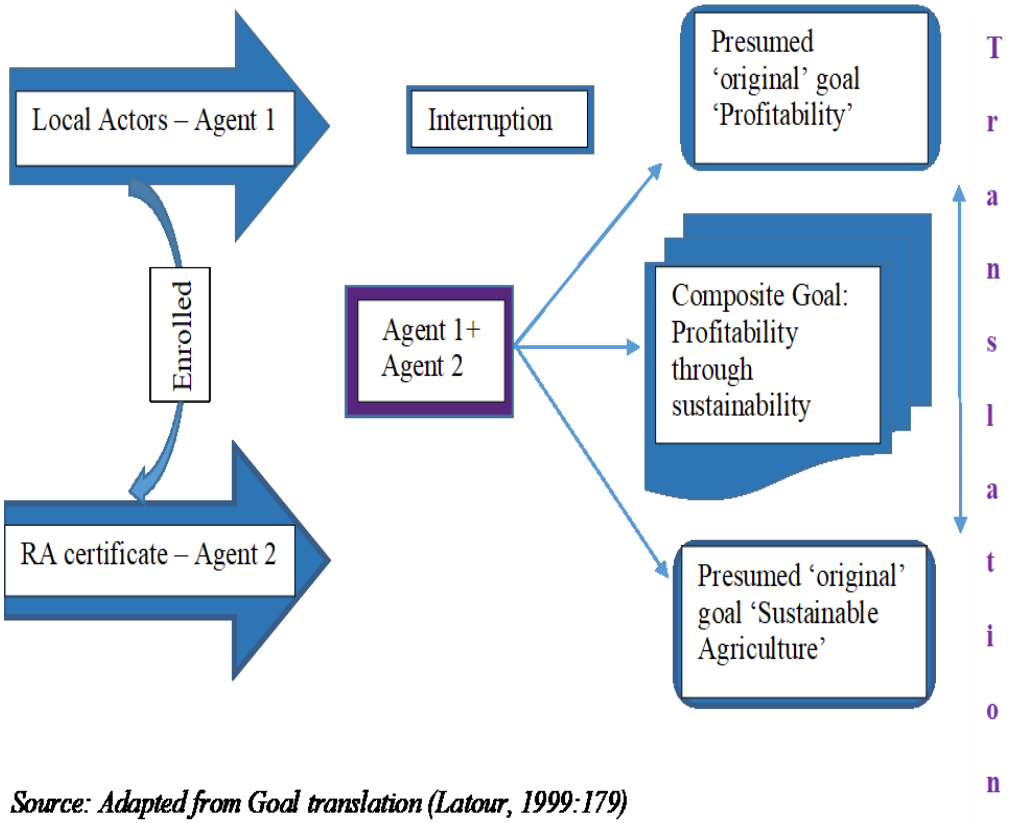
For example, if the local supply chain actors have changed their agricultural practices due to Rainforest Alliance certification that is a translation mediated by the Rainforest Alliance certification. The concept is illustrated with respect to 'interests', a means to construct facts. Translation of 'interests' is the key to enrolling people to construct facts; to talk about the certification, to adopt it, to adapt it and to attract other actors towards it (Latour, 1987). If the certification fails to enrol sufficient actors, it will not travel in the local tea industry. Studies have used translation to analyse the enrolling strategies through translating interests and to interpret the interactions of sociomaterial practices as a process of translation. For example, this notion has been used by accounting scholars to challenge the perceptions of accounting roles as rational and functional and the accounting implementation process as linear (Justesen and Mouritsen, 2011b).

This first meaning of mediation, goal translation through interference, is a 'programme of action', which can be explained as a story between two agents (a human actor and a technological artefact), about translating their own goals into a composite goal that is different from their original goals and illustrated as below (Figure 3.1). The term 'agent' is used to label humans and non-humans before they become actors in a sociomaterial network. The purpose of the study is to examine the mediation role of the technological agent (the Rainforest Alliance) in its interactions with local actors/firms. Here, the term 'original goal' refers to whatever goals

the agents have before they interact with each other. Figure 3.1 illustrates the technological artefact (Rainforest Alliance certification) and local supply chain actor (e.g. tea manufacture), their goals before interaction and then the Rainforest Alliance-mediated translated composite goal.

So, the two agents have their own goals. If the Rainforest Alliance has agency, it should be able to mediate the interests of the other agents by providing solutions to their interests/goals. Thus emerges a composite goal, the goal common to both actors as achievable only through the translation of their interests/goals. This is illustrated below.

Figure 3.1: The First Aspect of Technical Mediation: Goal Translation



Source: Adapted from Goal translation (Latour, 1999:179)

As mentioned, this notion will be used to examine whether the Rainforest Alliance technology, the key agent focused on in the study, entangles with the local agents (parties in the local supply

chain) by providing solutions (or not) to their interests as achievable through the Rainforest Alliance certification. Thus, they (local supply chain actors) translate (or not) their goals and become (or not) enrolled actors into the Rainforest Alliance's actor network. As per ANT, it is not required to know what exactly the original goals of actors were; instead, what ANT is interested in is how they are interested in the Rainforest Alliance certificate.

Having discussed the above theoretical framing for the first research question, the next move is to explain how the second meaning helps in exploring the second research question.

- **Composition**

The second research question, How does the Rainforest Alliance certificate translate the local management, accounting and agricultural practices of certified tea producers? aims at understanding the agency of the Rainforest Alliance, more particularly in relation to its underlying accountability standard produced by the Sustainable Agriculture Network. That is, it examines whether this Sustainable Agriculture Network standard mediates in transforming/translating the accountability practices of Rainforest Alliance-certified tea producers. The analysis is focused on the interactions with the certification to understand how far the Rainforest Alliance performs a 'translating' function on producer practices of those who adopted and implemented. This enables to one to analyse the adoption of any new accountability practices and understand whether and how existing accountability practices have changed. As Rainforest Alliance only certifies producers regarding standard compliance, the analysis is limited to the tea producers.

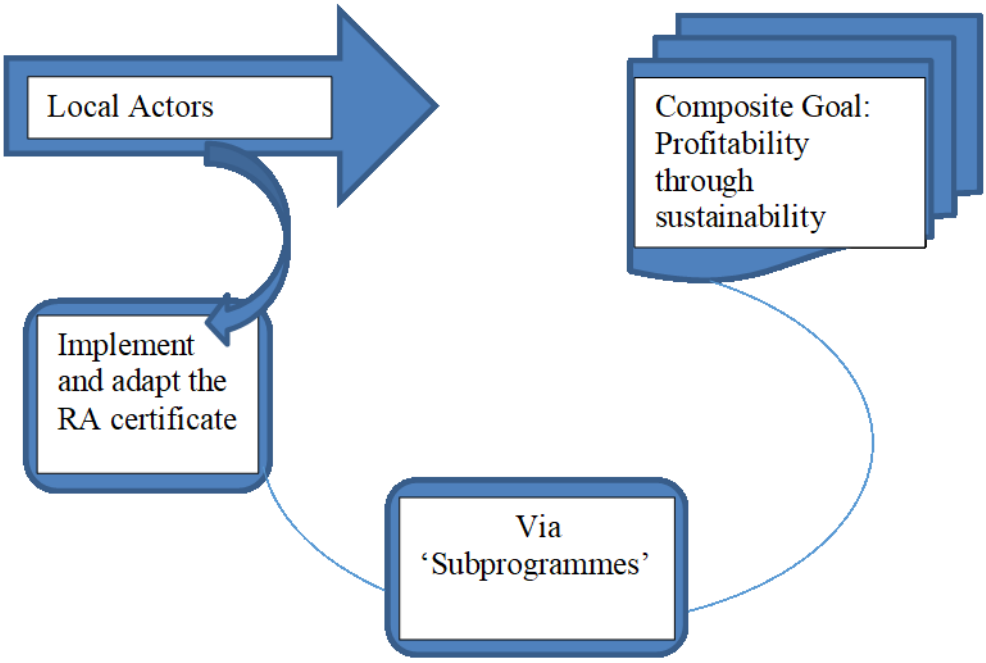
The second meaning of technical mediation, 'composition', helps to illustrate this theoretically: composition implies that a non-human as an actor in the collective of humans also participates in actions. Actors associate by way of allowing, authorising, enabling and affording. For

example, the technical artefact as an actor mediates through "the process of exchanging competencies, offering one another new possibilities, new goals and new functions" (Latour, 1999:182). Hence, action is not only a function of the human or a technological artefact. Instead,

> Action is simply not a property of humans but of an association of actants, and this is the second meaning of technical mediation. (Latour, 1999:182)

For example, local tea producers' and other supply chain actors' interests may be transformed (influenced or disassociated) by their relations with non-humans in the local tea industry such as the tea trading system, communication and marketing devices and even visionary objects such as tea quality (Briers and Chua, 2001). Action is a function of a 'hybrid' actor, neither the human alone nor the artefact. Here, the focus is on analysing the agency of the artefact through mediating in 'subprogrammes' (Latour, 1999:181). Subprogramme/s can be a single, two or more or a series of specific interactions in the collective of human and non-humans towards achieving composite goals. For example, subprogrammes can be the compliance requirements of the Rainforest Alliance certification, which the local actors implement and adapt their agricultural practices to ensure sustainable performance and effects. This would result in attracting more actors, either human or non-human, and implementing any other specific subprogrammes to enable the common interests. A diagram of the meaning of this technical mediation is shown in Figure 3.2.

Figure 3.2: The Second Aspect of Technical Mediation: Composition



Source: Adapted from Composition (Latour, 1999:181)

This constitutes how certified tea producers can interact in compliance with the Rainforest Alliance accountability standard in the local context, enabling the composite goal. However, more actors may join in these interactions, with whom subprogrammes are also formed and through all of them, only the composite goal becomes enabled. This is shown as a curved line in the diagram.

It is necessary to know whether the Rainforest Alliance can mediate in the process of subprogrammes. For this, it is necessary to know about the Rainforest Alliance's inscribed programmes of action. In terms of the agency of technological artefacts, Latour (1999) argues,

a technology is programmed for a set of actions and when this technology is entangled with humans in this collective, a hybrid actor emerges through mediation of the artefact and moves towards a composite goal through a single or several subprogrammes. Hence, this frame helps to establish whether the Rainforest Alliance's intended programme of actions (Rainforest Alliance as a certification technology intends to transform agricultural practices into sustainability through its inscribed Sustainable Agriculture Network standard) and to understand whether these are translated into subprogrammes in practice in the local network.

As shown in the diagram, the Rainforest Alliance may mediate through offering new functions as requirements of the Rainforest Alliance standard. Then the local actors may transform their existing accountability system by transforming these requirements through subprogrammes. The next section explains the third meaning of technical mediation 'reversible blackboxing'.

- **Reversible blackboxing**

This notion is used to examine the second research question in analysing the blackboxing of certification practices. It is employed to understand whether and how the Rainforest Alliance certification has been blackboxed in the local tea industry as a taken-for-granted standard within Sri Lanka.

The term black-boxed concerns the way the component actants become aligned such that a collective becomes seen and understood as a single (black-boxed) entity. That, is the internal complexity of a hybrid actants become hidden. However, this alignment and the consequent blackboxing can be reversed, such that a collectives' component actants become visible again in the event of a crisis.

Latour (1999) shows that when a blackboxed technology or artefact undergoes controversy, its former translations can be revealed as it goes through seven steps up or down depending on the nature of controversy. These seven steps are: disinterest, interests, composition of a new goal, obligatory passage point, alignment, blackboxing and punctualization. These are illustrated in the diagram below.

Figure 3.3: The Third Aspect of Technical Mediation: Reversible Blackboxing

Source: Adapted from Reversible Blackboxing (Latour, 1999:184)

Of these seven steps, the first two meanings of technical mediation , 'Goal translation' and 'Composition' focus on step one, two and three in examining the first and the second research questions as discussed above. This framework further offers four more stages (steps 4-7) as

means of tracing the mediation role of non-humans towards blackboxing and punctualization. Therefore, as mentioned before, these steps help to analyse the second research question.

The fourth step of the reversible blackboxing framework is 'Obligatory Passage Point' (OPP). During this stage, an initiation actor defines the identities of the other actors so that the initiator becomes the OPP for others to pass through if they are to achieve their own interests. For example, a Rainforest Alliance NGO local movement can define their identity in the tea industry as an essential body (OPP) in order to enable the export of tea from Sri Lanka. It defines sustainable requirements to the local tea growers and producers. Supply/service providers will be limited to sustainable practitioners. Buyers/exporters need sustainably produced tea. Local environment conservation stakeholders are interested in sustainability. So, if all of them are to meet their individual goals that can be done only via the Rainforest Alliance local movement which certifies sustainable tea.

The fifth step 'alignment' involves the employment of a particular device, interessement (Callon, 1984) to keep those identified other actors interested in the OPP. For example, the certification of the tea producers can be treated as an interessement device that keeps all of the above interested actors enrolled into the Rainforest Alliance NGO local movement. However, interessement devices fail in certain situations and are also challenging (Ambrose et al., 2016). For instance, in a technological communication system development project, the initial interessement device, a model of a technical logic, was not successful. This shows how technical superiority/logic alone is insufficient to enrol actors, instead needing an appeal to their interests. Thus, the initially planned system, a technologically oriented system, was adapted in the process as a sociocentric network system satisfying the minimum levels of interest of all the considered actors and hence became stable (Ruikar and Chang, 2012).

In step 6, blackboxing, each actor is negotiated with a specific role in the network so that there will be no controversies. Thus, one cannot observe any human and non-human interactions and associations involved in viewing the certification practices as acceptable Cavalheiro and Joia (2016:225) clarify some strategies towards enrolment of actors towards the blackboxing of practices: they may involve "physical violence, seduction, persuasion, transaction or consent without discussion".

The seventh and last step, punctualisation, is where all the enrolled actors' continued participation is ensured as agreed and the initiating actor becomes the spokesperson of their allies to avoid any betrayals of relations.

In focusing on interactions of Rainforest Alliance in the local context and whether it becomes accepted as a sustainable certification, the study seeks to understand how it receives support from 'spokespeople' who might speak for it. In ANT, this term is introduced to represent a human as they can speak on behalf of a non-human, which cannot speak. For an example, a scientist in a laboratory speaks on behalf of an instrument that cannot speak by itself to explain what is happening in the experiment. To show the use of this term in the ANT literature, for instance, consultants are recognised as spokespeople in a situation of a controversial accounting change in an organisation, as they aim to settle the related controversies (Christensen and Skærbæk, 2010). As Funck (2015) shows, changes in a network can replace spokespeople. For example medical doctors who were spokespeople during the initial stage of ideas development for a hospital quality audit system with a small group of actors, were later replaced by the 'national quality registers' (p.424) acting as expert spokespeople for a larger supporting network. Thus, spokespeople are not necessarily initiators. Similarly, this notion is also used for other supply chain parties (tea brokers, buyers/exporters, regulatory/monitory institutions) to assess the agency of the Rainforest Alliance as mediated in enrolling them into the Rainforest

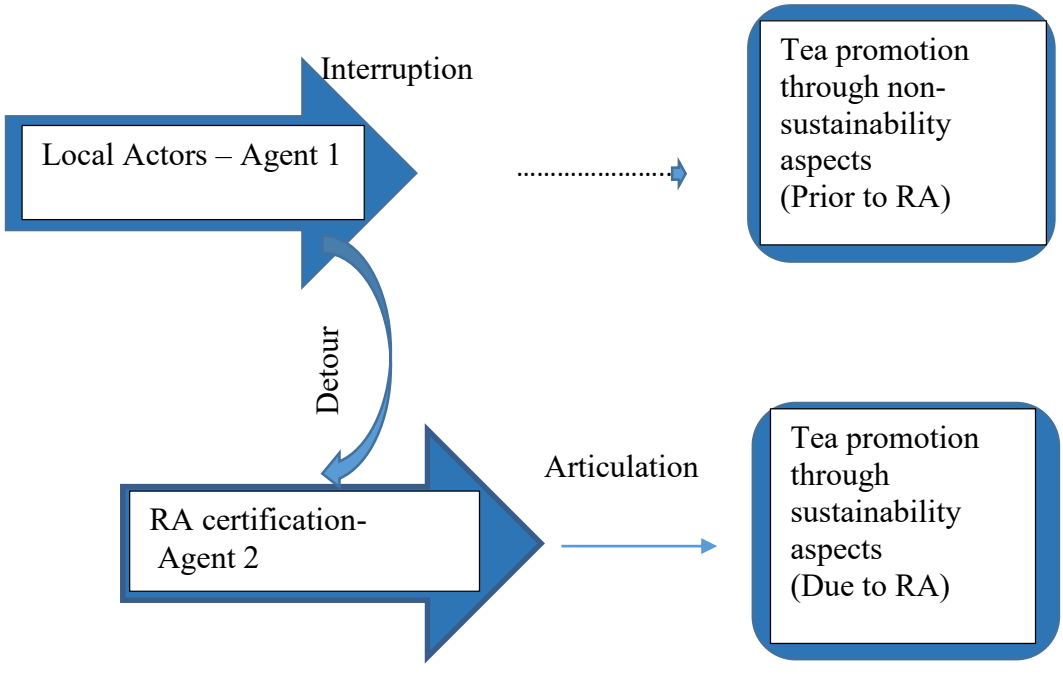
Alliance network beyond the first tier of the supply chain. The study seeks to identify the spokesperson involved in punctualization of the certificate.

- **Delegation**

The three meanings of technical mediation discussed above: 'Goal translation', 'Composition' and 'Reversible blackboxing' are used in examining the role of the Rainforest Alliance certification in three aspects; translating the goals of human actors and enabling composite goals via adopting and implementing certification through subprogrammes, requirements and the process of blackboxing the certification towards its acceptance in the tea industry.

The fourth meaning, 'Delegation' offers a broad meaning to the non-human's role of technical mediation acting by changing the matter of the expressions itself attached to a non-human through 'articulation'. The figure below illustrates how this notion will be used to examine the third research question of the study; How does the Rainforest Alliance stabilise its local network?

Figure 3.4: The Fourth Aspect of Technical Mediation: Delegation



Source: Adapted from Delegation (Latour, 1999:187)

The term articulation concerns the way that a technological artefact, when it becomes part of a sociomaterial arrangement, comes to represent a meaningful expression of a programme of action. In this way, the boundary between the material and the social is broken down as the technological artefact is seen to be a material articulation of social meaning.

As per the Rainforest Alliance NGO, biodiversity conservation and sustainable livelihoods (Rainforest Alliance, 2018) promotion is delegated into the Rainforest Alliance certificate; that is, certified production contributes to social and environmental sustainability. As shown in the diagram above, this theoretical notion is used in the study to understand whether and how the Rainforest Alliance certificate becomes an articulation of social and environmental sustainability?

This section proceeds by thinking about how all four meanings of technical mediation are used to analyse different aspects of the agency of the Rainforest Alliance certification. The use of first meaning, goal translation helps to understand why and how local actors are interested in Rainforest Alliance revealing the initial interests/ progress of the Rainforest Alliance certificate in the local context. The conception of goal translation will be used to analyse the interests of actors associated with the manufacture, regulation, selling and exporting of tea in Sri Lanka such as tea-producing companies, smallholders, brokers, buyers/exporters and industry regulators and industry associations. This concept is used in this study to understand how a concept such as 'sustainability' as promoted by the Rainforest Alliance can mean different things to different people as it is translated through a local supply chain.

The associations and relations arising during the implementation of Rainforest Alliance are analysed using the second meaning, composition. The conception of composition helps in investigating the second research question, How does the Rainforest Alliance certificate

translate the local management, accounting and agricultural practices of certified tea producers? Here, the third meaning, reversible blackboxing helps to understand interactions between the Rainforest Alliance certification and tea producers as a process of transforming local organisational accountability practices of the tea producers towards an acceptance of the certification in the local tea industry. It helps to analyse the locally set up mechanisms that are used to align the interests of the Rainforest Alliance and those of the other parties, aiming to change local accountability practices such as management accounting and the control system itself and the devices, for example standard operating procedures, waiting time measurements, mapping of workflows (Kastberg and Siverbo, 2016) and analysing methods used by the tea producers to engage stakeholders such as employees, workers, managers, the community and suppliers in accountability programmes. The last meaning, delegation enables the study to analyse whether and how the Rainforest Alliance certification becomes an articulation of social and environmental sustainability?

The next section illustrates several other ANT concepts that help in further understanding the role of technical mediation and explaining how asymmetry is built up in transforming the Rainforest Alliance certification.

3.4 Illustration of other ANT conceptions

3.4.1 Circulating reference

This notion refers to the idea of transformations as references are created from a particular referent. A chain of incremental transformations is created between a real world referent and the form in which it is enacted (the reference). With each transformation in the chain, a reference is said to circulate, and when the gap between referent and reference is traceable both backwards and forwards, that it is reversible. In this way, the reference can successfully

circulate between the two worlds. Latour (1999) illustrates this phenomenon using an example from a visit to a Savana forest in the Amazon, in which a range of references are circulated referring back and forth until the final reference, writing in a scientific publication, which is accepted as a successful reference of the referent: the forest. The concept is used by Frandsen (2010) in a study of healthcare practices in Sweden showing how medical practices are subject to series of translations via the creation of accounting references. The conception of circulating reference is extended to show that references are not only in the forms of text but also represent changing modes of practices (Frandsen, 2010).

This concept will be incorporated into the first and second research questions to understand how the 'original' Rainforest Alliance becomes transformed in order to offer meanings/solutions to the local network and how those references can successfully circulate between the North American NGO and the Sri Lankan grower.

The next section explains how the conception of 'inscriptions' helps in examining the agency of Rainforest Alliance in forming the composite Rainforest Alliance the Sri Lankan context.

3.4.2 Inscriptions

This notion is useful in examining the role of any non-human actors involved in the process of Rainforest Alliance adoption and implementation. This term has several meanings. In one aspect, the term is used to highlight that any artefact, such as a piece of machinery, is already embodied with meanings given by its innovators as to its functionality or requirements. The manner of its design to guide and control users is also meant by this term. Furthermore, the term is used to reflect the manner this artefact embodied by the users, the role of the users and of the system (Faraj et al., 2004). A study which argues that the State and accounting are not separate domains elaborates Latour's concept of inscription:

> Written reports, books of accounts, pictures, charts all represent a domain and can be deployed in attempts to administer it. As technology they do not have a neutral function of recording the real, but literally represent in such a way as to make it susceptible to evaluation, calculation and intervention. (Miller, 1990:318)

In a study of changes of the accounting systems of organisations, for example quantitative evidence, the numbers are termed inscriptions (Chua, 1995), as is accounting information (Lowe, 2001). An intellectual capital statement, which consists not only of numbers, but also of descriptions and visuals, is viewed as an 'inscription device', as these are means of producing knowledge about the organisation into a statement (Mouritsen et al., 2001:736).

Based on the above first meaning given to inscription, an artefact is embodied with a particular meaning. This notion can be used to study Rainforest Alliance certification in detail: how Rainforest Alliance may be inscribed with a meaning, sustainability, by its setting bodies and the manner specified therein achieving its objectives. This is incorporated in the concept of technical mediation by conceiving of technology as an artefact. In addition to this, as per the other given explanations for the term, inscription helps to explore how accounting, qualitative information and other forms of visuals represent evidence of transformation of the management and accounting information system as focused on by the second research question.

3.4.3 Matter of concern

In a later text, Latour (2005) proposes a novel approach to deconstruction by concentrating on matters of concern and not matters of fact.

A fact is what is collectively stabilised from the midst of controversies (Latour, 1987:42)

A matter of fact represents the already objectified 'nature' and 'society' (p.114) and so it is not further questioned and is accepted as real. Hence, the network of actors involved in creating the fact cannot be traced. In contrast, a matter of concern represents live relations and associations which are not yet facts and hence leave traces for recognising actors. As Latour argues, it is the

means to get closer to the facts. By focusing on matters of concern, controversies do not close, but instead exist as live and enables the world to be viewed in a realistic approach (Justesen and Mouritsen, 2011b). For example, 'profitability' expectations from the tea industry and growth of smallholders in the industry can be considered as facts which are known by the local industry. However, with the introduction of a sustainability oriented certification, these facts may be challenged and become concerns as to how commercial sustainability will be compromised or affected in reaching sustainability and impact purchasing from smallholders. Accordingly, the former focus of ANT is displaced from actors to attachments. According to (Latour, 2005)

> From now on, when we speak of an actor we should always add the large network of attachments making it act. So an actor network is what is made to act by a large star-shaped web of mediators flowing in and out of it. It is made to exist by its many ties; attachments are first, actors are second (p.217)

The use of this concept in a study of a university's resistance against a redundancy programme shows facts in the case as 'statistics on student numbers', 'financial viability' (p.544); however, for the staff, these facts had become a matter of concern as they challenged their job security (Knights and McCabe, 2016).

This notion, 'matter of concern' is used to understand the third research question, How does the Rainforest Alliance stabilise its local Rainforest Alliance network? Here, the wider implications subsequent to the Rainforest Alliance's implementation in the local context are assumed as 'concerns' for a number of local actors affecting the stability of the local Rainforest Alliance network. This theoretical conception helps to explore such concerns in the local context and enables tracing the actors attached to such concerns and hence highlight its probable impact on the stability (temporary) of the Rainforest Alliance network.

Based on the above theoretical discussion, the Rainforest Alliance certification is perceived as an actor whose agency will be studied from its initial 'flatland' base through its interactions in

the local tea supply chain to understand whether and how the Rainforest Alliance certification transforms. Table 3.1 summarises the overall theoretical approach.

Table 3:1: Theoretical Framework in Summary

Main research question: How does the Rainforest Alliance certificate translate a conception of sustainability within the local tea supply chain?			
Sub research questions	**1**	**2**	**3**
	Enrolment of local supply chain actors and provision of solutions to their interests/goals (or not)	Translation of local management, accounting and agricultural practices of certified tea producers	Rainforest Alliance's wider implications on its network stability
Broad theoretical conception	**Sociomateriality:** Examine Rainforest Alliance in the local context with no pre-conceived notion of what this certificate is until it has been followed in the analysis.		
Main theoretical concept: Technical Mediation	**First meaning: 'Goal translation'**	**Second meaning: 'Composition'** **Third meaning: 'Reversible Blackboxing'**	**Fourth meaning 'Delegation' & effects of technical mediation as 'Matters of Concern'**
Focus of the study	Rainforest Alliance is perceived as a technological artefact having a status of equal agency in applying this concept of technical mediation. Focus on following the initial process of Rainforest Alliance certification in its interactions in the local context.		
	Rainforest Alliance certification mediation in translation of local supply chain actors' interests towards a composite goal. Local supply chain actors such as tea	Rainforest Alliance inscribed accountability standard (sustainable agriculture standard) mediation in translating certified actors' local accountability practices through composite actions (subprogrammes) & trace how Rainforest Alliance is transforming as an acceptable standard in the industry.	Trace how Rainforest Alliance certificate becomes and articulation of sustainability Trace concerns arising with Rainforest

	producers, buyers, exporters and brokers	Actors/actants: Local supply chain actors and Rainforest Alliance standard requirements, local rules/regulations, norms/ habits/local organisational/ cultural aspects etc. and the Colombo tea auction	Alliance translation in the local context. Enable tracing actors behind those concerns Local supply chain actors and stakeholders
Other ANT concepts/terms	**Translation**; Translation **of interests** of local supply chain actors towards a composite goal. The translation concept helps to view the agency of the certification as a process using the meanings of 'technical mediation. ' In the first research question, the number of local supply chain actors' enrolment into Rainforest Alliance certification is accessed using the first meaning of translation, goal translation. Then the certified actors are subject to further translation through implementing the Rainforest Alliance accountability standard, following a further stages of translation (other three meaning of technical mediation, composition, reversible blackboxing and delegation). Furthermore, the translation concept applies to 'subprogrammes' (Rainforest Alliance requirements) to understand how the Rainforest Alliance standard (Sustainable Agriculture Network standard) requirements were adopted/adapted in interaction with the certified tea producers and its network of local actors/ actants		
	Circulating Reference Enables examining Rainforest Alliance as a circulation from Northern NGO certification towards a local context and circulations across the supply chain		
	Inscriptions; To examine how the Rainforest Alliance NGO inscribes meanings into the RA certification To trace non-humans (evidence of compliance); both quantitative and qualitative and visual evidences of sociomaterial practices enacted in translating local accountability practices		

3.5 Chapter summary

This chapter aimed at developing a conceptual framework to examine the agency of Rainforest Alliance certification in the local context based on the conception that Rainforest Alliance is an actor and its agency can be examined by following its interactions in the local context. The chapter first introduced ANT and then sociomateriality as providing the broad theoretical conception of the study. Based on the methodological principles of ANT, the four meanings of technical mediation were used to develop the main theoretical framework together with several other concepts drawn from ANT, In doing so, the chapter explained how this framework will be used to examine the research questions of the study, which are notionally linked to the four meanings of technical mediation.

Having developed the framework, the next chapter focuses on how this conceptual framework helped in designing the research methods of the study and in the fieldwork engagement in the local context.

CHAPTER 4

RESEARCH METHODOLOGY

4.1 Introduction

This chapter presents the methodology and methods adopted in the study in understanding the core research question of How does the Rainforest Alliance translate a conception of sustainability within the local supply chain?' The research methodology underpins and reflects the philosophical assumptions of the researcher. These assumptions about the nature of reality (ontology) and how such reality can be known as acceptable knowledge to a particular discipline (epistemology) drives not only the methodology but the methods of the study and the understanding of the investigation (Bryman, 2011, Saunders, 2012). Thus, philosophical assumptions, research methodology, methods and sources are interrelated, the "building blocks of research" (Grix, 2004:66).

Given the importance of considering the philosophical assumptions underlying the study, the chapter first presents a brief review of different philosophical assumptions and then justifies the chosen philosophical assumptions of interpretivism (subsection 4.2.1). The research methodology in section 4.3 details how this chosen philosophy shapes the research strategy as a qualitative study and the method as an interpretive case study (section 4.4). This is followed by the research design and strategy in detail (section 4.5) and the chapter ends with a summary.

4.2 Philosophical assumptions

This section briefly reviews the ontological and epistemological assumptions of social research. Broadly, the ontological assumptions are distinguished as objectivism and subjectivism based on their distinct views about the nature of reality. Researchers of an objective stance assume

the existence of an external reality independent to that of social actors. On the other hand, subjectivism holds the view that reality is not external to social actors but instead constructed subjectively through their perceptions and beliefs. Hence, reality is a social construction and subject to constant changes. Epistemology, that is, what constitutes acceptable knowledge varies depending on these ontological stances. This leads to two main types of epistemological assumptions: positivism and interpretivism. In positivism, which is based on the objective ontology, the researcher's assumptions are similar to a natural scientist's, whereby a phenomenon is observed as existing external to the social actors and to generalise like the natural laws. In contrast, interpretivism, which assumes a subjective ontology, considers that knowledge can be derived from understanding the unique insights of social actors (Ryan, 2002, Grix, 2004, Bryman, 2011, Saunders, 2012).

A number of social researchers seek to categorise and position the philosophical assumptions in different frameworks. The classification framework of (Burell and Morgan, 1979) is based on two assumptions about the nature of social science as either objective or subjective and about the nature of humans as radical versus regulated produces four mutually exclusive philosophical assumptions. Of them, interpretive and radical humanist are subjective ontological assumptions and the other two, functionalist and radical structuralist, belong to the opposite ontological stance, objectivism. These four offer unique research approaches leading to different research results. However, their limitation as a mutually exclusive set of assumptions is subject to criticisms (Chua, 1986).

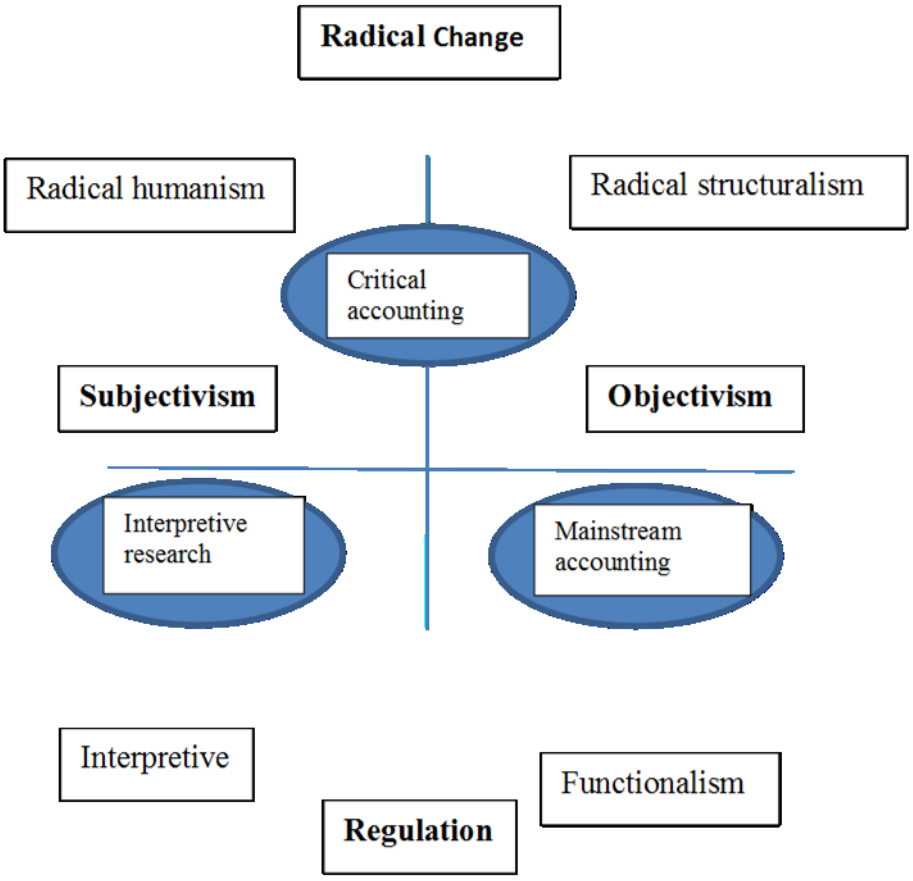
Another framework (Morgan and Smircich, 1980) offers six separate ontological assumptions which spread between the two extremes of objective and subjective assumptions about the nature of reality. Each offers a different set of assumptions about ontology, epistemology and

human nature, leading to a choice of different research methods. Here, the extreme subjective end assumes reality is purely human consciousness, and in contrast to this, the objective extreme assumes a concrete structure. Of these, the assumptions towards the subjective approach are recommended for social research, for example since reality in accounting in practice is less objective (Ryan, 2002).

Next, in considering the discipline-related philosophical frameworks offered by scholars, the above organisational research based philosophical frameworks have been adapted by accounting scholars to locate the philosophies in accounting research. What is significant is not the debate about their development, but the fact that they highlight how mainstream accounting studies are dominated by a positivistic approach and offer alternative assumptions for contributions to the accounting field (Hopper and Powell, 1985, Chua, 1986). Chua (1986), based on assumptions about ontology, epistemology and the interrelation between accounting theory and practice, classifies the philosophical approaches in accounting research into three categories: mainstream, interpretive and critical.

A similar classification suggested by Hopper and Powell (1985) is shown in Figure 4.1.

Figure 4.1: Philosophical Assumptions of Accounting Research



Source: Adapted from Hopper and Powell (1985:432)

Another recent classification modifies Burrell and Morgan's (1979) four-paradigm philosophical classification into three alternative paradigms: structural, anti-structural and post-structural. Each of these is further classified into two research domains, normative versus critical. Within this new framework, the former functionalist and radical belongs to the new classification of structural as two separate research domains. Similarly, the other two, interpretive and radical humanist, belong to anti-structural. Then the classification 'Post-

structural paradigm' differentiates the ontology as relativist, a relational epistemology and a deconstructionist assumption about the nature of humans and therefore a methodology as reflexive. Thereby this classification table facilitates illustrating postmodernist theories such as ANT (Hassard and Wolfram Cox, 2013:1709).

Having considered different philosophical frameworks, this study on Rainforest Alliance certification selects the approach of interpretivism as shown in Figure 5.1 above as a contribution to the broad field of CSR/sustainability accountability. 'ANT, the theoretical approach used to analyse the construction of the Rainforest Alliance certification in Sri Lanka, is described in Hassard & Cox's (2013) classifications as post-structural. By rejecting the traditional division between ontology and epistemology, ANT does not fit neatly into Burrell & Morgan's (1979) four-paradigm classification. That is, it does not consider the division of subject/object, global/local or non-human/human. The starting point for ANT is 'fact construction' to investigate how such divides come into being.

Furthermore, social researchers are of a negative view on the use of methodologies similar to those in the natural sciences in investigating social science phenomena and favour understanding them as constructed by the actors subjectively in reality (Ryan, 2002, Bryman, 2011, Saunders, 2012, Silverman, 2013). Hence, this study is located in this field of 'interpretivism' and next considers how such philosophical assumptions best suit the study of certification translation.

4.2.1 Justification of the chosen interpretive assumptions

Secondary information revealed that a number of local tea manufacturing companies have Rainforest Alliance certification and it is emerging in the local tea industry. However, it was not known why/how they were interested and implemented this certification. With Rainforest

Alliance as a non-local originated certification, it is more reasonable to locate the study on the interpretive assumptions instead of perceiving an objective reality independent from the local actors who are interested, enrolled and/or implementing it. On the other hand, since these tea producers are only one category among the actors in the supply chain of the tea industry, it is further assumed these other actors may also directly or indirectly be interested and support (or not) this certification. Therefore, it is assumed that knowledge about Rainforest Alliance certification can be obtained by understanding these different actors' relative interests, experiences, beliefs and expectations of Rainforest Alliance certification. The focus of interpretive researchers is to analyse realities as socially constructed and negotiated (Bryman, 2011, Saunders, 2012). Hence, these assumptions help to focus on how various local actors give subjective meanings to Rainforest Alliance certification through their interactions and negotiations.

The chosen approach is aligned with the research aims; that is, to understand how this certificate is translated in the local context and enacted by local actors. Rainforest Alliance certification as a North American generated certification aims to translate the adverse agricultural practices of distant supply chain actors into sustainability. In the literature, certifications are mainly considered as pushed by large companies onto the local firms through participants in the global supply chains. Hence, scholars have failed to reveal the agency of local actors and firms in how they choose to implement private certifications in developing countries. The study aims to explore the prevalence of any local agency over this non-local certification, particularly beyond the first tier of the supply chain. Hence, these assumptions help to study how these local actors exercise their agency through enacting the Rainforest Alliance in the local context. This will lead to attaching different meanings to this certification and adapting it as per their subjective views on this certification. As a result, the conception of agricultural sustainability inscribed in

the certification is perceived as subject to different meanings within the tea supply chain in Sri Lanka.

Next, the interpretive philosophical assumptions underlying the study can be aligned with the theoretical framework drawn from Actor Network Theory. As explained in the theory Chapter, ANT adopts a relativist ontology and its epistemology is relationist (Hassard and Wolfram Cox, 2013), whereby 'reality' is constructed from the relations between the social and the material. Rather than viewing reality as existing 'out there' or as being socially constructed, ANT proposes that reality is constructed from a network of relations (Latour, 1999). Under this perspective, the Rainforest Alliance is viewed as a form of certification 'technology' perceived as being constructed by the dynamic interplay of a network of human and non-human actors (Latour, 1987). For example, it is constituted by the relations between actors having an association with the certification such as NGOs, tea producers, intermediaries, auctions, catalogues, regulators and accounting systems. Therefore, a local meaning or translation of the Rainforest Alliance is constructed by the relations between, for example, local actors, market conditions, firms, certified producers, implementation guidelines and local laws. ANT is therefore used via an interpretive lens to show how Rainforest Alliance certification becomes translated in the local context (Ryan 2002).

4.3 Research methodology

As discussed above, the philosophical assumptions about ontology, epistemology, nature of humans and theory influence the methodological approach of a research study. Research methodologies are broadly classified into quantitative and qualitative approaches. Due to the limitations of previous criteria used for such classifications, scholars suggest distinguishing these two approaches in terms of the philosophical stance underlying the study, research

purpose and research question (Bryman, 2011, Saunders, 2012). No method is superior to another, instead the appropriate method should be determined based on the research problem and the objectives of the study (Ghauri, 1995, Silverman, 2013, Corbin, 2015). Thus, this section develops support for how the chosen methodology, the qualitative approach, is appropriate to the researcher's assumptions, aims and research questions. Firstly, it considers how the philosophical assumptions underlying this study drive the methodological choice as guided by Table 4.1 which distinguishes the philosophical assumptions between the two methodological approaches.

Table 4.1: Differences Between Quantitative and Qualitative Research Strategies

Criterion	**Quantitative**	**Qualitative**
Role of theory in research	Testing of theory	Generation of theory
Epistemological assumptions	Positivism	Interpretivism
Ontological assumptions	Objectivism	Constructionism

Source: Bryman and Bell (2011: 27)

This classification portrays how methodological distinctions between quantitative and qualitative approaches depends on the assumptions underlying the researching phenomenon. As shown in Table 4.1, the ontology of objectivism and epistemology of positivism leads to a quantitative research methodology. In this approach, theory is used to deduce hypotheses and statistically test the relationships of data, and the findings are generalizable. In contrast, if the ontology is assumed as constructionism, epistemology as interpretivism and the theory is inductively used either to test theory or to generate a new theory, the methodology is known as qualitative. A key characteristic of this approach is the subjective nature of data which is collected through unstructured methods different to the methods used in a quantitative

methodology. Table 4.2 highlights further differences between the two approaches in terms of characteristics and research strategies.

Table 4.2: Quantitative vs. Qualitative Research Strategies

Dimension	Quantitative	Qualitative
Research philosophy	Positivism Realist & pragmatist (As multiple method research)	Interpretivism Realist & pragmatist (As multiple method research)
Research approach	Deductive Possibilities: inductive if data used to develop theory	Inductive Possibilities: deductive to test an existing theory using qualitative procedures
Characteristics	Focus on relations between variables Use numeric and statistical techniques Ensure generalisability Researcher is independent from those being researched	Focus on participant meanings and the relationships between them Develop conceptual framework Data collection is non-standardised, naturalistic and interactive Researcher is not independent of those being researched
Research strategies	Experimental and surveys Use of questionnaires, structured observation, interviews	Action research, case study, ethnography, grounded theory and narrative research

Source: Adapted from Saunders et al. (2012: 162-164)

The above tables highlight the necessity of recalling the philosophical assumptions of the study in establishing the appropriate methodology. As discussed in detail in the previous section, the study assumes an ontology of subjectivism and an interpretive. Human behaviour is considered as regulated and the researcher expects to obtain a theoretically informed understanding of the

phenomenon as an interpretive study. Hence, the qualitative approach is appropriate for the study.

Apart from these, the nature of the research problem is to understand the nature of Rainforest Alliance certification translation through the experience of the actors who enact it in the local context. When compared with the quantitative methodology, the chosen qualitative approach enables the achievement of the research objectives; that is, to make a sense of how different local actors in the supply chain interpret Rainforest Alliance certification depending on their cognition, and thus a means to know more about unknown aspects of Rainforest Alliance certification. (Saunders, 2012, Corbin, 2015). This requires going into the field to find out why/ how local actors are interested in this certification, how they implement it and their views about the certification. Hence, in line with the philosophical assumptions and considering the nature of the research problem, this study adopts a qualitative research methodology. Following the characteristics and strategies pertaining to a qualitative approach as shown in the table above, the researcher engaged in six months of fieldwork characterised by flexible and unstructured interviews, observations and document reviews supporting understanding the nature of the certification translation in the tea industry. The following section details the chosen research method of the case study.

4.4 Research method: Case study approach

This study adopts the case study approach as the research method to collect data about Rainforest Alliance certification translation in the local context (Ryan, 2002, Yin, 2014). The research method should be linked to the research methodology and the research questions (Grix, 2004, Silverman, 2013). This study, underpinned by interpretive philosophical assumptions, adopted a qualitative research methodology. The research questions of the study focus on

understanding how Rainforest Alliance is translated and enacted in the local context. So it requires exploring the phenomenon of Rainforest Alliance translation within its real-life context of the local tea industry in Sri Lanka as a current and emerging practice: the adopted method is a case study (Saunders, 2012).

In addition, the guidance provided by Yin (2014) as shown in Table 4.3 is useful in justifying the chosen research method further.

Table 4.3: Different Research Methods

Method	**Type of research question**	**Requirement for control of behavioural events**	**Focuses on contemporary events**
Experiment	How, Why	Yes	Yes
Survey	Who, What, Where How many, How much	No	Yes
Archival analysis	Who, What, Where How many, How much	No	Yes/No
History	How, Why	No	No
Case study	How, why	No	Yes
History	How, why	No	No

Source: Yin (2014:9)

As per the illustration in the table, the research questions of the case studies are framed in terms of how and why questions: How/why are local actors interested and enrolled (or not) into Rainforest Alliance certification? How Rainforest Alliance is translated? Next, the study requires no controls of behaviour over the actors/events nor is such employed during the data

collection. Instead the researcher engages in fieldwork in their real setting of practice through unstructured interviews and observations to obtain an interpretive understanding of why/how this certificate as a current and emerging practice is being focused on, practised and adapted (or not) by the local actors. Theoretically, RA is subject to translation. This method allows the researcher to gain a holistic understanding through empirical observations as they take place in real practice (Ryan, 2002, Yin, 2014). Thus, this study sought to obtain a rich understanding beyond the first tier of actors in the supply chain and an overall understanding of the research context, the tea industry in Sri Lanka, through collecting data from multiple sources including observing Rainforest Alliance practices in the real context.

Next, the type of case study must be determined, as they may differ depending on the type of research, positive versus interpretive (Ryan, 2002).

Table 4.4: Types of Case Studies

Type of Research	**Positive**	**Interpretive**
View of the world	External and objective	Social construction
Types of study	Exploratory	Explanatory
Nature of explanation	Deductive	Pattern
Nature of generalisation	Statistical	Theoretical
Role of theory	Hypothesis generation	Understanding
Nature of accounting	Economic decision-making	Object of study

Source: Differences in case study research (Ryan, 2002:146)

While exploratory case studies are suggested for positivistic research, interpretive researchers adopt the explanatory case study method. Interpretive researchers use the explanatory case method in order to understand and explain the subjective reasons given by the social actors over

the interested phenomenon. However, Ryan (2002) argues that this distinction between explanatory and exploratory is ambiguous and the choice depends on the methodological choice and the nature of the research.

As mentioned above, this study adopts a qualitative research methodology underpinned by interpretive assumptions. In considering the nature of the research, the focus is on a theoretically informed understanding of Rainforest Alliance reality; that is, to understand the agency of the Rainforest Alliance in terms of Rainforest Alliance certificate translation in the local context, which requires exploring and explaining the ongoing process of Rainforest Alliance interactions in the local actors. Hence, in keeping with these aspects the type of case study represents both explanatory and exploratory aspects.

In exploratory studies, the researcher seeks to gain more insights into the nature of the phenomenon in order to narrow the broader focus as the study progress This is achieved through asking open questions following unstructured data collection techniques to clarify the research problems (Saunders, 2012). Explanatory designs focus on explaining the reasons for the observed practices of the specific case (Ryan, 2002).

This study, as mentioned, focuses on exploring the agency of the Rainforest Alliance certification and explaining the process of enactments as a translation of the certificate in the local context. Thus, the scope of this case study with the above exploratory and explanatory features follows the definition below.

> A case study is an empirical enquiry that investigates a contemporary phenomenon (the 'case') in depth and within its real-world context, especially when the boundaries between phenomenon and context may not be clearly evidence. (Yin, 2014:16)

Thus, such a case study bears features such as adoption of multiple data sources supporting data convergence needs in the form of triangulation and data collection and analysis guided by a theory (Yin, 2014). The case study design and strategy are explained in the next section.

4.5 Research design and strategy

This section presents how the study was designed and strategies adopted in gathering empirical data through the fieldwork engagement in Sri Lanka. Follow-up of procedural guidance in designing and conducting case research helps in the successful conduct of the study and reliability of the case study research (Yin, 2014). Such guidance as proposed by Ryan (2002) includes several key steps: preparation, evidence collection, evidence assessment and identification and explanation of patterns. Some common prior procedures proposed by other researchers include arranging access, ethical approval and selection of cases (Bryman, 2011, Saunders, 2012). However, in practice due to the complexity of the study, the researcher may not be able to follow up the procedures linearly. With that note, the section below describes the procedure applied in designing and conducting the case study.

4.5.1 Preparation

4.5.1.1 Establishing research questions and methods

The researcher was motivated to study why private, international sustainability certifications are emerging in the long-established tea industry in Sri Lanka, particularly the latest Rainforest Alliance certification as a sustainability certification. The review of the literature helped to recognise a contributory gap in the CSR/sustainability literature to study it from the perspective of the certification itself enabling one to understand how these certifications act in the local context and to add to the scant literature on local agency, especially beyond the first tier of suppliers. As a result, the aim of the research was to focus on the role of the Rainforest Alliance

certification and of the local actors. In this regard, whilst sociomateriality provided the broad theoretical base, the theoretical approach drawn from ANT helped to form the initial research question as How is this Rainforest Alliance certification translated in the tea industry in Sri Lanka? A researcher cannot approach a study with no prior theorisation. An either explicit or implicit view guides the data collection, especially to determine areas to look for in the field (Ryan, 2002). Theory can be used in three ways, as deduction, induction or abduction, in the design of a study. Of these, the methodological approach commended by ANT in this study can be considered to be characterised by both deductive (theory to data) and inductive (data to theory) (Saunders, 2012).

First the research question was theoretically framed explicitly as, How does the Rainforest Alliance certificate translate in the local supply chain? with a broad purpose of understanding why/how Rainforest Alliance acts and translated in the local context. This requires exploring Rainforest Alliance certification in detail in its real context of practice. With theoretical guidance on tracing associations and networks wherever it follows relevant to the phenomenon, the study was planned to reach who/whatever the Rainforest Alliance certification interested local actors to explore the phenomenon in detail. Hence, fieldwork was planned as the appropriate data collection method to collect data from the field as the phenomenon is being practised. The maximum period was limited to 6 months considering the time limitations of the PhD study. The study sought to develop a case study including multiple actors based on an initially developed supply chain map.

A researcher should approach the field with an open mind and be flexible to allow the development of new theories and introduce additional theories following the progress of the study (Ryan, 2002). This was aligned with ANT theory, itself as it requires approaching the

inquiry with an open mind to follow the human and non-human actors. Hence, no structured interview questions or observations were designed in advance and flexibility was expected during the engagement. Specific aims and objectives were gradually evolved over the course of the fieldwork with the understanding of the local context in which the meanings about this certification are produced (Silverman, 2013). These were transformed into specific research sub questions during the process of analysing and interpreting the data. The process followed was a back and forth approach to the theory, literature, research questions and data.

The next section addresses how supply chain organisations and actors were selected for the study.

4.5.1.2 Selection of case study organisations

As mentioned, this study aims to develop an interpretive case study identifying various local supply chain actors and objects who/which interact with Rainforest Alliance by way of enacting the certification in the local context. Case selection in qualitative research should be theoretically guided (Silverman, 2013). A theoretical sampling method, that is a sample guided by the theory (ANT), was chosen to try to learn and understand the views of all actors associated with the Rainforest Alliance in Sri Lanka. However, practical constraints lead one to try to elicit the views of representative of all actor groups (Bryman, 2011, Silverman, 2013). As a guide in selecting possible cases, the supply chain of the tea industry was mapped in advance with the help of secondary information. This helped to recognise the possible actors, maximising the opportunities to reach a number of actors and events for interviews and observations, and to include tea producers, buyers, exporters and brokers. Similarly, it was an implicit objective to foresee the role of any non-human actors in the process, such as supply chain relationships, organisations, documents, etc. to gain theoretical insights into their interactions in translating

the Rainforest Alliance certificate in the local context. Moreover, theoretical sampling enabled more direct and deep insights to be drawn in analysing the observed characteristics (Silverman, 2013).

However, during the six-month field visit in Sri Lanka, this supply chain map was expanded gradually with further information and experience to include all the relevant supply chain actors in order to trace the Rainforest Alliance network within the tea supply chain. Accordingly, the key parties in the supply chain recognised are: at the downstream of the supply chain, small tea growers called 'smallholders', then the corporate sector consisting of 21 Regional Plantation Companies and two state-owned plantation bodies. Leaf collectors were intermediaries between the smallholders and the tea producers. Buyers included tea packers, processors and exporters. Brokers were from eight brokering companies. Lastly, state monitoring/regulating institutions and industry associations were included as local industry governors.

In the next step, actors in the Rainforest Alliance network were gradually traced from this expanded local supply chain. They were interviewed to represent all actor categories to establish their interests/motives for Rainforest Alliance certification. The first category of Rainforest Alliance actors was purposefully selected from the category of tea producers, as they are the Rainforest Alliance targeted certification implementers in the tea industry. As Rainforest Alliance implementers, they become the key supply chain actors to follow to understand how they give different meanings to the certification and how they implement and adopt the certification in practice. This aided in identifying the creation of associations between human actors but also non-humans such as market devices, and also aided in identifying tensions and resistances in the co-production of the Sri Lankan Rainforest Alliance certification.

From this category only nine Regional Plantation Companies were Rainforest Alliance -certified, eight listed companies and one non-listed company. Another listed Regional Plantation Companies were working for the Rainforest Alliance and one private tea company was certified and had abandoned it (as at August 2015). From these, there were eight total case samples (Table 4.6). Of them seven are certified Regional Plantation Companies including the non-listed company. In addition to these the above-mentioned Rainforest Alliance prospective company and the private tea company were also included in the sample from the category of tea producers. Data saturation was reached with the completion of three certified Regional Plantation Companies. However, the researcher was motivated to reach other cases due to their unique features to explore any Rainforest Alliance -related possible differences. Thus, the case sample included the one and only smallholder certified private tea company, a non-listed Regional Plantation Companies, a Regional Plantation Company working for Rainforest Alliance certification and a latest Rainforest Alliance adopter, also selected to represent the geographical coverage of tea estates as well. This helped to enhance the reliability of the data as a form of triangulation.

Then selection of the next actor category, buyers/exporters, was motivated by the review of literature and the interview feedback. Voluntary international certifications are reported as being promoted through export value chains, and in the case of Rainforest Alliance, it is globally promoted through multinational buyers/exporters, more particularly in the local context, as the actors expressed, Unilever. Hence, Unilever was selected as a critical sampled case due to their claim to offer Rainforest Alliance tea. Unilever was specifically selected in order to understand why they have become interested in buying and promoting certified tea in the local context. 'Following' Unilever in the local context helped identify the associations between Unilever and other human and non-human actors.

Even though it was revealed that other buyers were not interested in the Rainforest Alliance at the Colombo tea auction, the researcher planned to interview them focusing on critical buyers/exporters to understand why they are not interested in Rainforest Alliance certification. 'Following' non-adopters aimed to understand the reasons behind their non-attraction to the certificate, implications for enrolment and any possible conditions that may threaten the stability of the Rainforest Alliance network.

Accordingly, the largest buyer/exporter from the auction who buys around 50- 60%, another major MNC buyer/exporter and two famous value-added buyers/exporters were selected for the sample. None of these critical buyers were interested in Rainforest Alliance and the sample reached saturation in that category.

The third category of supply chain actors are tea brokers. Eight brokering companies operate in the industry. They were again selected intentionally subsequent to an auction visit and seeing their role as conductors of the auction and intermediaries between tea producers and buyers. They were chosen in order to understand why and how they interact with the certified tea producers, certified teas, promoting buyers such as Unilever and other supply chain actors and devices. These interactions and associations would reveal the different meanings given to the certification in helping to stabilise the network through translation. Normally manufacturing companies employ more than one brokering company. Access was negotiated to four tea brokers including the largest broker to understand the nature of their involvement in the co-production of the certificate.

The justification for choosing the next Rainforest Alliance actor category of regulating/monitoring institutions is twofold. One is the literature highlighting voluntary certifications of non-local origins and the lack of rules/regulations in developing countries. On the other hand, the Rainforest Alliance standard requires compliance with local

rules/regulations. Hence, the study sought to explore the interests/motivations of all dominant tea industry-related state institutions and of a dominant industry association. These consisted of the Sri Lanka Tea Board, Tea Research Institute, Tea Small Holders Authority, Environment Authority, Sri Lanka Standards Institution, and Ministry of Plantation. In addition to these, a powerful industry body, the Ceylon Tea Traders Association was included as the tea auction comes under their direct purview. Accordingly the sample included seven actors from this category. These actors representing industry and statutory bodies are analysed in order to understand why they are interested in the Rainforest Alliance certification and whether and how they interact with the certified tea producers and other supply chain actors. For example, how would existing local laws and rules help, or not, in implementing the certification activities. Similarly, since Rainforest Alliance is a non-local certification, how might they have different interpretations to the Rainforest Alliance-inscribed meaning of sustainability and how might such interpretations affect network stability.

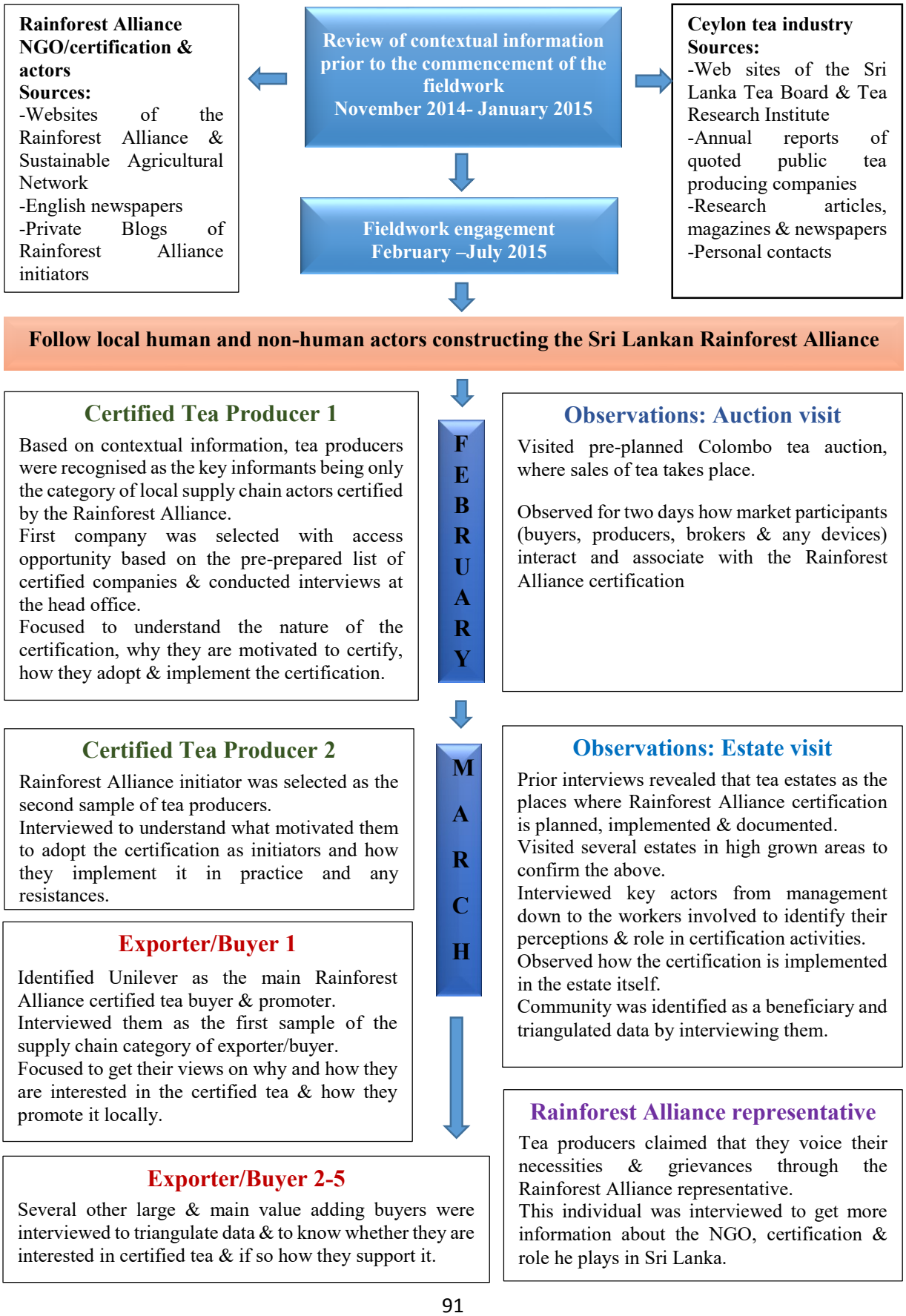
Other than the supply chain collaborators, the study included interviews with two Rainforest Alliance representatives and a Rainforest Alliance auditor. One is the local Rainforest Alliance representative who is the only person representing the Rainforest Alliance locally as a local representative. This actor is 'followed' to understand how the certification is promoted in the tea industry and to know the nature of any resistances and supportive conditions that would affect network stability. Furthermore, it gives an opportunity to get more information about the certification and about the organisation of the Rainforest Alliance NGO.

The other Rainforest Alliance representative works from the Netherlands and is in charge of training and development activities related to the tea industry in Asia. During the fieldwork period, this individual was in Sri Lanka for a training project on land degradation associated with smallholder tea. This actor's role in Sri Lanka is traced to understand the nature of

initiatives being undertaken in promoting Rainforest Alliance in Sri Lanka and how this actor interacts with other local and non- local actors in such activities. Following a Rainforest Alliance representative also provided an opportunity to trace actors beyond the local supply chain who are directly associated with the Rainforest Alliance NGO and the certificate. On the one hand, tracing associations and interactions reveals how local actors exercise their agency translating the certification in the local context. On the other hand, it reveals how local actors interact and are associated to implement the certification requirements as it enables their goals to succeed.

The auditor is a freelance local auditor who previously worked as a Rainforest Alliance manager in a Regional Plantation Company. The reason for selecting an auditor during the fieldwork is to obtain views about the auditing experience as it encompasses many certified tea producers. This enables one to gain understanding about the resistances, strengths and weaknesses of certified estates as a whole and about particular cases. Furthermore, an auditor helped in gaining an understanding of how the certificate compliance process is applied and evaluated during auditing and reveals whether there are any deviations from the Rainforest Alliance standard which would reflect the nature of translation of the certificate in the local context. The figure (4.2) below depicts how the research fieldwork unfolded during six months. Engaging with this range of actors through the fieldwork period in Sri Lanka convinced the researcher the relevant local Rainforest Alliance network had been covered.

Figure 4.2: Research Map Tracing the Local Rainforest Alliance Actor Network



Brokers

During the auction it was observed that Rainforest Alliance certified message is conveyed through tea catalogues to market participants.

Brokers as the preparers of the tea catalogue were interviewed to understand why they differentiate certified teas from normal teas.

Out of eight brokering companies five were selected to triangulate data

APRIL

Rainforest Alliance auditor

Interviewed a local freelance auditor, the only active auditor in Sri Lanka to get broader insights about the certification and compliance issues in the local context.

Observations: Workshop

Got an opportunity to be an observer at a Rainforest Alliance workshop conducted by a Rainforest Alliance representative in Netherland to encourage smallholder enrolment in the certification and how to plan it.

Certified Tea Producer 3

The only company that certified smallholders, but later given up was visited

They were interviewed for their role in the process of certifying the smallholders & the reason why they have given up in the end.

MAY

Industry Monitors/Regulators

Tea Research Institute known as advisor provides technical know-how & guidance to the tea producers.
They were interviewed to know whether they are interested in Rainforest Alliance certification as well.

Industry Monitors/Regulators

Sri Lanka Tea Board & the Plantation Ministry was approached to know whether they as the sole authority of the tea industry support the Rainforest Alliance certification & if so, how they do it.

Observations: Estate visit

Even though saturation point is reached after interviewing three tea producers, I had opportunity to visit five more certified estates situated in different geographical areas of the country.
Interviewed and observed these estate practices to ascertain whether there is any deviation in their approach to the certification from that of others.

JUNE

Tea Producer 4

Contacted a company seeking enrolment a new in Rainforest Alliance to find out if there is any significant difference in their motivation which urged them to join the certification other than previously certified producers interests.

Certified Tea Producer 5

In order to get latest information about the Rainforest Alliance certification, interviewed a tea producer who has recently certified. This provides a means to triangulate data.

JULY

Industry Monitors/Regulators

Tea Smallholder Development Authority
Interviewed officers of this authority who attended the Rainforest Alliance workshop to know how they coordinate the support of Rainforest Alliance NGO on behalf of the tea smallholders.

Industry Monitors/Regulators

Sri Lanka Standard Institution
This was revealed as the only local state body representing ISO and in charge of issuance of local certifications
They were approached to inquire whether they issue certifications as that of Rainforest Alliance & if not, whether they support & recommend the certificate in the local context.

Industry Monitors/Regulators

Environment Authority
Tea producers referred to this authority for environmental related permits
Interviewed officers of this authority to know whether prevailing local laws & regulations in par with the Rainforest Alliance certification requirements.

Industry Monitors/Regulators

Tea Traders Association stands for the industry & inquired whether they are keen on the Rainforest Alliance

Rainforest Alliance representative

Netherland manager was interviewed via Skype as the last interviewee to triangulate data

4.5.1.3 Initial access arrangements

The researcher had initiated informal contact with one Rainforest Alliance -certified Regional Plantation Company before commencing the PhD study. Before commencing data collection, the researcher approached two private tea business company owners through personal contacts for access arrangements to the certified companies. However, due to their immediate unavailability during the period of the visit to Sri Lanka, initial access established contacting several Rainforest Alliance -certified tea companies directly. They all were formally approached presenting the research requirements and objectives in a University of Birmingham approved letter together with the ethical compliance form. Ethical approval was obtained from the university before leaving for the fieldwork by submitting an application supported by an interview guide, participant information sheet (appendix 2) and access arrangement letter/email (appendix 3). The study developed as a comprehensive case study of the tea supply chain covering all the related actors enabled mostly by referrals, so-called snowball sampling (Bryman, 2011)

4.5.2 Collecting evidence

The methodological underpinnings of the ANT theory are to study science and technology or 'knowledge' while they are in the making and before the studied phenomenon's controversies are settled (Latour, 1987). Following this, the phenomenon of Rainforest Alliance translation was studied during its period of emergence in the tea industry in Sri Lanka during a six-month fieldwork period from February to July 2015. Moreover, in ANT, both humans and non-humans are considered in the same analytical view (Lee and Hassard, 1999). Hence the majority of data collection instruments, interviews, direct observations, participant observation, physical artefacts and documentation covering five of the six main data collection methods (Saunders, 2012) were used to gain broader insights to recognise the roles of both human and non-human

actors in the process. As Silverman (2006) argues, data collection instruments are methods and not mere techniques and their importance depends on the adopted methodology as illustrated in Table 4.5. Furthermore, what is/are appropriate depends on the research question, aims and the method (Silverman, 2006).

Table 4.5: Data Collection Methods

	Methodology	
Method	**Quantitative Research**	**Qualitative Research**
Observation	Preliminary work	Fundamental to understanding another culture
Textual analysis	Content analysis	Understanding participants' categories
Interviews	Survey research	Open-ended questions to small samples
Transcripts	Used infrequently to check the accuracy of interview records	Used to understand how participants organise their talk and body movements

Source: Silverman (2006:19)

Following the necessity to satisfy the data collection instruments for the research methodology, the method, aims and questions, instruments used during the fieldwork engagement are detailed next.

4.5.2.1 Interviews

Interviews are commonly used data collection instruments in qualitative research. They are strong, insightful and targeted (Bryman, 2011, Yin, 2014). As per the research aims of this study, interviews were used as the main data collection instrument to draw insights from local

actors who were interested and interacted with the certification. These helped to understand their personal views towards Rainforest Alliance certification and seek explanations for how they experience implementing the certification, resistances and the impact on the industry. In qualitative research, interviews can be conducted as either unstructured or semi-structured. The nature of unstructured interviews is a form of a conversation in which the researcher follows up the points subsequent to raise an initial research question to the interviewee (Bryman, 2011). In contrast, semi-structured interviews follow an interview guide. This study, adopting interviews as the key source of evidence, followed both methods and conducted a total of 74 interviews with a number of supply chain actors during the fieldwork period. The first interviews were unstructured.

- **Unstructured interviews**

Data collection started through a formal direct contact established with a financial accountant of an early Rainforest Alliance -certified tea manufacturing company at their head office. Following my interest in hearing detailed views and experiences about this certification implementation, I was introduced to their Rainforest Alliance manager at the head office for a face-to-face interview for detailed information. The first interview can be considered as totally unstructured. The expectation was to get an overall view. Hence, during the initial interview, the focus was not only on the certification and its implementations at their certified estates but also about the tea industry, how it operates in practice, its actors, history, norms and attitudes and information about other Rainforest Alliance-certified actors. It was similar to a conversation broadly prompting to know why and how they were certified. It last for more than 2.5 hours in two sessions with a break. Following this, an interview guide (appendix 4) was prepared to be used in the interviews with the actors from the same supply chain category.

Interviews following interview guides are classified as semi-structured interviews and hence how they were continued with the same actor categories is discussed in the next section.

A similar approach was adopted in interviewing actors from each new supply chain activity: that is, the first interview with the new actor category (brokers, exporters/buyers, employees and industry monitory and regulatory actors, especially parties not subject to Rainforest Alliance certification) was unstructured. This helped in getting more in-depth insight into the certification and the industry. However, interviews with certified tea manufacturing companies and through other adopted research instruments such as the review of Rainforest Alliance compliance documents and observations (e.g. Colombo tea auction) recognised that these actors are directly or indirectly interested in Rainforest Alliance certification.

- **Interview strategy**

As mentioned above, subsequent to having a totally unstructured interview with the first actor of the supply chain actor category, a draft interview guide was developed for others in the same category. This led to the development of five different drafts, unique to each actor category. However, they helped only as a guide to ensure no point considered important was missed. Each interview was started afresh to hear about their unique views about the certification and how they are interested, interacted and implemented.

As mentioned, during the unstructured interviews, the focus was to get an understanding about the nature and functions of the tea industry itself and to get insights as to how to develop specific sub questions to examine the theoretically framed broad research question of, 'How does the Rainforest Alliance certificate translate in the local supply chain?'. These first unstructured interviews revealed broader insights about the tea industry in general, nature of the supply chain, trends in export markets, threats in major Ceylon tea markets and other issues in the tea

industry. On the one hand, this approach helps to confirm the accuracy of the contextual data gathered before commencement of the fieldwork and on the other hand, it helps to 'open' the tea industry, theoretically assumed to be 'black-boxed'.

Then, the discussion moved to the main interview focus, the Rainforest Alliance certification to gather their general views. A number of research questions, described below, were then developed which are theoretically based and linked to the main three research questions of the study.

During the interviews, I wanted to ensure actors explain why and how they are interested in the Rainforest Alliance certification in order to understand their underlying 'interests and motives'. In line with the theoretical notion of technical mediations, these discussions provide data to examine the first sub-research question, how does the Rainforest Alliance certificate enrol (or not) supply chain actors? The discussions revealed how Unilever and the emerging requirements of overseas buyers/exporters made them interested in voluntarily moving for expensive certificates such as Rainforest Alliance amidst resistances. The discussions revealed how Rainforest Alliance interacts in changing agricultural practices, accounting and management accounting systems and associates with other actors in the tea supply chain. This helped develop further interview questions (annex 3) to raise from other similar actors in the supply chain.

Accordingly, the first interview question was theoretically framed to understand their interests in Rainforest Alliance: how the plantation company became motivated to obtain the certification. As illustrated in the theory chapter, the concept of 'goal translation', helps to understand how Rainforest Alliance provides (or not) solutions to the local actors' interests and enrols them into the certification. As noted in the reflective diary, most of the actors initially responded in short answers that their move for Rainforest Alliance is for the betterment of the

industry, or for sustainability. However, as the interviews progressed, they were expressing conflicting views saying Rainforest Alliance gives no price returns as expected but now they cannot stop as it will be perceived negatively. Then, I had to repeat the same question that led to respondents revealing how the market changed with Unilever buying and promoting Rainforest Alliance and how they were motivated by the expected demand and high price of certified teas. Similarly, when interviewing other actors, considering their role and activities performed in the tea industry, I was focused on understanding their motives behind the certification rather than accepting initial generalised responses such as 'CSR' or 'sustainability'.

Questions were then developed relating to how they adopt and implement Rainforest Alliance requirements in order to understand how Rainforest Alliance is implemented and stabilizes in line with the theoretical conception of 'composition'. Specifically, the questions focused on identifying the human and non-human actors involved in this process to understand how they interact and associate during the adoption and implementation of the Rainforest Alliance certification. These interactions provide data to understand the process of forming the Sri Lankan Rainforest Alliance. Based on the feedback of the unstructured interviews, this was expected to reveal a process covering: a) what the Rainforest Alliance certification requires the local actors to do; and b) how local actors initiate Rainforest Alliance activities, implement and practice them (or not) as day today activities. As mentioned, interviewee responses referred to organizational changes relating to agricultural practices, accounting systems and adoption of new practices. Accordingly, some interview questions were aimed to understand 'what does the Rainforest Alliance certificate require?' seeking specific actions and expectations of the Rainforest Alliance standard. As per the theoretical lens of composition, Rainforest Alliance

requirements reflect the sub-programmes that local actors are expected to adopt and implement to enable sustainable goals.

To understand the role of local actors, the next interview questions focused on understanding 'how Rainforest Alliance is planned at the beginning?' Here, the focus was to understand, whether they implement Rainforest Alliance requirements as required or adapt them, which helps understand Rainforest Alliance agency and its form of translations. Then, to understand how they implement the certification activities, a broad question was raised as, 'How do they enact the certification?' Here, the focus for data was on identifying human and non-human interactions and associations in implementing Rainforest Alliance activities. It was revealed that actors from management to workers at the tea estates are involved in Rainforest Alliance activities. Therefore, questions focused on understanding how they persuade, enrol and mobilize actors towards a current status of (temporary) stability providing data to analyse the process of reversible black boxing.

As the theoretical requirement was on tracing actors involved with the Rainforest Alliance certification, a number of questions were developed to know, 'how are other actors in the supply chain motivated by Rainforest Alliance?, 'how do upstream supply chain actors perceive the certification?' and of 'how the certification practices are implemented by different actors in the supply chain?. The data on such interactions and associations provide data to understand the process of blackboxing the certificate in the local context. As explained in the theory chapter, this data helped analyse the process of enrolling and mobilizing actors, blackboxing practices and the punctualisation of activities as everyday normal practices.

Other interview questions focused on understanding how these actors interpret Rainforest Alliance given it is inscribed with notions of sustainability. Questions probed How do you

interpret the Rainforest Alliance certification?' and 'what do you understand by CSR/sustainability?' (the common answer to the first question) to understand whether or how local perceptions of these concepts get translated into Rainforest Alliance. Their views provided data to understand whether Rainforest Alliance is able to articulate its inscribed meaning of sustainability in the local context.

In addition, the review of literature helped in emphasising some issues such as local priorities and resistances that could be explored through research questions during the field visit. For example, questions enquired about 'how were any resistances tackled?' and the positive and negative effects of the certification to understand its stability in the local context. In theoretical terms, these provide data on the 'matters of concern' that would either strengthen or destabilize network stability.

The main concern was on the tea manufacturing companies as they are the actors subject to Rainforest Alliance certification. During the period, eight companies were approached and interviewed and well exceeded the saturation of data. As mentioned, the interviews started with the key informant at the head office and visits to Rainforest Alliance -certified estates were arranged by them. At the level of the estates all the key informants, managers and employees were interviewed (Table 4.6). To ensure the reliability of facts expressed by the managers, some workers and even members of the community such as school teachers/principals were interviewed in some cases. Certified estates were more than happy to accompany the researcher to observe infrastructure and allowed me to meet workers. When it comes to the other actor categories, they were also limited as shown in Table 4.6 when reaching saturation.

Each interview was conducted at their place of employment and audio recorded. The time span ranged from 10 minutes to more than 2 hours. Except for a few informal interviews, all were

audio recorded in two recording devices at the time of the interview. The medium of interviews was mainly English as it is the official language in the tea industry. However, interviews with workers were either in their language (Tamil) or in Sinhala. A company representative was given for Tamil interviews as an interpreter. Interviews conducted in Sinhala were translated by the researcher. During the interviews, notes were taken for follow-up questions and clarifications and used to update the filed notes at the end of the each visit. The interview data was augmented and triangulated with documentary analysis and observation.

Table 4.6: Interview Sources

Actor category (designation)	**Number of organisations**	**Number of interviews**
Exporters/buyers (EC)	05	08
Managers (M)		
Producers (MC)	08	
Managers/staff (M)		27
Workers (W)		08
Community (C)		02 37
Tea brokers (BC)	05	09
Managers (M)		
Legal/industry/certification institutions (L)	09	22
Total Number of interviews		**74**

4.5.2.2 Observations

A field visit is an opportunity to observe activities as they are being practised and provides alternative sources of evidence to interviews and document reviews (Yin, 2014).

As mentioned earlier, conducting interviews at the place of employment enabled formal and informal observations. The key informants of the Rainforest Alliance -certified companies were from their head office and the majority were from tea estates located in different geographical regions of the country. They were approached as a two to three day residential visit at each company's selected number of certified estates. There visits were made to tea factories and plantation estates where Rainforest Alliance related infrastructure developments could be observed. These included Rainforest Alliance-required field-level changes such as setting up buffer zones, soil conservation methods and then development of infrastructure such as bathing places for chemical sprayers, waste disposal methods and waste water treatment methods. These were recorded as field notes at the end of each estate visit and interesting areas were photographed. These represent data used to analyse how Rainforest Alliance has impacted on local practices in forming the composite goal. Observations enabled one to collect data about these types of changes made due to Rainforest Alliance and the nature of such changes. In addition, observation notes were taken on the conduct of the Colombo tea auction over two days, at a two-day workshop conducted by Rainforest Alliance representatives for tea smallholders and at local Rainforest Alliance training sessions conducted for plantation workers and their families.

Similarly, when visiting the tea buyers/exporters and brokers, a number of companies demonstrated their tea testing units where tea samples are checked for their quality parameters such as tea taste, size of the particles and aroma. These showed how certified tea is mainly distinguished through the tea catalogue imprint, illustrating its role as a non-human in supporting the translation of the certification amongst supply chain actors

4.5.2.3 Documentary evidence

This was another complementary data collection method performed before, during and after the completion of the fieldwork.

The purpose of such a review prior to the fieldwork was to obtain a contextual understanding of the industry and to plan the data collection. These included mainly the annual reports of listed Rainforest Alliance -certified tea manufacturing companies, online available information on MNC tea buyers and tea industry-related regulatory bodies such as Sri Lanka Tea Board, Tea Research Institute and Tea Smallholdings Development Authority. Information about the Rainforest Alliance certificate and its organisation were reviewed from the Rainforest Alliance website and online newspapers.

The review of documentary evidence during the fieldwork provided an enriched perspective on the interview data and a means to triangulate the research methods and data validity. The most reviewed documents from the certified tea manufacturing companies were the Rainforest Alliance Manual and the ten Rainforest Alliance files, maintained separately for each Rainforest Alliance standard principle. During the interviews, the company estate interviewees often asked the researcher to refer to these documents for Rainforest Alliance -related facts and events. These constitute their descriptions of external reality (Silverman, 2013), especially their management and accounting information systems adopted to ensure compliance with the Rainforest Alliance standard requirements. The documents provide data to identify the role of any non-humans involved in certification translation at the level of estates and amongst other supply chain actors. In line with the theoretical approach of ANT, such a review enables one to give due recognition to the non-humans, similar to the human actors, beyond considering them as mere instrument devices that carry human interests and agency.

In addition, Rainforest Alliance meeting minutes and Rainforest Alliance audit reports were reviewed in several companies subject to a promise of confidentiality. These reports help to confirm certain field notes on observations and informal discussions and conflicting views and doubtful tones in interviews about the nature of resistance, tactfulness and Rainforest Alliance implementation weaknesses. Hence, the documentary review became a method of triangulation.

The documentary evidence review was further continued after the fieldwork during writing up the thesis chapters on context, analysis and discussion. The data analysis revealed the role of tea multinationals, particularly Unilever, in promoting the Rainforest Alliance in the local context. Hence, their websites were reviewed for additional information. Furthermore, with limited independent information available about the Rainforest Alliance NGO organisation and its network organisations, online newspapers were reviewed to obtain more unbiased information.

In engaging and collecting research evidence in this way, the researcher ensured commitment to the declared ethical procedures.

4.5.3 Data analysis

Qualitative data are massive in volume, complex and not standardised. In order to address the research objectives and research questions they need to be explored, analysed, synthesised and transformed (Saunders, 2012). Different scholars suggest different approaches for data analysis (e.g.Ghauri, 1995, Bryman, 2011, Saunders, 2012, Yin, 2014). The procedure adopted in this study mostly followed the generic approach suggested for qualitative data analysis (Saunders, 2012). The aim of this section is to show the consistency of the adopted approach with the research philosophy, research strategy and data collection methods (Saunders, 2012).

4.5.3.1 Preparation for data analysis

During the period of six months the researcher was fully engaged in the fieldwork with opportunities to apply a number of data collection methods to a number of supply chain actor organisations located in different geographical regions of the country. The data consisted of interviews, documents, photographs and field notes. Of these, the main source of evidence were the interviews. Out of 74 audio recorded interviews, only a very few could be transcribed immediately subsequent to the visits due to the nature of the fieldwork. Others were transcribed by myself after completion of the field visits, working full time for about two months. It is necessary to consider the nature of contextual information such as variances in tone and non-verbal communications in transcribing the content of interview conversations. Thus, the field notes which were updated after each interview were reviewed before transcribing each interview and the transcription incorporated relevant contextual information in brackets or highlighted in the word-processed interview document. Data cleaning helped to avoid errors in transcriptions. This was performed through listening back to the audio with a printed copy of the interview script for any corrections.

Each word-processed interview was saved according to a pre-designed anonymous label in separate folders created for each supply chain actor category. This anonymous label distinguished them based on supply chain actor category (e.g. tea producers, brokers), the identity of the organisation, the position of the interviewee (e.g. manager, worker) and numbered under each category separately.

All documentary information such as scanned copies, online reports, photographs, and PowerPoint presentation slides of companies were arranged in separate folders under the same anonymised labels used above. Hard copies of collected documents, such as Rainforest Alliance

audit reports, Rainforest Alliance compliance documentary evidence and publications collected from legal and regulatory authorities were physically separated according to supply chain actor category for easy access whenever necessary.

Use of analysis aid techniques such as self-memos, progress notes, and summaries of documents, notebooks or a reflective diary for recording contextual information helps in interpreting data more reflectively (Saunders, 2012). The researcher maintained a reflective diary. This started with the purpose of maintaining a record of different types of information in addition to the recorded interviews (e.g. hard and soft documents) possessed by the researcher with respect to a number of supply chain actors. A brief handwritten summary of the researcher's reflection on each organisation and its interviewed actors were added based on the six-month exposure driven by active interactions on the field visits and reflected in the field notes. This helped as a method of data reduction and to ensure availability of additional data whenever needed. In particular, in writing up the discussion chapter, consideration of this contextual information helped to incorporate the researcher's reflective thoughts to enrich the discussion of the findings. The data were analysed using the NVivo software package.

4.5.3.2 Categorisation of data

This, as the first activity in the data analysis process, refers to the development of codes so that originally collected data can be rearranged into a structure to facilitate further analysis. The categories, which are 'terms', were developed from the ANT theory (goal/interests, Resistances), CSR/sustainability literature (supply chain CSR), from interviewees (Quality) and as emerged during the process of data analysis (perception on certifications, Rainforest Alliance in action). Categories were descriptive initially and however were useful in two aspects. First, it was easy to develop related subcategories during the next stage, 'unitising' the data (Saunders,

2012:558), when transcripts are read and recognised to attach to these categories. Next, since selective transcribing of each interview was not performed, under descriptive categories, new subcategories were created and attached to data considered less useful for data redundancy. Categories were coherent internally, that is to the data content, and externally, that is in relation to other categories.

Data reorganisation started after importing all the word-processed documents into the NVivo software and creating a project file. Then each transcript commencing from the supply chain actor category of tea manufacturing companies was read from the beginning and the researcher started to attach data (selected sentences and/or paragraphs) into the initial categories (Nodes in NVivo). As attaching proceeded, a number of subcategories (sub nodes in NVivo) were created under each main category and also sub-subcategories, as a hierarchy. As mentioned before, descriptive categories enabled data redundancy through creating subcategories. For example under the goals/interests main category, subcategories were created for each other type of certification to separate actors' interest in those certifications which are recognised as independent to their view on the Rainforest Alliance.

This first open categorising method helped to make more structured sense of the data. As this progressed, after unitising 15-20 interview scripts including transcripts from all the actor categories into the above categories, the researcher could recognise more clearly the relations and patterns between categories and the necessity to reorganise certain codes under different categories.

At this, stage it was decided to rearrange these categories so that they were more specific and reflected the theoretical concepts and the literature. Based on the research questions, objectives and theory, a revised coding structure was generated. After discussing with the supervisors, it

was further subject to certain amendments and the transcriptions were recoded as a new project file in NVivo. The developed category structure is illustrated in the table below and each node has developed further into a number of specific sub nodes, some of them amalgamated later in writing up the analysis chapter.

Table 4.7: Coding Structure

Research objectives	**Theoretical analysis**	**Key data category**	**Analytical codes**
To understand the different supply chain actors' rationale for Rainforest Alliance	Technical mediation: Goal translation: How do local actors perceive Rainforest Alliance as a solution for their interests	Motives/Interests	Producers Brokers Buyers/exporters Industry regulators Rainforest Alliance actors
To understand the prior position and goals before adoption of the Rainforest Alliance with respect to other certifications	Role of non-humans: other certifications. To recognise how actors perceive (or not) those certifications as impacting on RA. Non-human actors	Motives: Other certifications	Perceptions ISO ETP UTZ HACCP Others
To understand how Rainforest Alliance mediates in changing local practices	Technical mediation: Composition and circulating reference	Rainforest Alliance translation	Enrolling and persuading strategies. Management and accounting practices. Certification related other changes. Rainforest Alliance in supply chain. Unintended outcomes Resistance to Rainforest Alliance Initial challenges Continuing

How does the Rainforest Alliance stabilise its network?	Detours and affordances Emerged from data Certified tea producers perceive Rainforest Alliance as benefitting them as opposed to pre-certification	Rainforest Alliance perceptions	Community Environment Workers Quality Sustainability CSR Economics Law compliance
To map the activities and actors of the tea industry to understand the context of the industry and to develop the context chapter	Emerged from data . Actors' contextual information about the industry	Supply chain information	Actors and activities e.g. Tea Sales Tea brokering
To recognise local priorities overlooked by certifications	Matters of concern. Actors' concerns in the industry except on Rainforest Alliance and other certifications	Supply chain concerns	Cost of production Market control Politics Tea quality Smallholders

Source: Developed by the researcher

This section continues by explaining how the coded data were analysed and presented in the Analysis chapter. As mentioned before, research questions were theoretically framed and refined during the engagement of the fieldwork and as well as during data coding and analysis. Codes were developed based on theory, literature and emerging themes. When reading through the coded data, a pattern of Rainforest Alliance translation was revealed in the local context that could be presented under the four meanings of technical mediation proposed in the theoretical framework. Thus, the data analysis chapter was organized accordingly.

The first research question focused on analysing the 'motives/interests' of supply chain actors. Thus, each actor's motives/interests were analysed under each supply chain actor category separately under further sub-nodes. Such sub-nodes named 'forced adoption' and 'voluntary

adoption' & 'other' were merged in the analysis. For example, one exporter/buyer, Unilever and one producer, Finlay's interest was coded under 'forced adoption'. Therefore, in presenting the actors interests in line with the first research question, these interests were grouped under the heading of 'forced to adopt' identifying them as the initiators.

Next, data coded under the category of voluntary adoption revealed an emerging theme of 'market dynamics' referring to the actions of Unilever in common. These interests were then analysed in two sub-sections, 'likelihood of demand' and 'price expectations'. In line with the theoretical notion of goal translation, the analysis summary was presented as formation of a Sri Lankan Rainforest Alliance actor network. Similarly, actor interests coded under the sub node of 'others' were grouped under the title of 'other actors and conditions' presenting how other actors' different interests help the certificate's promotion and circulation giving it different meanings.

The second research question is again theoretically developed to understand the nature of Rainforest Alliance certification agency (and translation) in its adoption and implementation. Observations coded under 'Rainforest Alliance translation', 'supply chain information' and 'motives for other certifications' were used to present data as a story in line with the meanings of composition, reversible black boxing and the concept of circulating reference. Coded data was then used to present the story under different analysis sections as given in the next chapter. For example, the code of 'initial challenges' was presented under the heading of 'formation of a local version of Rainforest Alliance- Local interpretation guideline (6.3.1) and 'formation of local version of Rainforest Alliance (6.3.2-1) as these coded data relate to the initial translation of the certificate. Then the code of 'Rainforest Alliance management and accounting practices' was used to present data under its sub-nodes of 'formation of inscriptions'. Similarly, the code of 'Rainforest Alliance related other changes' was used to present data under 'formation of new

activities'. In presenting data as a story, data coded under some codes such as 'enrolling and persuading strategies' were incorporated to the above mentioned analysis headings.

The third research question was analysed using the theoretical conception of 'matters of concern' and 'articulation' as the main third section in the analysis chapter. The codes of 'Rainforest Alliance perceptions' and 'supply chain concerns' were used to organize this section under its major sub coding; 'smallholders' as exclusion of smallholders, 'law compliance' as 'enforcement of local law compliance' and then 'tea quality', 'actors & activities' presented under 'developing local certifications'. When it comes to other codes, 'supply chain information', and 'supply chain concerns' were used in the context chapter.

Having considered how data were collected and analysed, next we examine their credibility.

4.5.4 Research credibility

In assessing the quality of research studies, the parameters relevant for quantitative studies, reliability and validity, are employed differently in qualitative studies (Ryan, 2002, Bryman, 2011). As disclosed in the sections above, this study used a properly designed research plan as appropriate to study the phenomenon of Rainforest Alliance certification translation in the local context. This included the collection and organised recording of appropriate evidence from a number of sources and their availability as password protected soft copies and properly safeguarded hard copes as audit trails. Thus follows 'procedural reliability' as an adaptation of reliability (Ryan, 2002:155). The collection of data from a number of sources; interviews, observations and document reviews, and of similar cases across the same supply chain actor category (seven out of nine certified companies) supported the data and method triangulation. Moreover, as Yin (2014) suggests, validity can be improved by getting the draft case study

reviewed beyond peers to include the case study informants and participants.[6] Externally, the key findings of the study were discussed and this reaffirmed certain key findings of the study, such as confirmations of the stoppage of buying of smallholder teas after Rainforest Alliance, with two key informants and a participant in the tea industry. One is a Rainforest Alliance auditor and former Rainforest Alliance certificate handling manager and another a Rainforest Alliance manager, through emails and Skype. This helped in ensuring the construct validity (Yin, 2014). Second is ensuring how the case study is 'complete' (202). In this study, this was satisfied through an exhaustive effort to collect almost all relevant data through adopting a number of data collecting techniques. In line with the above facts, this study emphasises with confidence its reliability and the validity of data. The next section proceeds by highlighting how my research diary was used in constructing 'facts' about the agency (and translation) of Rainforest Alliance.

4.5.5 Fact construction

This section describes how exposure during the fieldwork engagement, undertaking interviews, observations and documentary reviews, contributes towards constructing 'facts' related to understanding the formation of a composite Rainforest Alliance in the local context.

As explained above, the main research question of the study aimed to understand, how does the Rainforest Alliance certificate translate a conception of sustainability within the local tea supply chain? Two research questions were developed to guide the fieldwork engagement from the broad theoretical lens of sociomateriality and following the ANT approach of tracing human and non-human actors. The first question aimed at understanding 'how does Rainforest Alliance enroll (or not) actors providing solutions to their interests? Understanding the motives for adopting the certification (or not) were not initially obvious in the formal interviews. The

[6] The findings of the study were presented at a regional PhD colloquium.

reflective diary notes that tea producer interviewees were often initially stating that adoption is voluntary for protecting the environment and for looking after their workers as a responsibility. However, as the interviews proceeds, they commonly mentioned that sustainability issues are not their priority. Hence, the first interview question (*why they are interested for the certification*) was often discussed several times during the course of the interview to fully understand their motives. For example, 'commercial expectations' were often revealed during the latter part of the interviews. Hence, observations and documentary reviews and informal discussions were undertaken further to establish the motives of different supply chain actors for the certification. These facts and observation notes taken at the auction visit contribute towards identifying the emerging theme of 'Market dynamics' from data.

Next, the second research question was broadly focused on to understand how Rainforest Alliance is implemented. The researcher had no specific idea about how it is being implemented, whether and how it would affect the certified tea producers. Unstructured interviews helped to probe into this matter to reveal means of implementing the certification and its impact at the level of the tea producers and beyond them. The fieldwork sought to increase the number of certified tea producers being analysed (from the original plans) in order whether the practices differ between first certified tea producers and those who join the certification later and also in terms of geographical locations. Diary notes helped in observing how Rainforest Alliance was understood as a range of created inscriptions in certified tea estates. For example, when asked them about Rainforest Alliance, actors commonly showed the researcher different types of maintained records. This led to understanding how Rainforest Alliance was enacted through initiating social and environmental accounting systems. Therefore, documentary reviews, observations and interview questions aimed to collect data on changes to accounting and management accounting system and other practices. Then, after

coding and analyzing data, the second research question was established as ‘how does the Rainforest Alliance translate the local management, accounting and agricultural practices of certified tea producers?’

According to several wider supply chain actors, as noted in the diary, Rainforest Alliance was seen as providing solutions to their different interests. Differences in the interests of supply chain actors and their perception of certification benefits in interviews led to the development of the third research question relating to the stability of the Rainforest Alliance certification. This question also developed from fieldwork diary excerpts asking what will happen to Rainforest Alliance when all the Regional Plantation Companies got certified (given that Regional Plantation Companies appeared to be getting Rainforest Alliance-certified as a strategy to compete with smallholder tea at the auction). Here, the focus was to understand how the Rainforest Alliance certification would articulate its inscribed meaning of sustainability and how it would be problematised in the local context. Diary notes revealed number of problematised areas affecting its stability such as the interrelationship with local certifications, smallholder certification issues and the impact on law enforcement.

This therefore provides an example of how the fieldwork diary and research methods (developing and refining the research questions, coding and analysing data) were used to identify facts and construct the narrative as depicted in the next chapter.

4.6 Chapter summary

This chapter explained how the interpretive philosophical assumptions of the researcher influenced the choice of a qualitative research methodology in exploring Rainforest Alliance certification translation in the tea industry in Sri Lanka as an interpretive case study. Drawing on sociomateriality and ANT, the study aims to understand the agency of the certification as a process of interactions through its enactment by local actors. Thus the study was designed as a fieldwork case study to collect data from multiple sources, and how they were analysed for interpretation was detailed ending with a section of researcher's contribution towards fact construction. The next chapter presents the results of the analysed data.

CHAPTER 5

RAINFOREST ALLIANCE CERTIFICATION AND THE TEA INDUSTRY

5.1 Introduction

As disclosed in the literature review chapter, the food and beverage sector is subject to increasing global demands for food safety, quality and sustainability. As a response, the tea industry is increasingly subject to a number of sustainability certifications[7]. This study focuses on the Rainforest Alliance certification, which promotes the social and environmental sustainability of agricultural activities via its global certification system. This chapter focuses on discussing of how ANT, proposed in the previous theory, chapter can help in analysing the tea industry supply chain, and opening the 'black box' that represents Rainforest Alliance in Sri Lanka. The chapter is organised in two sections; 5.2 The Sri Lankan Tea Industry and 5.3 Rainforest Alliance, to understand the network relations and dynamics that constitute Rainforest Alliance in Sri Lanka.

5.2 The Sri Lankan Tea Industry

The global tea industry supply chain is vertically integrated and dominated by powerful multinational corporations (Unilever, Twinings and Tata Global Beverages) who together sell approximately 85% of global production (Groosman, 2011). Tea is mainly grown in Asia, with Sri Lanka being the third largest tea producer in the world with a long history of tea cultivation over 150 years commencing from the British colonial period. Table 5.1 highlights some key industry production figures.

[7] Refer to table 2.3 in Chapter 2, Popular International Tea Certifications.

Table 5.1: World Top Tea Production Statistics

Top tea growers	**Production** (Thousand metric tons)	**As a percentage of world tea production**
Asia	**4,151**	**84.6%**
China	1,924	Top Asian growers contribute 94% of Asian production 80% of world tea production
India	1,200	
Sri Lanka	340	
Vietnam	180	
Turkey	149	
Indonesia	134	
Africa	**643**	**13.1%**
Kenya	432	67% of region and 9% of world production
Uganda	61	
Malawi	46	
Others	**112**	**2.3%**
Total	**4,906**	

Source: Statistical Information of plantation crops 2013, Ministry of Plantation Industries (2015b)

The tea industry in Sri Lanka, known for producing 'Ceylon tea', is almost solely export-oriented with approximately 90% of production exported overseas. Tea is an environmentally sensitive agricultural product and hence tea grown in different areas of the country produces different types of Ceylon tea and is categorised accordingly. 'Low-grown' tea is generally exported to the Middle East and Russia, whilst 'high-grown' tea is exported to Western Europe, North America, Japan, Pakistan and Egypt (Tea Research Institute of Sri Lanka, 2013).

> 70% of our tea mainly goes to the Middle East and Ukraine. The other 30% goes to the Europe and Japan (LC2M1)

Some of the local tea statistics are given in the table 5.2.

Table 5.2: Tea Statistics: Sri Lanka

Statistics		**Tea categorisation**	
Total production	334 million Kgs	**Elevation**	**Product**
Total export	311.14 million kg	High-grown tea - 22%	Orthodox (Black tea) - 92%
Average cost of production	Rs 390 per kg	Mid-grown tea - 17%	Cut Tear & Curl - 7%
Value addition	42%	Low-grown tea - 61%	Green Tea – 1%
Average cost of production	Rs 390 per kg		

Source: Ministry of Plantation (2015a, b)

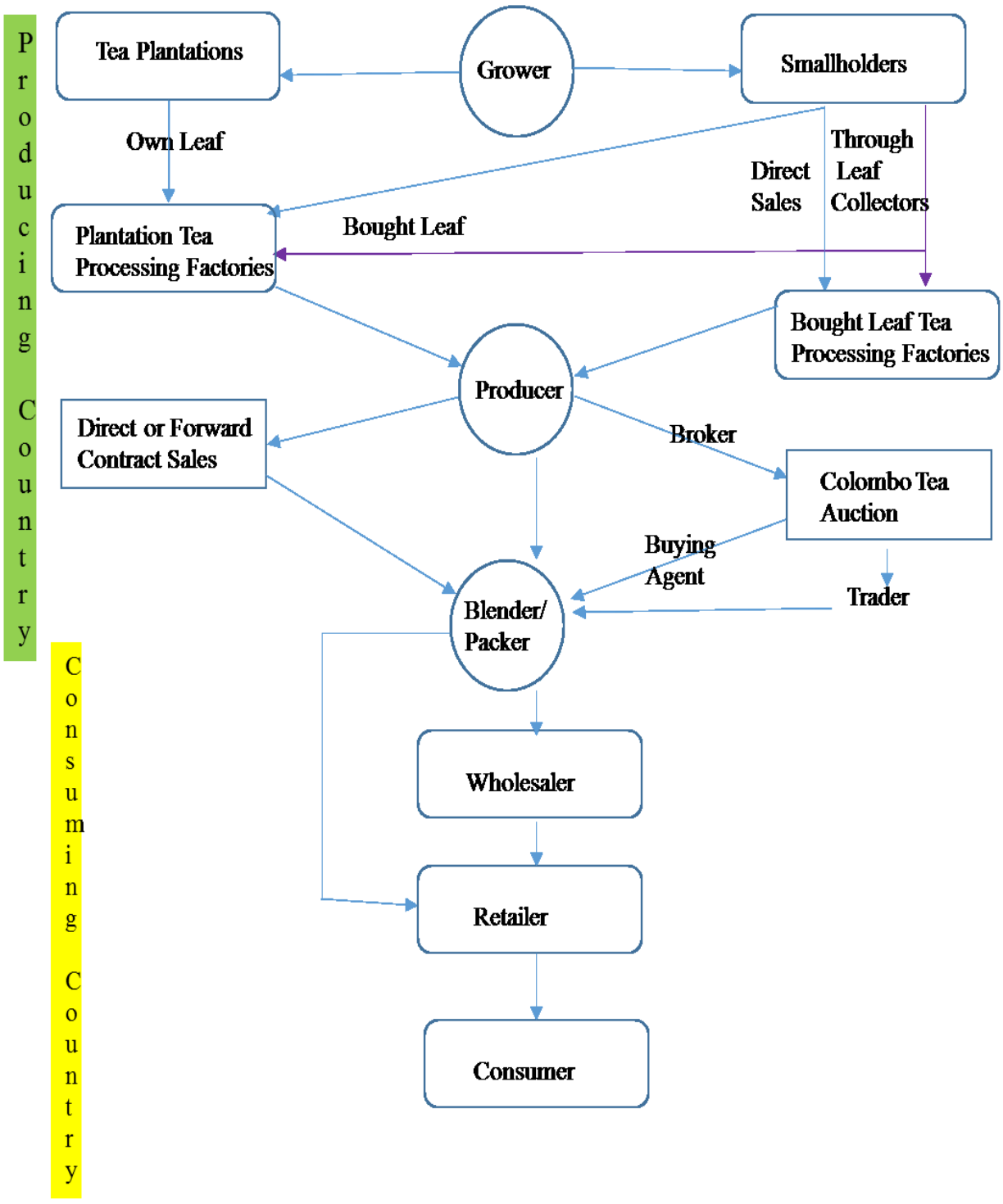
Over the years, the tea industry has become an important aspect of the Sri Lankan economy providing the major source of agricultural export income and acting as a significant source of employment. All tea must be sold through the Colombo tea market auction, although the Ceylon Tea Board do allow a small proportion of private sales (typically between 3-10% of annual production). Tea prices therefore depend predominantly on demand and supply at the auction. The Colombo tea market is dominated by a single local buyer-Akbar Brothers (approximately 55% of sales) who mainly buys tea for the Middle Eastern and Russian markets, whilst the other major buyers typically account for 5-10% of sales. However, the majority of buyers are small-scale.

Traditionally tea was sold as 'bulk' tea, although the industry has adapted since the 1980s to focus on the value-added activities of blending, packing and branding – activities that distinguish Sri Lanka from other tea-producing countries (SOMO, 2006, Groosman, 2011). Section next focuses on mapping out the local actor network.

5.2.1 Tea supply chain

The figure below (5.1) depicts a map of the local tea supply chain.

Figure 5.1: The Tea Supply Chain



The above supply chain is described in terms of the key supply chain actors and functions.

Tea Producers

The industry includes a 'corporate sector' comprising of large-scale tea estates: this consists of 21 tea producing companies (Regional Plantation Companies) and several State-owned tea estates. This complements a 'smallholder sector' consisting of a large number of small-scale growers who control a growing proportion of tea production (Groosman, 2011). According to the prevailing guidelines, smallholders are defined as those who cultivate no more than 4 hectares of land.

The 21 Regional Plantation Companies control 37% of the total land given over to tea cultivation whilst the State-owned tea estates control 4% (Ministry of Plantation Industries, 2015b). Smallholders control the remainder of land devoted to growing tea (approximately 59%) and produce 72% of total tea leaf. The registered total number of smallholders by 2015 amounted to 397,223 spread across all 14 tea-growing districts of the country, although they are mainly concentrated in 8 districts where they account for about 95% of the total 'low-grown' tea production. Smallholders sell their tea leaves either directly to the Regional Plantation Companies (to produce factory finished tea (known as 'made tea')) or via intermediaries ('leaf collectors') to bought leaf factories to produce made tea.

The corporate sector plays a vital role in producing 'made tea'. State-owned estates mostly use their own tea leaves to produce factory finished tea, 'made tea' - only 4% is sourced from elsewhere - whereas Regional Plantation Companies purchase on average around 26% of tea leaf from smallholders in order to blend and produce 'made tea '. Tea ownership statistics are given in the table 5.3 below.

Table 5.3: Tea Ownership Statistics

	Smallholders	Corporate Sector RPC State
Extent of cultivation	59%	37% 4%
Number of holders	397,223	20 RPC 2 state organisations
Contribution to green leaf	72%	28%
Contribution to made tea		40%

Source: Ministry of Plantation (2015b)

Many Regional Plantation Companies are certified with a number of certifications such as ISO 22000:2005 / Hazard Analysis Critical Control Point (HACCP), Ethical Tea Partnership (ETP), Occupational Health and Safety Assessment Series (OHAS) 18001:2001, Fair Labour Organisation (FLO), UTZ, Global Good Agricultural Practices (GAP) and Rainforest Alliance (RA). A number of companies are already initiated in Rainforest Alliance certification and as shown in the table 5.4 expand this to their other estates.

Table 5.4 illustrates Regional Plantation Companies and information about their certifications drawn from annual reports 2013/2014 before engagement in the fieldwork in Sri Lanka.

Table 5.4: Quoted Public Regional Plantation Companies

Regional Plantation Companies (RPC)	**Rainforest certified/readiness by the financial year end of 2013/2014**	**Disclosed certifications/standards/ engagements** *(2013/2014 Annual Report)*
1. Maskeliya Plantations PLC	3 factories in the process of applying for Rainforest Alliance certification Owned and managed by the Richard Pieris & Company PLC-(ARPICO), a Sri Lankan conglomerate	ETP-UK, ISO 22000, Fair trade Labelling Organisation (FLO)
2. Bogawantalawa Tea Estates PLC	Rainforest Alliance in process and ready by end of 2013	Fair Trade, HACCP, BRC Food standard, ISO 9001:2000, ISO: 22000:2005. *(2012/2013 Annual Report)*
3. Horana Plantations PLC	Rainforest Alliance certificate continued audit cycle for the second year in 2013/2014	HACCP, ISO: 22000:2005, SGS Product Certification, Forest Stewardship Council's SGC Certificate, Fair Trade, ETP
4. Balanagoda Plantations PLC	Accreditation finalised during the year under review In 2013 Rainforest Alliance obtained for 9 estates	ISO 22000, ISO 9001-2008
5. Talawakele tea Estates PLC	Rainforest Alliance certificate renewed Owned and managed by Hayleys, a Sri Lankan conglomerate	ISO 22000,Ethical Tea Partnership and UTZ Complied with GRI 3.1
6. Watawala Plantations PLC	Rainforest Alliance for 5 estates Apply G4 standards, and Annual Report prepared as an Integrated report Owned and managed by Sunshine holdings PLC, and joint ventured with Tata Global Beverages	ISO 22000-2005, HACCP, ETP, FT

7. Udupusellwa Plantations PLC	In addition to prevailing Rainforest Alliance certificate obtained for Matale group of estates in December 2013 making all estates Rainforest Alliance certified Owned and controlled by Finlay's	*(2012/2013 Annual Report)* No other disclosures
8. Kelani Valley Plantations PLC	In 2011 obtained Rainforest Alliance for 19 tea plantations validated for further 3 years at all black tea processing centres. Owned and managed by Hayleys Apply GR3.1 standards, compliance level C+ and Annual Report prepared as an Integrated report	HACCP (Sri Lanka), ISO 22000: 2005 (Switzerland), GLOBAL G.A.P. (New Zealand), UTZ, ETP, Signatory to United Nations Global Compact *(2012/2013 Annual Report)*
9. Hapugastenne Plantations PLC	All estates Rainforest Alliance certified This RPC also owned and controlled by the Finlay's	December 2013 Annual Report) Rainforest Alliance Certified
10. Malwatte Valley Plantations Plc	-	ISO 22000,ETP certifications *(2012/2013 Annual Report)*
11. Namunukula Plantations Plc	-	No reference
12. Elpitiya Plantations PLC	-	No reference *(2012/2013 Annual Report)*
13. Agalawatta Plantations PLC	-	No reference
14. Kegalle Plantations PLC	-	ISO 22000:2005,ETP-UK
15. Madulisma Plantations PLC	-	No reference
16. Kotagala Plantations PLC	-	No reference
17. Kahawatte plantations Plc	-	FSC, ETP, obtained during the year 2013 Annual Report

Source: Developed by the author based on published annual reports

The above 17 Regional Plantation Companies are public quoted companies and four Regional Plantation Companies are unlisted liability companies as shown below. During the field visit it was found that one of these unlisted Regional Plantation Companies is Rainforest Alliance - certified and the others are not certified.

Table 5.5: Private Regional Plantation Companies

Plantation name	Management	Certifications
18. Agarapatana Plantations	LANKEM tea and rubber plantations (pvt) ltd	Rainforest Alliance certificate obtained in 2012 for three estates ISO and ETP
19. Pussellawa Plantations	Fully owned subsidiary of Ceylon Estates Teas (pvt) ltd	No information
20. Maturata Plantations	Managed by the state	No information
21. Elkaduwa Plantations	Managed by the state	No information

Source: Developed by author based on annual reports and fieldwork data

In general, Regional Plantation Companies' head offices are based in Colombo and estate managers across the regions are responsible for estate activities. The majority of the workforce are female manual workers. For example, of the total workforce, executives represent 1% (84), clerical and supervisors 5% (690) and the majority 94% are manual workers (12,128) (Kelani Valley, 2012/2013). Regional Plantation Companies are managed by separate plantation management companies, of which some are large blue chip conglomerates like Hayleys, ARPICO and multinationals such as Finlay.

Tea buyers/exporters

As mandated by the Sri Lanka Tea Board, only registered buyers can buy tea from the Colombo tea auction and the majority of buyers are registered exporters. Many buyers add value to the bulk tea purchase from the auction. There are a large number of registered local agents of foreign buyers and local entities of multinational buyers such as Unilever and Van Rees. Auction purchase is dominated by a single local buying company which purchases around 50-55%, and about five other buyers are considered as major buyers, such as Unilever who purchase around 5-10% (Buyers Data CBA, 2014).

Tea brokers

Eight brokering companies are registered with the Sri Lanka Tea Board to sell tea at the Colombo tea auction as intermediaries between the tea producers and buyers. Brokers are responsible for the conduct of the auction and collection of state levies. Their income is brokerage fees which is calculated as a percentage (1%) of invoice prices. Furthermore, for purchases at the auction, buyers should make full payment before delivery and this is a mandatory requirement of the brokers. Before the auction, brokers collect tea samples from all the producers and distribute them as small tea samples to each buyer with the tea auction catalogue.

Regulations and regulatory/monitoring bodies

This category of actors consists of the local regulatory and monitoring network through state and industry bodies. The industry is subject to several mandatory rules, such as Sri Lanka Tea Board Law No 14 of 1975, Tea Control Act No 51 of 1957, Tea (Tax & Control of Export) Act

No 16 of 1959, the Sri Lanka Tea Board (import & export) Regulations 1981 and the Sri Lanka Tea Board Standards.

The state intervenes in the tea industry through the established statutory bodies under the Ministry of Plantation Industries. The Sri Lanka Tea Board is the main statutory body of the tea industry established on 1 January 1976 under Sri Lanka Tea Board Law No 14 of 1975. Its main function is the regulation of tea industry to ensure the quality and safety of Ceylon tea by making new or amending laws (Report of the Tea Commission, 1968).

The Tea Small Holding Development Authority established in 1977 by Act No 35 of 1975 is the state body for the smallholders. All aspects of the activities of tea smallholders, from growing, production and marketing to welfare come under this authority. The establishment and legal status of smallholder societies and registration was passed by Act No 36 of 1991 and by a subsequently passed act (Act No 21 of 1997).

In addition to these two main bodies, several other state bodies operate in the tea sector. The Tea Research Institute of Sri Lanka is privately funded by industry actors and provides technical assistance to the industry. There are other self-financing institutions established for smallholder tea processing: the Tea Shakti Fund, state tea factory; Kalubowitiyana Tea Factory Ltd and the plantation education institution; the National Institute of Plantation Management, Tea, Rubber and Coconut Estates (Control of Fragmentation) Board are other related institutions (Ministry of Plantation Industries, no date)

Similarly the industry is organised in terms of each key supply chain actor in associations, such as the brokers (The Colombo Brokers' Association), factory owners (the Sri Lanka Tea Factory Owners Association), the growers (the Planters' Association of Ceylon) and also the multi stakeholder association, the Colombo Tea Traders Association (CTTA). The CTTA, established

in 1894, is the regulatory and monitoring body of the auction. It is a powerful industry body including buyers, sellers and brokers and an affiliation of the Planters' Association of Ceylon, Sri Lanka Tea Factory Owners Association and the Colombo Brokers association (Colombo Tea Trader's Association, 2014/2015:20).

The section now highlights sustainability issues in the industry as a whole and the major supply chain actors interested in these sustainability issues and key legislation relevant in the industry.

Other than these industry-specific institutions/associations, Sri Lanka with a history of having an agricultural-oriented economy is rich with legislations as national policy to protect and conserve natural resources. Key pieces of legislation include

> The Soil Conservation Act No 25 of 1951 and amendments focus on soil erosion, siltation, soil salinization, flood peaks, soil impoverishment and water logging. Forest Ordinance on forests/vegetation; biodiversity; endangered species; surface water quality, soil erosion, water supply, flood peaks. Control of Pesticide Act No 33 of 1980 and Plant Quarantine Act on air quality, water quality, pesticides, fertilizer, public health and safety. (Central Environmental Authority, 1997:77)

Two other national institutions, the Central Environment Authority and the Sri Lanka Standards Institution indirectly interfere in tea industry activities by stipulating rules/regulations on environmental protection and tea product/process quality issues respectively. National Environment Act No 47 of 1980 interferes in the protection and management of the environment and environmental impact assessments. Tea producers are also included as a category that is required to obtain an environmental protection licence from the authorities. The Sri Lanka Standards Institution as the national standards institution interfere in the tea industry by way of releasing standards on various aspects of the industry. The Sri Lanka Standards Institution is the only Sri Lankan member of the International Organisation for Standardization. It has released several Sri Lankan Standards for the tea industry, such as Sri Lankan Standard

1315:2007 Code of Practice for Tea Industry Part 1: Good Agricultural Practices for the Cultivation of Tea and SLS 135:2009/ISO 3720 Code of Practice for Tea Industry Part 3: Good Hygienic Practice for Storage, Blending, Packaging and Transport of Tea (Sri Lanka Standards Institution, 2014). Furthermore, the Sri Lanka Standards Institution, as the accredited body of several international certifications, such as ISO 9001, ISO 22000/HACCP, GMP, ISO 14000, SA 8000 and OHSAS 18001, certifies the tea factories.

The first release of the National Plantation Industry Policy by the Ministry of Plantation in May 2006 recognised productivity and profitability as the two key issues affecting the sustainability of the local tea industry. The national industry policy targets a GDP contribution of 7.7% (Tea Research Institute of Sri Lanka, 2013/2017). Among the key tea-producing countries, Sri Lanka records the lowest productivity:

> The national average productivity in 2011 is 1475 kg made tea/ha – a 0.2 percent decrease over the 2010 figures. (Tea Research Institute of Sri Lanka, 2013/2017:2)

Therefore, the smallholder sector is supported by the government in different ways; fixing a guaranteed minimum price for their green leaf (Rs 80 per kg of green leaf), fertiliser subsidies and provision of financial facilities for new planting. On the other hand, smallholders are considered to lack knowledge of the adoption of sustainable agricultural practices and are encouraged to use organic fertiliser, soil conservation, and water retention planning of lands using financial aid. Similar financial assistance is given for factory modernisation. The Tea Small Holding Development Authority is the responsible state institution for disbursing subsidies and training these smallholders (Tea Smallholders Development Authority, no date).

On the other hand, the Ceylon Tea Board as the main industry regulatory/monitory body, concerns itself with quality issues of tea from the level of the grower to the point of export. As

revealed during the fieldwork period, for them green leaf quality is an issue. According to them, use of improper storage methods during leaf transportation and delays in handing raw leaf to factories affect the quality of the finished tea (based on fieldwork data).

Next, at the level of the private sector growers, for the Regional Plantation Companies, as growers cum producers, the main issue is economic sustainability. Generally, the price drop in commodities in the world market have affected the tea industry as well. In addition to this common global market effect, the Ceylon tea industry is adversely affected by the economic sanctions, conflicts and currency depreciation of its major export markets in Russia, the Middle East and Ukraine. This has resulted in a large amount of unsold teas remaining at the Colombo tea auctions (Colombo Tea Traders Association, annual report 2013/2014)

In addition to the external market conditions, a range of internal factors affect the economic sustainability of the corporate sector, resulting in large number of Regional Plantation Companies recording losses (Colombo Tea Traders Association, annual report 2013/2014). Key factors are the uncontrollable rise in the cost of production due to wage hikes and payment of government guaranteed minimum prices to smallholders irrespective of auction prices. From the Regional Plantation Companies' standpoint, labour unions have become powerful and Collective Bargaining Agreements are influenced by political parties for their votes, which results in an increase of wages every two years with no connection to productivity:

> Political influences has been exerted, hitherto, on negotiations, to the disadvantage of the employers (….) appeals for provisions to stimulate productivity have fallen on deaf ears. (Colombo Tea Traders Association, annual report 2013/2014:16)
>
> increasing wages and decreasing productivity are emerging as critical threats to Sri Lanka tea industry (…) The cost of production increased by 7.2% compared to the previous year. This was mainly due to the wage increase of 22% against the previous year. (Agarapatana 2013/2014:6).

In addition, labour shortages and difficulty in attracting new labour to the industry, and a lack of engineering services to cater for the needs of the industry affect the corporate sector. Traditionally finished tea has been transported to the Colombo tea auction using the railway; however, at present teas are mainly transported on land transport, incurring high costs, due to the non-upgrade of the railway system.

Quality is the key concern of the Ceylon Tea Board, as the key regulatory and monitory actor of the industry. Tea quality is guaranteed through the mandatory Tea Board standard, ISO3720, which is applicable to all tea producers and exporters guiding on a minimum level of quality for black tea. The pesticide residues of the standard are based on the recommendations of the Tea Research Institute, however, exporters are required to comply additionally with the importers' Maximum Residue Limits of, for example, the EU and Japan (Sri Lanka Tea Board, Circular, 2010) and similarly the green tea standards. In addition to monitoring tea based on ISO3720 requirements, export teas are subject to the Lion logo quality standards, which specify quality standards according to the exporting destination. Furthermore, as mentioned above, the Sri Lanka Standards Institution provide guidance on improving the quality and safety of tea production and the finished tea. The Sri Lanka Tea Board and the Sri Lanka Standard Institution have jointly promoted a voluntary quality certification for tea producers, called the 'Ceylon Quality Certificate' (CQC). However, only a few tea producers have certified with this. Later these institutions have identified tea packers and blenders as more vulnerable parties for quality issues and hence are planning to introduce CQC as a compulsory certificate for them.

In order to overcome the above sustainability issues, the Tea Research Institute as the state institution, but a privately industry funded institution, proposes urgent and continuing attention to several aspects, such as top soil conservation and improvement of the soil fertility, replanting

of new locally suitable high-yielding cultivars, factory modernisation and automation, attracting labour for the industry and the necessity to be proactive and meet the changing global market requirements (Tea Research Institute, Corporate plan 2013-2017).

The analysis continues by focusing on the relations that constitute the organisation producing the Rainforest Alliance accountability certification.

5.3 Rainforest Alliance

In 1986, an American environmental activist, Daniel Katz, initiated the Rainforest Alliance NGO based in New York, with the aim of conserving forests vulnerable to harmful economic activity by constructing an agricultural sustainability-orientated accountability certification. It consists of 14 not-for profit 'member' organisations based in Latin America, the UK, Japan, India, Denmark and New Zealand, who have concerns relating to social and environmentally sustainable agriculture and forestry. The main funding bodies of the Rainforest Alliance are the Global Environment Facility, the US Agency for International Development, the UN Environment programme and a charitable trust.

Rainforest Alliance first certified an Indonesian forest in 1990. Based on the forestry standards, in the same year, the Rainforest Alliance developed a standard for the first agricultural crop, bananas and in 1992 Costa Rican and Hawaiian banana farms were certified first. Going ahead with its forestry conservation interests, in 1993, the Rainforest Alliance was involved in establishing an international forestry accreditation body, the Forest Stewardship Council, an NGO initially based in Mexico and in Germany since 2003 (Rainforest Alliance, no date). The Rainforest Alliance, as an Forest Stewardship Council-accredited NGO, first certified a forestry business, a timber and a logging company in 1999.

In addition, the Rainforest Alliance has shown interest in the environmental impact from non-agricultural fields. For instance in 1993, the Rainforest Alliance began to encourage sustainable tourism in Costa Rica concerning impacts on biodiversity. Moving ahead from forest conservation to agriculture and certifying the first banana farm in 1992, next, the Rainforest Alliance initiated certifying of other agricultural crops as well such as coffee and cocoa.

Rainforest Alliance's interests and network developed during the tenure of the first leader, Katz. As the Rainforest Alliance led in forming another NGO, the Sustainable Agricultural Network to set up standards for sustainable agriculture, and from then the Rainforest Alliance and Sustainable Agricultural Network jointly promoted Rainforest Alliance certification as an international certification encouraging adoption of its sustainable agricultural practices. Section 5.3.1 details the Sustainable Agricultural Network / Rainforest Alliance certification system. Table 5.6 presents several major developments of the Rainforest Alliance during the second leadership, Tensie Whelan.

Table 5.6: Summary of Key Rainforest Alliance Performances

Year	Programme
2000	Launched EcoIndex.org to facilitate sharing of sustainability information among interested professionals
2001	Forestry programmes grew in size and scope Certified first flower and fern farms in Costa Rica Initiated supporting small and indigenous forestry businesses to get them certified and enable them to access markets
2002	Environmental Education programmes formally launched First community forests and two banana farms certified in Asia
2003	Kraft announced its commitment to Rainforest Alliance certified coffee
2006	In Ethiopia, the first African coffee became Rainforest Alliance certified
2007	Unilever committed to buying Rainforest Alliance certified tea
2008	Began to develop standards for the responsible production of biofuels Helped to develop Global Sustainable Tourism Criteria

2009	Forest Stewardship Council accredited the Rainforest Alliance NGO as the first certification body for voluntary carbon standard Mars committed to Rainforest Alliance cocoa
2010	Tetley Tea committed to Rainforest Alliance certified tea Launched the sustainable Trip.org, which maintained Latin American and Caribbean hotels and tour operators who are recognised as sustainable In Africa, a carbon project was certified by Rainforest Alliance for the first time Helped develop sustainability standards for cattle farming
2011	Hosted the first Rainforest Alliance Week, a social media campaign that encouraged consumers to "follow the frog" when they shop and travel Launched Tour Operators Promoting Sustainability (TOPS), an online platform of sustainable tourism information for global tour operators
2012	Certification extended to cover spices Worldwide Rainforest Alliance Certified products and brands listed in an online database
2013	Rainforest Alliance certified cocoa globally reached a market share of 10%, 572 metric tons annually Initiated a credit facility programme for small farmers, Sustainable Finance Increased number of climate-smart verifications of coffee farms in Central America
2014	Networked with local actors conserving forests in Guatemala and Ecuador Signed New York forest declaration with 178 countries and local bodies to end deforestation by 2030 Emphasised climate-smart agriculture at UN climate discussion forums
2015	Spoke at the COP21 meeting of the UN in Paris and enabled the inclusion of forests into Article 5 of the agreement giving formal recognition to conservation requirements

Source: Developed by the author based on information on Rainforest Alliance website (no date).

The next section focuses on Rainforest Alliance certification.

5.3.1 Rainforest Alliance certification

Before introducing the Rainforest Alliance standard and its certification system, we first draw attention to the background of the Rainforest Alliance's standard development through networking with other social and environmental conservation-interested organisations, mainly

in Latin America and forming an NGO, the Sustainable Agriculture Network, for setting up agricultural standards.

Since 1984, number of other NGOs and environmental conservative bodies have also been involved in the development of sustainable agricultural standards for banana and coffee, for instance, Fundacion Natura in Colombia, the International Tropical Research Foundation in Guatemala and Pronatura Sur in Mexico. Furthermore, some others in Honduras, Ecuador and Brazil jointly worked on developing standards for cocoa and sugar farming. By 1997, these similar interested movements jointly formed the Sustainable Agriculture Network as a NGO of which the secretariat is based in Costa Rica (legally established in 2010 in Mexico) to develop a common standard aiming to conserve biodiversity and the environment as well as the well-being of the farming community. In an early development of the Sustainable Agriculture Network standards, it would appear that Sustainable Agriculture Network was first developed in 1991 with the involvement of key stakeholders in Latin America (Sustainable Agriculture Network, 2017). In 1994, it was furthered by encompassing banana farms, other types of crops and in other countries. Sustainable Agriculture Network is a member of the International Social and Environmental Accreditation and Labelling Alliance and have adopted their Code of Good Practice for Setting Social and Environmental Standards in setting up the Sustainable Agriculture Network standards. Subsequent to the release of two versions of the sustainable agriculture standard (April 2009 version and Sustainable Agriculture Network Addendum)[8], the Sustainable Agriculture Network Agriculture Standard was accepted as the single common standard covering all Sustainable Agriculture Network authorised crops. From 1 January 2011, this binding version of the standard has covered all farms. As a common standard, the

[8] The Addendum is expected to be used for implementation of best practices in oil palm, sugarcane and soy plantations with additional criteria

Sustainable Agriculture Network standard applies to tea farms as well (Sustainable Agriculture Standard, 2010). Sustainable Agriculture Network's latest Sustainable Agriculture Standard (2010, version 4) covers all farms and the General Interpretation Guide (2014) provides additional information for users. This shows a considerable time gap between the Sustainable Agriculture Network standard and development of its interpretation adding value and support for users.

With the establishment of Sustainable Agriculture Network, the Rainforest Alliance-certified seal™ was adopted by all member organisations as a common seal of sustainability (Sustainable Agriculture Network, 2017). Sustainable Agriculture Network comprises ten member organisations working in Ivory Coast, Guatemala, Colombia, Honduras, Brazil, Kenya, and Europe & South Asian countries, Mexico, the UK & El Salvador and the Rainforest Alliance from the US.

The Rainforest Alliance certification system is jointly promoted by the Rainforest Alliance NGO and its standard-setter, Sustainable Agriculture Network. Members of Sustainable Agriculture Network contribute towards setting up the sustainable agricultural standard and implementing the system through training farmers and monitoring the system. With the adoption of the Rainforest Alliance trademark, the Rainforest Alliance Sustainable Agriculture Network seems to be a powerful member of Sustainable Agriculture Network. Apart from setting up the standards, Sustainable Agriculture Network accredits audit firms for certifications and currently consists of ten such bodies. The Rainforest Alliance performs the traceability system, promotion of trademarks, monitoring and evaluation of the certification system and market engagement.

As per the latest revision of the Sustainable Agriculture Network standard (2010, version 4), Rainforest Alliance/ Sustainable Agriculture Network collaborate for a mission of sustainable transformation on a 'theory of change' (Sustainable Agriculture Network, 2017: 3). Change is expected through two main pillars: supporting changes in agricultural practices by standard-setting, training and helping farmers with sustainability practices; and creating a sustainability demanding environment. In enabling such an environment, the Rainforest Alliance expects change in consumers' and buyers' behaviour and support from governments. The Rainforest Alliance seeks to create market-driven demand for sustainable advantages that help in extending sustainable practices beyond the level of certified farms. Here, the Rainforest Alliance NGO expects Rainforest Alliance certification to be the credible assurance of sustainable consumption and sourcing. Expected changes are time bound. Farm practices are expected to change within a short period of time: the medium-term expectations are improvement of biodiversity, natural resources, farmer and community well-being, productivity and profitability by such certified farms. All these endeavours are targeted towards the long-term transformation of agricultural lands into sustainability.

The Sustainable Agriculture Network standard is based on ten principles (Table 5.7) and on three basic concepts: "risk analysis and mitigation", "complexity of operations" and "local legislation" (Sustainable Agriculture Network, 2014b:5). Sustainable Agriculture Network expects to achieve the three pillars of sustainability, social, environment and economy through promoting 'Climate-Smart Agriculture' (p.3). Each principle requires farms to analyse how their agricultural practices affect society and the environment and to improve their operations to achieve environmental, social and economic sustainability. Each principle except the last principle (10 – integrated waste management) is comprised of one or more critical criteria and altogether nine principles include 23 critical criteria, which are compulsory and assessed in

granting and continuing the certification. In addition to the critical criteria, a number of general guides are provided for each principle. The level of compliance is evaluated based on a scoring system. Farms that wish to obtain Rainforest Alliance certification should comply with all critical criteria and at least 50% of noncritical criteria specified under each individual principle. However, the total compliance level should meet at least 80% of the total standards' applicable criteria. Overall a percentage of 20% is allowed for improvements.

Certification is valid only for a three-year period and compliance is monitored by annual audits. The scope of the audit is the whole farm with related activities such as housing areas, infrastructure and workers affected by their production activities. There are two types of certification policy: individual farm or certified group. In the group audit, Rainforest Alliance auditors select a sample of the square root number of the total farms which are being certified. Table 5.7 gives a summary of the Sustainable Agriculture Network standard.

Table 5.7: Sustainable Agriculture Network (SAN) Standard

SAN principles	Critical criteria (total 23)	Other requirements (total 100) Examples
Social and environmental management system (SEMS)	Farm management commitment to Rainforest Alliance certification implementation as per its requirements and law. No mixing of certified and non-certified products.	Implement SEMS system by the farm. Assess social and environment impact of new activities.
Ecosystem Conservation	Conservation programme for natural environment of the farm. From the date of applying for Rainforest Alliance no destruction of the above environment.	Guidance on separation of production areas from the natural ecosystem. Harvesting of endangered species are not allowed
Wildlife protection	No hunting or harm of wild animals in the farm	Maintenance of inventory of wild animals/habitats
Water conservation	No discharge of waste water into water bodies without treatment No discharge of solid waste.	Waste water treatment systems.
Fair treatment and good working conditions for workers	No worker discrimination. Legal minimum wage. No child labour under 15 Specify child labour engagement conditions of 15-17 year olds No forced labour. Freedom of association Housing conditions by farm to workers. Access to safe drinking water by workers/families. Worker grievance handling mechanism	Social policy for the farm. Worker supervision conditions. Overtime conditions. Worker hiring methods.

Occupational health and safety	Training on chemicals using workers on specified aspects. Use of personal protection equipment for agrochemical users. Supervision and time limits of chemical applications. Showers and changing rooms for workers.	Worker safety measures. Documentary evidence maintenance
Community relations	Farm policy and procedure to ensure absence of negative impact on the community.	Prioritising local labour
Integrated crop management	Prohibited use of specified chemicals No transgenic corps	Crop management policies and programmes
Soil management and conservation	Prohibit use of environmentally sensitive areas for new production	Soil erosion prevention plans
Integrated waste management	None	Open-air burning of waste not allowed

Source: Sustainable Agriculture Standard, July 2010 (version 4)

5.3.2 Exploring the Rainforest Alliance network

As it appears from independent data sources, more notably during 1999 to 2015 under the second leadership, the Rainforest Alliance has collaborated with a number of leading retailers and multinationals which help promote the Rainforest Alliance on other continents. The second Rainforest Alliance NGO leader expressed her views to convince on the Rainforest Alliance's promotion strategy internationally, as a marketing tool rather than seeking to govern/influence production:

> So I come back to them [sellers] and say 'Well, did the consumer wake up in the morning and decide they wanted a ruffled potato chip? No! You marketed it to them, until they had to have it. And you can do the same thing with sustainability'. (Walshe, 2011, no page)

However, the strategy enables working through resistance to finding the producers and buyers who are willing to go for sustainable practices. The Rainforest Alliance seeks for them to benefit through competitive advantages over non- adopters:

> The key, she says, is to find a few farmers or a few buyers who are visionary. Once you get that first core going and their neighbours and competitors see their higher crop yields, fuller streams, better looking farms and happier workers, they will soon want a piece of the action …. her hope is that once other companies see the competitive advantage that can be derived from sustainable practices, they will want to get on board and soon what is the exception will become the rule. (Walshe, 2011, no page)

The Rainforest Alliance approach is market-based promotion, as discussed in the *Financial Times* (UK):

> 'We work with companies, but in a very concrete way,' says Tensie Whelan, director of the Rainforest Alliance. Through what Ms. Whelan calls a 'market-based conservation mechanism,' … 'Activist groups like the Rainforest Ethics or Greenpeace will go after companies,' explains Ms Whelan. 'And then they will tell them to go and work with the Rainforest Alliance or other groups that can certify their practices'. (Murray, 2005:4)

Rainforest Alliance certification provides solutions to sustainability concerns in the food supply chain as reported in the Financial Times. It is interesting to find out in the study to whom Rainforest Alliance certification really provides solutions:

> 'The food industry is under increased pressure to take responsibility for supply chains, including chocolate, coffee, bananas and tea,' says Chris Wille, the Rainforest Alliance chief of sustainable agriculture. 'Consumers increasingly expect their food to be from managed farms where people are treated with respect and given good working conditions,' he says. 'Companies used often not to know where their products came from, but there is now a rapid and huge transformation to understand this and get workers' rights included in their social and environmental responsibilities'. (Bird, 2010, no page)

The success of the Rainforest Alliance's market-based promotion approach is evident with large retailers' and multinationals' commitment to Rainforest Alliance certification as a means of sustainable sourcing. In 2005, Kraft commenced selling Rainforest Alliance -certified coffees in North America, Europe and Asia. Similarly, in Europe, Chiquita started selling certified

bananas, chocolate and orange juice. In the coffee sector, the Rainforest Alliance has become a popular certification adopted by companies for legitimacy and to respond to increasing sustainability demands from consumers and the markets (Raynolds et al., 2007). Similarly, commitment to sustainability sourcing by multinational tea companies as tea producers/packers/retailers has led to tea being added to the Rainforest Alliance's certified crop list and the certification being promoted across the supply chain towards the developing economy producers. As revealed, amongst the Rainforest Alliance certification promoters are Unilever and Tata Global Beverages:

> SAN/Rainforest Alliance tea certification has expanded dramatically over the past five years supported by sustainable sourcing commitments by Unilever (Lipton and PG Tips brands), Taylors of Harrogate (Yorkshire Tea brand), Tata Global Beverages (Tetley Tea brand), Teekanne Tee, Typhoo Tea and others … and the strong emphasis on including smallholder tea producers in certified value chains has meant that the number of Rainforest Alliance Certified farms has grown from 15,000 in 2010 to over 700,000 in 2014. By the end of 2014, Rainforest Alliance Certified tea was being produced in 18 countries. (Jeffrey and Newsom 2015:58)

Rainforest Alliance tea certifications first appeared in Kenya in 2007, where large tea plantation companies such as James Finlay and Unilever implemented CSR initiatives in the smallholder sector as well as their contribution to the tea production being increasing and notable (Turner, 2008). A review of Unilever's sustainable strategies shows their sourcing policy is either to comply with their own sustainable sourcing code or go for external certifications. The Rainforest Alliance is therefore the selected external certification in sourcing tea from producing countries:

> the Rainforest Alliance (RA) Certified™ seal provides reassurance to consumers that certified products are sourced from farms applying rigorous sustainability standards. Rainforest Alliance supports our supplier development programme across all major tea-producing countries. (Unilever, 2014: no page)

Rainforest Alliance certification has been opted for by five other leading tea companies as well (IDH, 2011) as they are a means of legitimacy (Mueller et al., 2009) and external verification

provides credibility to their external stakeholders (Castka and Corbett, 2014). Referring to an agreement by leading international coffee traders with the Rainforest Alliance, the report by the *Financial Times* (UK) further stated:

> brokers say such an agreement will send a signal to the entire supply chain, particularly producers, that the roasters are concerned about more than just the purity of the coffee and may pay more to know that the beans have been produced using good environmental practices by workers who are adequately paid (Silver, 2003:16)

Recently the Rainforest Alliance has been networking with another major corporate player, Procter & Gamble:

> 'P&G knows that it is important to preserve our world's forests to ensure a future for our planet. That's why we partner with the Forest Stewardship Council and the Rainforest Alliance to help us ensure that the tree fibres used in our products (Procter & Gamble, 2016: no page)

The latest president of the Rainforest Alliance, Nigel Sizer (from February 2017) briefs on how retailers such as Tesco, Lidl and Asda joining the Rainforest Alliance network helps expand the certification in major consumer markets such as Europe and the US:

> This past year, Tesco, the UK grocery chain, has partnered with us to source more sustainable bananas, tea, cocoa and coffee. (…) and Asda, another UK supermarket chain, has committed to sourcing 93 percent of its bananas from Rainforest Alliance Certified™ farms. In Germany, major retailer Lidl has also committed to sourcing 90 percent of its bananas from Rainforest Alliance Certified farms. These sustainability commitments cover tens of thousands of stores across Europe and the United States and represent the kind of mass-market transformation. (Sizer, 2017: no page)

Having revealed the Rainforest Alliance's interests and networks, next review the financing aspects of the Rainforest Alliance. Rainforest Alliance sustainability projects are funded by private funds, donations, private companies and government grants. A significant amount of

funds also come from UN development programmes as well. The *Financial Times* provides evidence of several sources:

> Chris Wille, the Rainforest Alliance's head of sustainable agriculture, says the sustainable practices are moving from specialised to mass markets. 'Demand has been more than doubling every year in the past few years,' he says. Rainforest Alliance expects to announce officially that the United Nations Development Programme will give $ 12.5m (£ 6.6m) to scale up its operations. Big buyers such as Kraft will be important in that growth. 'Our idea is about mainstreaming the concept of sustainability,' says Mr Atwood. 'We're not out to compete in niche markets'. (Hal, 2006:8)

In addition to this funding, from 1 October 2010 October the Rainforest Alliance has introduced a fee for trading Rainforest Alliance -certified products, charged to importers or buyers. The Rainforest Alliance has networked with a number of NGOs, and stakeholders from both private and public bodies such as Greenpeace and the National Wildlife Federation in launching sustainability activities. As shown in Table 4.3, since 2013, the Rainforest Alliance has collaborated with local stakeholders in Guatemala and Ecuador in forest conservation programmes:

> We've seen a big push for sustainability in the private sector, with public commitments by 366 companies worth US $2.9 trillion to eliminate deforestation in their supply chains. And we are part of an innovative new coalition of organizations including Greenpeace, WWF, The Nature Conservancy, and National Wildlife Federation working to create a framework of assessment and accountability for these companies as they move along their sustainability journey. (Rainforest Alliance, no date, no page)

Following the review of the Rainforest Alliance's network, the next section analyses information on its expansion to Asia and Sri Lanka.

5.3.2.1 Rainforest Alliance interests in Asia and to Sri Lanka

When considering the region wise presence of Rainforest Alliance certification, Latin America is widely certified for coffee. Three crops, cocoa, coffee and tea constitute the major certified crops in Asia. In Asia, the Rainforest Alliance is mainly present through certifying the tea and

coffee and also includes cocoa, spices and fruits. In terms of Rainforest Alliance -certified land, while cocoa is first, tea, coffee and banana respectively contribute the next certified crops. Out of total global tea production land, the percentage of Rainforest Alliance -certified tea lands is 15.1% (Rainforest Alliance, 2015). Tea farming is identified as indirectly contributing to deforestation through soil erosion, overuse of chemicals, and ineffective firewood use for tea processing. The Rainforest Alliance has reached Asia through sustainability interested multinationals sourcing from Asia. For instance, ethical sourcing was a concern of Unilever since 2002 (Blowfield, 2003). Unilever, having its own estates in North and South India, Kenya and Tanzania produces approximately 72,000 tonnes of tea and is committed to securing tea from sustainable and ethical sources (Unilever, 2014). Unilever targeted certifying all of its Lipton brand tea bags by 2015 and by 2020 achieving 100% sustainable sourcing targets including for loose tea. They perceive this as an encouragement to farmers and suppliers for sustainable farming and practices in Kenya, Tanzania, Malawi, Indonesia, India, Argentina and Sri Lanka. Similarly, other buyers from Asian countries, for example Tata Global Beverages, as the second largest consolidated group of tea companies in the world including Tetley targeted 100% Rainforest Alliance sourcing by 2016 and also engages with the Ethical Tea Partnership (Tata Global Beverages, 2014). Similarly, another multinational, Van Rees is also committed to the Rainforest Alliance (Van Rees, 2014). As evident from the Section 4.3.1, the Rainforest Alliance's interests are evolving towards the tea industry through multinationals. Accordingly, we next review its presence in the tea industry in Sri Lanka.

The above data supports that the Rainforest Alliance has spread into other areas from Latin America, through multinationals' mainstreaming strategies, for example in coffee (Raynolds et al., 2007) and as a form of non-tariff barrier to suppliers from developing countries (Turner, 2008). As Raynolds et al. (2007) report, by 2004, Rainforest Alliance -certified coffee was only

produced in Latin America and markets were limited to North America, some European countries, Japan, Australia and Brazil. The Rainforest Alliance is concerned about the environmental impact from commercial production such as palm oil farms in Indonesia and also the effects on biodiversity of tea farms in Asian countries such as India, Sri Lanka, Vietnam, Myanmar, and China, including the well-being of the farming community. For instance, the Rainforest Alliance engages prospective sustainability buyers into Rainforest Alliance /buyer projects to train farmers in sustainability practices in selected farms/countries. In Vietnam, the Rainforest Alliance is collaborating with Unilever in training and educating tea smallholders, and in Indonesia with Nestle (Rainforest Alliance, no date).

The above review shows that the Rainforest Alliance is primarily concerned with conserving biodiversity, and the environment and the welfare of workers/community, hence the social and environmental aspects are emphasised rather than the economic sustainability of producers. The Rainforest Alliance pays no premium like some other certifications (e.g. Ethical Tea Partnership); however, the Rainforest Alliance expects economic sustainability to be achieved through improved productivity methods and benefits of market-based assessment of Rainforest Alliance tea quality (Kolk, 2012). In addition to the above means of networking, Rainforest Alliance has networked with UTZ, a Netherlands sustainability certificate, to avoid duplicate audits at farms (UTZ, no date).

5.4 Chapter summary

This chapter described how the tea industry is increasingly concerned about sustainability issues and global players, multinationals and retailers are adopting Rainforest Alliance certification as a means of promoting sustainability in the tea supply chain. Then, it looked at how Rainforest Alliance as a sustainability interested NGO developed a sustainable agriculture certification

system and market-based promotion strategy. An examination of the characteristics of the certification system revealed how the Rainforest Alliance intends to change local agricultural practices. Then, the Sri Lanka tea industry as the focused case of this study was examined in detail to reveal the actors in the supply chain and sustainability issues and local regulatory background. The tea industry is organised into a corporate sector and a smallholder sector, of which the smallholder sector is the largest sector contributing more than three quarters of the total tea production in Sri Lanka. High costs of production, volatile export markets, and difficulties in attracting new generations to the industry, lack of replanting, soil erosion, difficulties in maintaining tea quality and continued use of old machineries are major sustainability issues in the local tea industry. The next chapter focuses on how this contextual information helped in designing the research methods of the study and in the engagement in fieldwork in the local context.

CHAPTER 6

CASE STUDY DATA ANALYSIS ON THE AGENCY OF THE RAINFOREST ALLIANCE CERTIFICATION

6.1 Introduction

This chapter presents an analysis of the Rainforest Alliance certification agency in translating a 'sustainability' concept within the context of the Sri Lankan tea industry. Theoretically, this represents the process of the Rainforest Alliance transforming and stabilising its local Rainforest Alliance network. For analytical purposes, the findings are presented in three separate sections, each focusing on a specific aspect/phase of Rainforest Alliance agency. The first section (6.2) seeks to analyse data on how the Rainforest Alliance certificate enrols supply chain actors. The second section (6.3) aims to analyse the Rainforest Alliance's agency in transforming the local management, accounting and agricultural practices of the tea producers. Thirdly, section 6.4 analyses how Rainforest Alliance stabilises (temporary) its local network and the chapter ends with a summary of the findings.

6.2 How does the Rainforest Alliance certificate enrol local supply chain actors?

Drawing from the theoretical framework of technical mediation, this section analyses the Rainforest Alliance's agency in enrolling local actors and presents how different local actors became attracted to Rainforest Alliance, how they came to see Rainforest Alliance as a potential solution to their goals and how some did not become enrolled as Rainforest Alliance is not a means to reach their goals. The first subsection (6.2.1) analyses 'initiators', the first adopters in Sri Lanka, forced to adopt through multinational parent companies' influence, and other actors who voluntarily adopted due to alteration to market dynamics as presented in the second section

(6.2.2). The themes analysed in this chapter are as referred in the discussion of coding structure, chapter 4, subsection 4.5.3.2.

6.2.1 Initiators as forced to adopt

The study found that the Rainforest Alliance certificate was initially brought into Sri Lanka by two Western multinationals through its adoption requirement for their local entities. Of the two local Rainforest Alliance certification initiators, one was Unilever Lipton Ceylon: a buyer/exporter of Ceylon tea that was forced to comply with Unilever's global sustainable sourcing strategy by adopting Rainforest Alliance certification in sourcing teas locally during 2008. The following voice illustrates how they were forced to reach the initial target of sourcing only Rainforest Alliance supply certified Ceylon tea for Unilever teabags by 2015 and to limit to Rainforest Alliance certified teas for all tea (leaf and tea bags) by 2020:

> By 2015 all our tea bags 'Lipton tea bags' should be Rainforest Alliance certified globally. We are there. Not only for tea bags, Unilever has declared [a] commitment for Rainforest Alliance teas globally. In 2020 all tea should be Rainforest Alliance certified. So, we must have enough availability. That is a main target we are pushing [for] now, converting estates for sustainable sourcing. Because of that we are mainly focusing on Rainforest Alliance tea and we give it our priority. (EC1M2)

Thus, for the local entity, Rainforest Alliance certification adoption was a means of compliance with the parent Unilever's global corporate agenda. The following exemplar illustrates this point:

> For sure we will give support to Rainforest Alliance or sustainable standard. Because that is a part of our corporate agenda. (EC1M3)

Next, the other Rainforest Alliance initiator, the local tea manufacturing entity Finlays Colombo Limited, similarly claimed to have been influenced by their UK parent company, Finlays during 2007. Thus, initiating Rainforest Alliance certification activities in 2008, two tea estates were

certified first in 2010, becoming the first Rainforest Alliance tea producers in the local tea industry. During the interviews, actors characterised themselves as pioneers:

> We were the initiators. No other company had taken Rainforest Alliance into Sri Lanka. So, we started this as a policy as the principles have decided. (MC1M2).

Their view demonstrates that the certification is pushed onto the developing economies from multinationals based in the Global North. An exemplar illustrates this point:

> For Sri Lanka, Rainforest Alliance was not introduced till 2007. But since our principals are from [the] UK, they have a sustainability profile. One [part] of their agenda is to work towards sustainability standards. Finlay-Kenya has tea estates. They have already gone for Rainforest Alliance. So, they have experience [and can] transfer the same practices to us, not [simply] towards getting a certification and meeting compliance [expectations], but to consider it as a part of our sustainability agenda. (MC1M1)

As revealed, multinationals' promotion of Rainforest Alliance certification for local entities in the developing economies shows an underlying interest of commercial sustainability. For them, the Rainforest Alliance certificate is a means of ensuring the commercial sustainability of the company itself. The quote below illustrates the point:

> They have decided that for our sustainability of our company that we should go for Rainforest Alliance. Because that is an improvement of our total company. (MC1M1)

These adoptions were not voluntary. As shown these local firms had to adopt due to the wider strategies of the global group which they are part of. This shows Rainforest Alliance as providing solutions to the goals of multinationals and their local entities, thus they are enrolled into Rainforest Alliance network. As analysed next, following this Rainforest Alliance certificate introduction, other local supply chain actors were also voluntarily motivated to adopt Rainforest Alliance certification.

6.2.2 Voluntary adoption

The study found local actors have been voluntarily motivated to secure Rainforest Alliance certification due to alterations to local market dynamics. This section first analyses how the

Rainforest Alliance mediates in changing market dynamics and then presents how they became attractive to local actors in forming a Rainforest Alliance local network.

6.2.2.1 Market dynamics

The Rainforest Alliance mediated in altering the local market dynamics even just through its introduction by the two initial adopters. The Colombo tea market is dominated by a single local buyer (approximately 55%[9]) who mainly buys tea for the Russia and Middle East market, the major markets for Ceylon tea, whilst the other major buyers are in the range of 5-10% and the majority are small-scale buyers. Unilever is such a major buyer (approximately 10% of auction sales) and a regular established buyer of Ceylon tea. Unilever had led in promoting international certifications such as Ethical Tea Partnership that became later a common market requirement and as observed, most of the Regional Plantation Companies and other tea estates are Ethical Tea Partnership certified. Similarly, Unilever mediated in promoting the Rainforest Alliance certificate locally, driving the market towards an expectations for the likelihood of future demand for Rainforest Alliance tea and price premium expectations. This has led to changes in operations at the Colombo tea auction, which is normally driven by demand and supply. Due to Sri Lankan regulations on tea sales, the Colombo tea auction provided a transparent medium for observing market transactions. Unilever's actions altered market dynamics – as observed by one buyer:

> With or without certification, price is decided by demand and supply. You know to a certain extent, certification can overrule demand and supply. But the general accepted equation for the price formula is demand and supply. (EC2M1)

[9] Based on analysis of auction sales reports 2015 and interviews.

a) Unilever's Rainforest Alliance promotion locally and likelihood of future demand

Unilever announced its local tea procurement policy to source only Rainforest Alliance tea for teabags by 2015, and by 2020 to limit all tea sourcing (leaf and tea bags) to Rainforest Alliance -certified tea. Therefore, some local tea producers (Regional Plantation Companies) saw certification as a defensive necessary for future competitive survival:

> Unilever… very frankly told [us], 'even though you don't have any monetary benefits, [it] is compulsory in 2020'. Therefore, obviously, you should [adopt Rainforest Alliance] whether you like it or not. You must have [Rainforest Alliance] otherwise most of our teas will be black listed. (MC5M1)

As further highlighted, Rainforest Alliance is a means to face the competition from other certified beverages:

> We should see market challenges from other beverage groups… We see a category need. Most of the other beverages are getting certified: coffee, cocoa… We have opened the talk by doing it on our plantations, that's all we can do (EC1M1)

Several other local tea producers claimed they observe the Rainforest Alliance to be a future requirement where big Western buyers other than Unilever and Finlay were beginning to require Rainforest Alliance tea, thus probably affecting the market dynamics:

> Tata… [the world's leading buyer] also have given a deadline that is from this year onwards… – 'we are only catering with Rainforest Alliance-certified teas'. With all that, we decided, OK, we also have a commitment towards the community, environment. (MC3M1)

So, local market participants expect the demand for Rainforest Alliance tea to increase over time. The following quote demonstrates the notion of the certification being written by multinationals and therefore pushed onto the developing economies from multinationals based in the Global North.

> If we don't get into [Rainforest Alliance], our competition gets lesser. There will be only non-Rainforest Alliance buyers bidding for our teas [at the tea auction]. Here we are creating a demand by getting the Rainforest Alliance [certification] for our tea'.

> It doesn't put our prices up. But… recognition is there as Rainforest Alliance. Maybe another plantation which is not Rainforest Alliance-certified will not have that benefit… We have that benefit of supplying to [Unilever]. They don't buy 10% of our teas. But they are one of the biggest. Only thing is… it benefits them more than us. (MC3M2)

The agency of the certification is evident in altering the dynamics of the tea industry by changing expectations of future demand. However, the local tea producers bear the costs of implementing the certificate. The next subsection considers whether the local tea producers (as opposed to global buyers) expect the certification to provide a solution to their goals and compensate for the costs of adoption.

The next aspect of market dynamics relates to the expectation of a premium price for Rainforest Alliance tea.

b) Expectations of price premiums driven by expectations of Unilever

Rainforest Alliance, unlike some other certifications (e.g. UTZ, Organic, Fair Trade) is not characterised by a guaranteed fixed/variable premium price[10] to certified suppliers and not reflected in the sales invoice as a premium. However, Unilever can choose to pay a higher amount for Rainforest Alliance certified tea, and this has led to alterations to market dynamics. This was candidly described as follows:

> If you go to the auction you will see how much Unilever is supporting sustainable sourcing estates, you will see the price difference. [Unilever] don't care about the price as long as it is from a sustainable sourcing. [Unilever] just give that extra pound and buy that tea. If you take the market information and see what is the average price for tea [Unilever] have pushed the market [and] the farmers. (EC1M2)

This was observed by market participants and for them it seems that Unilever do pay a premium for certified tea, but it is not guaranteed:

[10] Additional cash amount paid above the market price.

> Some get high prices with Rainforest Alliance, see, [estate name] plantation, their Rainforest Alliance estates get 20 or 30 rupees more than the normal sales price. (BC4M1)

Thus, tea producers began to see the adoption of Rainforest Alliance certification as an opportunity to secure higher prices and secure commercial sustainability. Therefore, they are motivated to expand the number of certified tea estates:

> If we take [estate X and Y] and our [Z] estates, they have got certified now about 8 months before. We can see price improvements in [those] estates… [Rainforest Alliance] don't give a direct benefit but [those] estates get the benefit by way of better prices... Definitely [price] is the factor which motivated all of us… to go for this certification… It gives [us] an edge over non-certified estates. (MC3M3)

Unilever promotes the Rainforest Alliance not only through purchasing normal tea at a higher price, but by paying a higher price for off-grade teas, which are used for teabags at their local teabag processing factory. As one tea producer revealed, unlike for certified normal teas, off-grades teas are purchased paying a direct premium ranging up to 50 rupees. Therefore, if normal teas are Rainforest Alliance certified, the tea producers get an opportunity to sell even their off-grades teas at a higher price thereby offsetting compliance costs:

> With this CTC factory, [an] Unilever instant tea factory, they are paying 20 rupees more than the others to us because of this Rainforest Alliance certification. Actually, normal teas they are buying at 30 rupees per kilo, this is refused [off-grade] tea I am referring to, not the normal tea. But they are giving 50 rupees to us…. Then the people are motivated….otherwise actually you must keep in mind it is a costly affair to fulfil the requirements. (MC2M2)

Western multinationals like Unilever have been the primary drivers of Rainforest Alliance certification in the Sri Lankan tea industry because they have been prepared to pay higher prices for certified tea. But other human and non- human actors within the industry have been also been critically important in creating conditions amenable to the widespread adoption of the certification as a way of securing competitive advantage. The next section considers how price expectations are channelled through brokers and other

c) Support from other supply chain actors in widespread adoption of the certification

Brokers played a particularly important role in promoting the opportunity for gaining a competitive advantage from certification. Price expectations were often channelled through brokers, who are interested in selling tea at higher prices as they receive more commission. Brokers are chosen by the tea producers from eight registered tea brokering companies, and each producer normally has more than one brokering company. Brokerage fees are calculated as a percentage (typically 1%) of invoiced sales value, and this provided them with an interest in promoting Rainforest Alliance:

> They [brokers] were telling me earlier, you get the Rainforest Alliance, we will market your tea. And even your refused tea can be sold 30 to 40 rupees more than the others. (MC6M1)

> We [tea estate] got instructions from the head office but it actually came [via the] brokers. [The] brokers said, if you get Rainforest Alliance, you can get [a] high price. (MC3M3)

Brokers occupy a key position in the tea supply chain, and so they have been able to communicate the demand from multinational corporations for certified tea to the tea producers.

> Certification is important because most of the overseas buyers now require certifications. It is… gradually becoming essential because the estates that have the certification are supported by the buyers… [Some] buyers can't buy… or won't buy [non-certified tea]. So, there is definitely a price differential between those who have the certification and those who don't (BC3M3).

Crucially, brokers promoted Rainforest Alliance certification as a means of improving the quality of the tea produced. They argued that it was this quality improvement that would lead to producers securing a price premium for their tea.

> When one factory certifies their product, quality improves. As a result, their price will improve and [their] sales average will improve. We can convey this to other factories and get them also involved… We can see a tremendous improvement in tea prices [for

> certified factories]… The neighbours are asking us how they are getting [higher prices], so we can always tell them... 'their product quality has been improved because of the certification', so you have to [become get the certificate]. (BC3M3)

By linking certification with quality, brokers were able to convince producers of the potential competitive advantages of adoption: certification becomes seen to be a natural extension of producers' existing commercial aim of making the best possible quality tea so as to command the best possible selling price.

> I will tell you one thing. If you make fine tea, your tea is definitely getting a good price and demand at the tea auction. That means with Rainforest Alliance, we will definitely get something more. [It is] not stated in the invoice as a premium but definitely our prices will go up. (MC5M1).

This linking of certification with quality is further strengthened by the "tea catalogue" (of auction lots) at the Colombo tea auction, which includes the logos of certifications achieved by each auction lot. The certification logos in the catalogue act as a visible differentiator of quality at the auction.

However, many non-Rainforest Alliance certified buyers perceive that some certified teas are not of the expected quality but still receive high prices:

> But there are some buyers, for example if you take Lipton, or there is a company called Tea Tang, when they buy they consider these certain marks, Rainforest Alliance and they pay a premium price, which I think is not really necessary. Because you can buy a similar type of tea at a much lesser price, without a certification. And sometimes it can be even better than the certified one. (EC4M2)

Irrespective of this view, supply chain actors representing the regulatory/monitory bodies, such as the Sri Lanka Tea Board, the main statutory body in the tea industry, capitalise on voluntary certifications as an indicator of high-quality and therefore helpful in promoting Ceylon tea in certain markets. Their attachment to the certification is seen as a means of securing future demand:

> Most of the factories have certifications, quality certifications, ISO, RA, and HACCP. European markets are concerned we capitalise on them. We do selective promotions in

> Europe and USA. They are very health conscious, very sensitive towards pesticide residues, cleanliness of tea... They consider tea as a beverage, not as a commodity that is being traded. So…. we emphasise [quality and sustainability aspects] in Europe and in sophisticated markets like Japan, Australia, New Zeeland, USA, Germany and France. (M4)

As a primarily export-oriented industry, state regulatory bodies perceive certifications as helping preserve future export income by promoting certified teas in Western markets:

> We mainly produce tea for the export market, nearly 95%. Only 3 to 4% [goes] to [the] local market. So, getting such certifications has become essential - we don't have an alternative otherwise. Whatever… they ask for, we must do it. If not, we don't have a market. (M3)

Therefore, government bodies in the tea industry, mainly the Sri Lanka Tea Board, encourage Regional Plantation Companies to adopt certifications as it helps to improve the export earnings of the local tea industry. Tea represents the main export income source from the agricultural exports of the country.

After analysing how the certification affects network relations between buyers, market intermediaries (brokers), local tea producers and market devices, the next subsection analyses how these market dynamics, price and demand expectations became attractive to some actors (but not others) in voluntarily adopting the Rainforest Alliance certification.

6.2.3 Formation of the Sri Lankan Rainforest Alliance actor network

This section presents the formation of the Sri Lanka - Rainforest Alliance actor network, analysing how different local supply chain actors came to see Rainforest Alliance certification as a potential solution to their goals.

Given the agency of the certification in affecting local market dynamics, some local tea producers were motivated to voluntarily adopt Rainforest Alliance in the hope of competitive

advantage, based on price. There was an expectation of 'first-mover' advantage, as indicated below:

> Rainforest Alliance came along with Unilever. Four years ago [2010]… we were trying to get [Rainforest Alliance]. We were the first guys that got the auditors to come. At the last minute, we had to pull out because one estate had an issue. Finlay's were doing this with us [independently at the same time]. They got in the auditors maybe about two weeks before us. [Before we pulled out] we were… well ahead of them [but] they were the first to be Rainforest Alliance certified in Sri Lanka. We were the second [but] we were the first as a company, [as Finlay's] only [certified] 2 estates. (MC2M1)

Tea producers who usually sold to Western buyers saw the Rainforest Alliance as a means to ensure future sales. The quote below highlights this commercial expectation:

> We are happy that we are certified as Rainforest Alliance producers so that our teas find markets. And if you look into the tea trade, we need RA. Because it is not all the buyers they require Rainforest Alliance. If you take the Middle East buyers, they don't look for Rainforest Alliance teas. If you take Russia they don't look for Rainforest Alliance tea. But what happens is because Lipton [Unilever] are looking for Rainforest Alliance, because, they are supporting what the consumer wants. I mean that is the marketing tool for them. (MC3M2)

For those selling to buyers situated in Russia and the Middle East the certification offered no solution to their goals. This was a common perception among those buyers as illustrated by one voice:

> We have not got involved [in Rainforest Alliance]. Our clients have not yet asked for Rainforest Alliance. But I think in Europe they are asking for Rainforest Alliance. (EC3D1)

Another buyer added that, for them the Rainforest Alliance is just another certification, vying for attention amongst other certifications:

> Rainforest Alliance, at the moment, is not a very practical certification for us because of the [small] volumes we have got… There were some inquiries for Rainforest Alliance, but it all depends on how profitable or how viable it is for us to acquire the certification. (EC4M2)

Although some actors were enrolled in the Sri Lankan Rainforest Alliance network through expectations of commercial gain, e.g. demand, price ('commercial sustainability'), some local

actors believed that the Rainforest Alliance helps agricultural sustainability, which is essential for the sustainability of the tea industry. To illustrate one such alternative interest, perceiving Rainforest Alliance as benefitting beyond commercial sustainability:

> The main reason is the sustainability of the industry actually. From the management point of view, Rainforest Alliance is not for the estate and not for the company... I think the beneficiaries are at the global level. And the second [advantage] is economic benefit. Others have started already mainly because of the NSA [Net sales average] - mainly we are getting increased NSA. (MC7M2)

A similar view was expressed by a certified smallholder of a company perceiving future economic risks from soil erosion due to gem mines:

> I felt we will not be able to [sell] our leaf anymore, especially for the Ratanpura tea, because of gems. They talked about soil erosion: one reason for this soil erosion is the gem mining here. So, [resource persons] questioned us how do we [farm]. I told them we must get permission even to do tea farming. They explained how tea is sent abroad. Once we come back I told those details to others [smallholders]. (MC8SH)

After the mandatory adoptions in 2010, and a spate of voluntary adoptions during 2012-2015, momentum had gathered behind the Rainforest Alliance, and this led other Western firms to encourage/sponsor some producers to adopt, thereby strengthening the network. The study found foreign buying companies from Japan and the Netherlands, who had networked with the Rainforest Alliance had sponsored selected Regional Plantation Companies to adopt Rainforest Alliance certification via a local Sri Lankan Rainforest Alliance agent during 2013. The quote below highlights how different actors, both local and foreign interact in persuading local actors to 'enrol' in Rainforest Alliance.

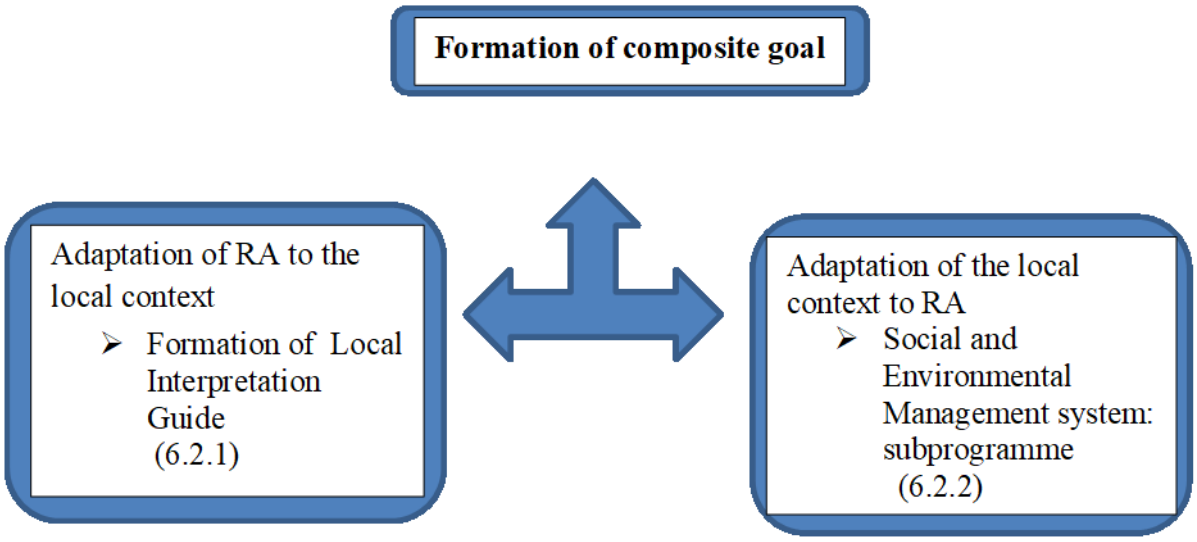
> So, Mr [local Rainforest Alliance rep] said this is the best estate for Rainforest Alliance, we must certify this. He used to bring the buyers here. You can go through my visitor's book and see their remarks. Some are Rainforest Alliance coordinators. They were asking me… 'why don't you go for certification. You are 100% there'. They encouraged me, then I applied and got it. (MC6M1)

Interestingly the study found how every actor expressed their Rainforest Alliance move as for agricultural sustainability at the start of the interview and sometimes even as intrinsic. But as noted in the field notes of informal discussions and revealed in the continuation of the interviews, interests were commercially driven. Enrolment was generally characterised locally by relations based on expectations of future demand/price aiming at economic and commercial concerns: that is commercial sustainability. Nevertheless Rainforest Alliance is conceived in the West as a means of enforcing/encouraging/monitoring environmental sustainability and the well-being of the farming community through improved agricultural practices. This is reflected in the Rainforest Alliance mission of "conserving biodiversity and ensuring sustainable livelihoods through creative, pragmatic collaboration we aims to rebalance the planet by building strong forests and healthy communities around the world" (Rainforest Alliance, no date). How this tension is exhibited in practice is analysed next.

6.3 Transformation of local management, accounting and agricultural practices

On one hand, Rainforest Alliance requirements are adapted to the local Sri Lankan context; on the other hand, producers adopt different methods of agricultural sustainability codified by Rainforest Alliance through aspects (subprogrammes) of the adoption process. This section analyses these transformations: the formation of a local version of Rainforest Alliance (Local interpretation Guide) (6.3.1.) and adoption of a subprogramme (SEMS) effecting changes to local social and environmental accountability practices (6.3.2.) as a formation of a composite Rainforest Alliance. This is illustrated in Figure 6.1.

Figure 6.1: The Formation of a Composite Goal Encompassing Environmental and Commercial Sustainability



Rainforest Alliance certification aims to certify tea producers for agricultural sustainability. However, as Section 6.2 reveals, many local tea producers translate the Rainforest Alliance as a means to achieve commercial sustainability. Drawing on the ANT concept of 'composition', this section analyses whether and how the Rainforest Alliance mediates the practices of producers in providing solutions to the goals of agricultural and commercial sustainability; that is, to understand whether (and how) both goals have been synthesised in the enactment of the Rainforest Alliance within the local context. The Rainforest Alliance is viewed as a certification technology, and as Latour (1999) argues, a technology is programmed for a set of actions ('specific subprogrammes'). When this technology is entangled with human actors, a 'sociotechnical' hybrid actor emerges and a composite or combined goal is achieved through specific subprogramme/s. A key subprogramme that has emerged commonly across all Rainforest Alliance-certified tea producers is the adoption of a Social and Environmental Management System. The formation of the composite Sri Lankan Rainforest Alliance is analysed based on the theoretical notion of 'Reversible blackboxing' as illustrated below.

6.3.1 Formation of a local version of Rainforest Alliance: Local Interpretation Guideline

This section seeks to provide an overview of how the actor network (the set of relations) formed the Sri Lankan version of the Rainforest Alliance, the Local Interpretation Guideline. It acts as an interessement device accommodating the local actors so it can meet their goals. Furthermore, in applying the theoretical notion of circulating reference, this section shows how the Local Interpretation Guideline is accepted as a valid reference of the Rainforest Alliance, even though it might be quite different from other versions of the Rainforest Alliance standard (Sustainable Agriculture Network), which is a general sustainable agriculture standard for a number of crops. Therefore, the data reveals early adopters had to interpret the standard themselves. The nature of resistances represents the first step of reversible blackboxing, 'disinterest'. The initial disinterest of local actors towards the certification due to practical difficulties is illustrated in the quote below.

> So, lots of efforts had to be done. We had to find out how we should adopt it into the Sri Lankan context. What is applicable in Kenya, you can't apply as it is in Sri Lanka. So, we couldn't get any guidance from them [Rainforest Alliance] as well. So, it is our own systems we are developing. During first three years, we did not have any input from others, even not any local representative. (MC1M1)

Due to the absence of Rainforest Alliance representative locally, initial adopters had freedom to interpret the Rainforest Alliance themselves. There were no local auditors for the Rainforest Alliance certification or any consultancy firms. Therefore, some tea producers obtained consultancy services from organisations which provide auditing/consultancy services locally for other international certifications. As Rainforest Alliance actor explained, these consulting firms' interpretation of the certification caused resistance in Rainforest Alliance expansion locally as they misinterpreted certain requirements as well as making Rainforest Alliance certification a costly affair. For example:

> There was a gap, a transition period, where no one was representing Rainforest Alliance in Sri Lanka. During this period, private companies came up to the scene and they offered training. What they didn't understand was that this is a general standard for 100 crops and 47 countries. So, they were going through all the criteria. So, it is not relevant at all. (RA1)

He cited a number of instances of resistances based on the relevance of Rainforest Alliance requirements to tea (as opposed to other crops) and where some general requirements are in conflict with local regulatory requirements:

> If I show you… for example 2.8 Agro forestry system homogeneity. The entire criteria are not relevant for tea. All these plantation companies were saying they can't do it, because [of] the Tea Research Institute. They don't recommend these native species because some… are competing with the tea bush. So, [the] Tea Research Institute is not recommending [aspects of 2.8]. There was a conflict. That is because they didn't understand [tea production in Sri Lanka]. (RA1)

So the North American Rainforest Alliance was seen as inconsistent with the views of actors in the local Sri Lankan Rainforest Alliance network. On the other hand, some resistances were due to misinterpretations of the standard requirements. One such example relates to the compliance requirement on the conservation of wildlife:

> There was another criterion, Wildlife principle 3. It says an inventory of wildlife should be maintained. They have spent millions on doing comprehensive studies [on wildlife conservation but it's] not necessary at all. [The principle] says only that they should have an inventory. They didn't understand why they have been asked for this. (RA1)

In addition, tea producers found it difficult to implement certain Rainforest Alliance standard requirements which fall beyond their control. As an example, estates have no control over the activities of non-workers who live on the estates. The following voice confirms this common issue:

> The Rainforest Alliance standard's scope is the whole population inside our boundary and all the activities. Boundary means the estate extent. So, we must look at all the aspects inside the boundaries. There are workers and non-workers inside the boundary.

> So, there are some conflicts when implementing Rainforest Alliance activities. So even if there are conflicts, we must implement Rainforest Alliance activities. (MC3M1)

As reported, non-workers living in estate houses are unique to the Sri Lankan tea industry:

> Not like in India or Kenya, in Sri Lanka if I give a house to a worker, we can't chase him. You know now in X [estate] only 16% are working. All others are non-workers. They are in the line rooms. We can't chase them. Because, it belongs to their grandfather's grandfather. (MC2M2)

Another issue is encroachment of tea estates (especially on vacated areas within the tea estates) by the villagers. Encroachment of villagers onto land owned by the state has resulted in lack of control over their activities by the tea producers. However, according to the Rainforest Alliance, estates should be responsible for the activities within those encroached areas. As a local actor pointed out this issue:

> The people in the estates they are encroaching on some areas, there are some problems there. (MC2M1)

Estates are required to encourage villagers in the encroached areas to follow local laws, especially with respect to the use of chemicals and waste disposal. As an actor explained, villagers become gradually 'interested' in the certification process as it leads to a change in their practices and the adoption of new responsibilities:

> In any estate, you can see so many vegetable gardens. Those are encroachments and [are] regularised. They have the right to land. Companies cannot involve [themselves] in these things. But we can't let those people use the banned chemicals. What we now do is we educate them, not only plantation workers [but] others: villagers and some of the non- workers inside the estate. We educate them on IPM [Integrated Pest Management] and how to use chemicals, integrated chemicals. We get an agreement signed by them to say that we have educated them to follow SAN guidelines on chemical usage. Though those guidelines are agreed on paper, some are using [them]. However, for us we have proof for the Registrar of Pesticides, in Sri Lanka-there is evidence that we have educated them. (RA)

As presented above, the very little implementation guidance and the incompatibility of many aspects of Rainforest Alliance standards to the tea industry in Sri Lanka led resistance towards the formation of a local version of the Rainforest Alliance. Local actors were aware of the

availability of such interpretation guides for India and Kenya and thus also influenced one for Sri Lanka through the local Rainforest Alliance representative. An actor recalled the formation of a Local Interpretation Guide that became actant as a device blackboxing the certification in the local context:

> Mr [X], the local representative,… told [us] that there should be a local interpretation guide to Sri Lanka, …like [in] Kenya and India. (MC2M2)

Actors who were then certified and seeking Rainforest Alliance collectively asked for a local interpretation guide for Sri Lanka as indicate in the quote below:

> All of the Regional Plantation Companies got together and convinced the Rainforest Alliance that we… come out with several requests [and] decisions on Rainforest Alliance. There is a local person representing Rainforest Alliance, Mr. X. He was the mediator in the process and we have come up with a Local Interpretation Guide. (MC2M3)

The Local Interpretation Guideline was issued in June 2014 after three yearly workshops held in Sri Lanka from 2011 to 2013. These workshops were organised locally and coordinated by the Rainforest Alliance as the secretary of Sustainable Agriculture Network (Local Interpretation Guide, 2014). The Local Interpretation Guideline is organised in terms of the Sustainable Agriculture Network standard's 10 principles highlighting the Sustainable Agriculture Network standard criteria and interpreting it for the environmental and social conditions in Sri Lanka. However, the Local Interpretation Guide emphasises the fact that only Sustainable Agriculture Network standard criteria are binding for compliance evaluation for the certification and not the Local Interpretation Guide. The Local Interpretation Guide is treated only as a guide for auditors and mediates in encouraging tea producers to adopt best local agricultural practices. This shows a transformation of the original Sustainable Agriculture Network standard in response to the local voices and thus adapting the Western conception of the Rainforest Alliance to fit the local context, especially in response to auditing issues and to

encourage companies to adopt best local practices. Thus, this links to the theoretical notion of composition, illustrating how the certification has evolved to meet the goals the North American and the local context. The local interpretation guide acted as a interessement device:

> It was published last year, 2014. Local Interpretation Guideline for Tea Production in Sri Lanka. We are going through this. It is a guideline for auditors, because of the… Local Interpretation Guide, they are not auditing and checking the houses [relating to worker encroachments]. (RA2).

A summary of the changed/modified sections from the Sustainable Agriculture Network standard in the Local Interpretation Guideline is given in Table 6.1.

Table 6.1: Local Interpretation Guideline

Sustainable Agriculture Network Principle	**Local Interpretation Guide requirement**
1-Scope of Rainforest Alliance for Social and Environmental Management System requires responsibility for the entire estate boundary	Existing legalised encroachments before 1992 are acknowledged. Encroachments after 1992 are mentioned as the responsibility of the estates Required to map legalised encroachments within the estate boundaries over which estates have no control Required to document their activities which are not in line with Sustainable Agriculture Network standard objectives and guide on procedures for monitoring and controlling such Compliance requirements in engagements with service providers are stipulated Energy sources identified, monitoring mechanisms and efficiency plans are recommended
2-10	Relevant local rules and regulations are specified

Source: Developed by the author based on Local Interpretation Guide, Sri Lanka

Whilst this shows how the 'original' Sustainable Agriculture Network standard was adapted as

a local interpretation guide fitting to the local environment, in analysing further the formation of the composite Rainforest Alliance, the next section shows how the goals and practices of local tea producers were adapted as the Rainforest Alliance was implemented. Composite Rainforest Alliance was formed through enacting the Sustainable Agriculture Network standard /Local Interpretation Guide through an influential subprogramme as analysed next. These subprogrammes enabled the Sri Lanka- Rainforest Alliance to meet the goal of environmental sustainability whilst also offering commercial sustainability to local actors.

6.3.2 Changes to social and environmental accountability practices

This section aims to analyse how the subprogramme, the Social & Environmental Management System mediated in changing the social and environmental practices of certified tea producers. Certified plantations had to set up a specific Social and Environmental Management System as a requirement of the first principle of the Sustainable Agriculture Network standards embedded in the local variant of Rainforest Alliance. This subprogramme becomes the obligatory passage point through which both the tea producers and the Rainforest Alliance certifiers, Rainforest Alliance auditors have to pass through to achieve composite goals. For the tea producers, depending on the size and nature of their operations, each tea estate intending to be certified would have to implement such a system in order to plan and implement the requirements of Rainforest Alliance. Similarly for the Rainforest Alliance auditors, the presence of a social and environmental management system is the base through which they obtain reliable audit evidence.

As per the third meaning of technical mediation, reversible blackboxing, to become accepted as standard within the Sri Lanka tea industry, the Rainforest Alliance certification needs to align actants in ways that stabilise the actor-network and effectively black-boxes the process of certification. Having analysed how local actors became interested and enrolled towards a

composite goal, this section continues by focusing on how individual actors become aligned in the process of implementing the certification, such that this process becomes blackboxed.

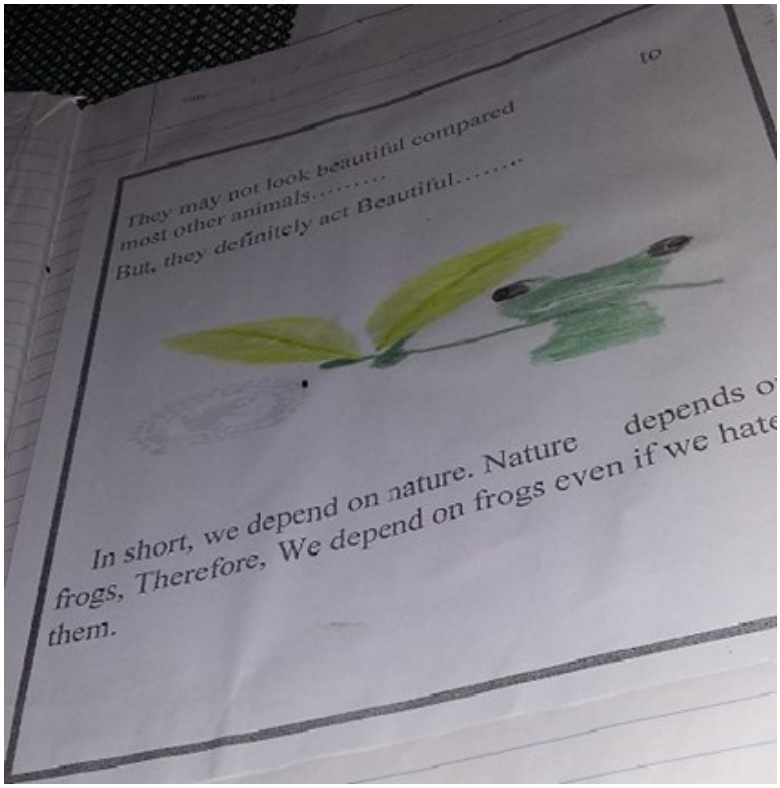
I. Formation of local version of Rainforest Alliance

As shown above, the Local Interpretation Guideline provides a local version of the Rainforest Alliance, that is the Western approach adapting to Sri Lanka, and this section shows how another non-human actor, the Rainforest Alliance Manual was formed as a local version of the Rainforest Alliance, reflecting how the Sri Lanka approach adapted to the Western Rainforest Alliance.

Rainforest Alliance-interested tea producers have inscribed the Rainforest Alliance requirements (Sustainable Agriculture Network/Local Interpretation Guide) into a specific standard operating procedure manual called the 'Rainforest Alliance Manual'. This is a key accountability device prepared at the level of the head office, guiding their estates as to how to persuade and enrol actors and align agricultural practices achieving a composite goal. Thus, it acts in inscribing a local Sri Lankan version of Rainforest Alliance.

The picture below (figure 6.2) taken from a Rainforest Alliance manual of a certified tea producer shows inscriptions depicting notions of 'sustainability':

Figure: 6.2: The Rainforest Alliance Logo in Action through the Rainforest Alliance Manual



The transformation process is indicated in the quote below:

> When it comes to group certification, that will be run by the head office. We have only one manual. If it is going to be changed, we change it and give the copies to the estates. The factories can be run on their own way. This is a guideline. This is a SOP [Standard Operation Procedure] basically. (MC4M1)

As indicate below, this non-human device was common to other certified companies as well, transforming the Sustainable Agriculture Network standard into a local version:

> There is a Rainforest Alliance Manual. Rather than the standard, there is a Rainforest Alliance Manual. Manual… is developed [for] each [Sustainable Agriculture Network] principal. There for each criterion, we have a guideline… as to how these criteria can be complied with. (MC2M3)

The manual documents the structure of the internal accountability. This is like an organisation chart and starts from head office management and links to the estates. Compliance is monitored

and controlled by the head office through the internal auditing of estates' social and environmental compliances. This comes under the preview of an appointed manager at the head office designated as the Group Administrator. Within the estates, estate managers act as the coordinators ensuring implementations through Rainforest Alliance committees. This is a system common to all the certified estates. Guided by the Rainforest Alliance Manual, estate actors account for agricultural practices by creating various inscriptions and formalise existing activities via specific programmes and procedures in addition to the adoption of novel practices. Estate actors are organised via Rainforest Alliance committees, which represent actors from all the functional levels from management to fieldworkers from the estate. The following voice illustrates how the Rainforest Alliance certification aligns non-humans in ways that stabilise the network and effectively black-boxes the process of certification:

> Planning is done by the estate management. There… [is a] Rainforest Alliance committee. Normally there are no separate persons allocated as a Rainforest Alliance implementation person. But the existing staff are committee members. The existing staff are given responsibilities in different areas and they are responsible for implementing different activities. Say factory officers, they must trace the records, they must give the traceability records and update them. Estate medical assistants, they are not doctors, but they are assisting the people on health and care. So, they are also involved in the training programmes. (MC2M3)

This section presented how the Rainforest Alliance Manual also provided a local version of the Rainforest Alliance in contrast to how the Local Interpretation Guide provides a local version of the Rainforest Alliance. The next section analyses how the certification manual prepared by the head office of certified tea producers mediates in operationalizing the Rainforest Alliance Manual. Whilst the first subsection analyses how it mediates in initiating accounting for social and environmental responsibilities, the second subsection analyses the changes to existing practices as well as the adoption of new practices.

II. Formation of inscriptions at the level of tea estates

As mentioned before, the Sustainable Agriculture Network standard requires Rainforest Alliance -certified tea producers to form a social and environmental management system. A key feature of the system is a requirement to account for social and environmental performances and impact. The study finds that tea estates have initiated such accounting by generating a range of inscriptions. Many inscriptions were common among certified tea estates, as their nature is specified by the standard. Each estate maintains ten files arranging numerous inscriptions in support of compliance of the Rainforest Alliance standard that specifies nine social and environmental accountability areas (please refer to Table 4.4 -water, wildlife, soil, eco system conservation, occupational health and safety of workers, fair treatment and good working conditions for workers, integrated crop management, waste management and community relations). For example, for each accountability area, estates had prepared documents formulating social and environmental goals and objectives, detailed action plans, social and environmental risk assessment records and continuous improvement plans. Maintenance of Rainforest Alliance documents as per each Rainforest Alliance principle requirement was a common practice as the Figure 6.3 shows:

Figure: 6.3: Accounting Inscriptions Maintained for Ten Sustainability Aspects

As the estates mentioned, the absence of accounting practices that enabled the creation and maintenance of tangible evidence have led Rainforest Alliance auditors to perceive an absence of a social and environmental management system and thus a lack or absence of sustainability practices.

Although the Rainforest Alliance Manual was introduced as a new device conveying social and environmental accountability practices, various practices had been in place for many years. As actors noted, the Sri Lankan tea industry had been successfully operating for over 150 years. One aspect is reforestation. Since tea estates use firewood as an energy source, they plant trees for firewood, and it is a local legal requirement as well. However, for instance, estates have had no evidence to support ongoing ecosystem conservation practices.

> It [evidence] is a requirement because when they come for certification audits, if we don't have adequate evidence to show them say, we have worked for reforestation… we don't get marks. Now for example we have photos of all the fauna and flora that we have. Now that documentation starts from the day you start these activities. (MC7M1)

Therefore, they have created such inscriptions to support compliances, as it seems, rather than fundamentally changing certain practices. The quote below illustrates how local actors have aligned the standard requirements into their day to day practices:

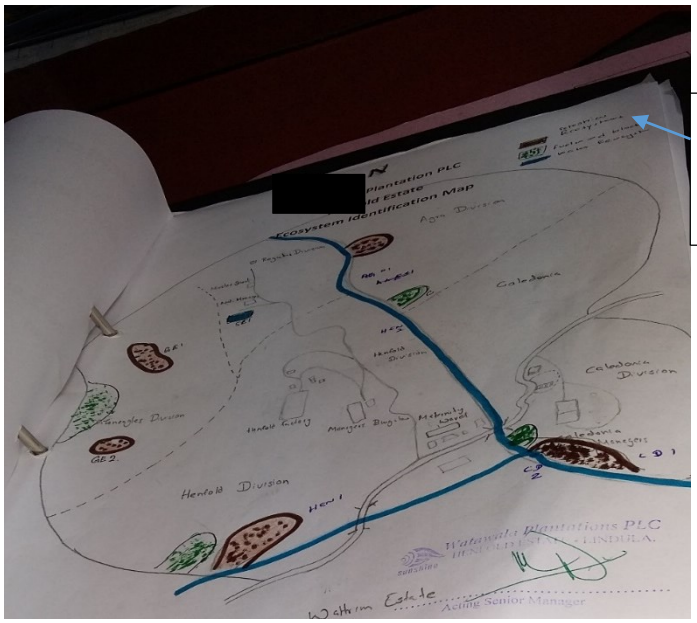
> We were doing most of the things - everything we were doing. What we did initially was tabulate and write down what we were doing. And then we made our own documents, our own plans and we stuck to it. That is all we did. (MC2M1)

The absence of social and environmental accounting before the Rainforest Alliance certification is confirmed in this following quote:

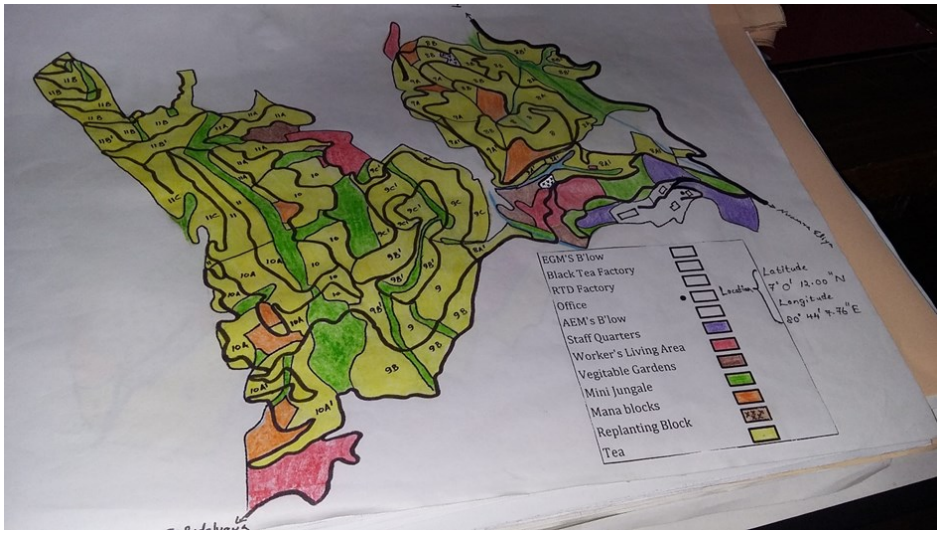
> We are getting less marks for this principal number one (Social and Environmental Management System of the Sustainable Agriculture Network standard) … the certification is telling us to map water flows, streams, rivers and all. So, whoever goes for the Rainforest Alliance audit for the first time they fail this requirement most of the time … not fail, [but] the lapses are there. (MC2M2)

All the estates had initiated accounting for their environment by clearly demarcating how tea estates are segregated into several divisions, the features of their ecosystems, and the nature of the biodiversity. This was done either manually or using technological tools such as Google maps to produce pictorial inscriptions of their environment. Two inscriptions taken from two estates are illustrated (figure 6.4) below.

Figure 6 4: Mapping the Ecosystem



Tea producer 'Y'



These shows how the standard requirements are being blackboxed at the level of each certified tea producer. The excerpts below show the plans for the Social & Environmental Management System of one company illustrating their explicit accountabilities towards a range of affected actors (workers, community, other supply chain actors)

Social & Environmental Management System's objective; planning and executing operations in a manner that fosters the implementation of the best management practices in the Rainforest Alliance standard.

> Goals; Four goals: (i) implementation of best agricultural practices in order to obtain Rainforest Alliance and continuous improvement (ii) ensure all workers have an adequate level of knowledge and skill of the safe and orderly implementation of different agricultural activities (iii) ensure service providers are familiar with and adhere to the social and environmental aspects of the standard (iv) communicate the objectives of company of sustainable agricultural concepts to the worker community. (MC3)

Table 6.2 shows such a documented activity plan of a company (MC2), with planning and prioritisation of agricultural sustainability activities, integration of social and environmental responsibilities to agricultural practices and delegation of activities to actors from each functional level. This can be seen as an document initiating accounting for social and environmental activities as well as audit evidence that helps reach the composite goal.

Table 6.2: Activity Plan-Social and Environmental Management System.

Activities	**Timeline**	**Responsibility**	**Completion Date**
Establish a Rainforest Alliance team, members are all divisional heads (office/field/factory/health)	Short term	EM-Estate Manager	xx
Prepare action plans for every sustainable principle	Short term	EM	
Establish objectives for the sustainable principles	Short term	EM	
Estate map, water map, ecosystem identification, map preparation	Short term	EM	
Implement documentation in identified areas and procedures	Short term	EM	

Training plan	Short term	EM, CC (crèche chief), EMA (estate medical assistant), PFWO (welfare officer)	
Conduct subcontractors' and workers' awareness programmes	Medium term	EM, CC, EMA, PFWO	
Estate audits	Short term	Company engineer	
Internal audit	Long term	Head office	

Source: Extracted from a certified company: MC2

Among such common inscriptions are inventory records that show how each estate now maintains wildlife. Field officers are responsible for collecting data on a daily basis and an animal inventory is updated at the office. Thus, creation of inscriptions can be considered as an interessement device used to lock internal estate actors into agricultural sustainability through new accounting practices. Newly adopted social and environmental accountability practices are indicated below:

> We see lists of animal inventory in the plantation or the farm. There are different methods that they use for this. Some people have notebooks, wildlife-citing book, bird-citing book. Once they see, they write here. [This is undertaken by] field workers like field officers but [also] the supervisors and assistant managers [and] welfare officers. They always have this book in the pocket, so once they see a different animal, sometimes they don't know the name, but they will write the characteristics and the place. At the end of the month a manager… will sit and see all the books and if they find a new [animal], they will update the list. (RA2)

Another key new accounting relates to risk assessment requirements of normal agricultural practices and of any newly introduced activities. Several instances are shown below that illustrate how risk assessment is enacted. Risk assessments have now become a standard operating procedure, a means of blackboxing the certification process:

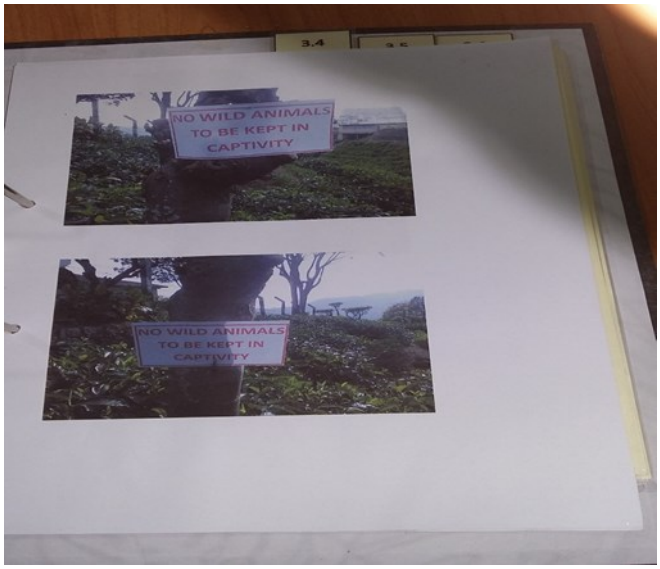
> Soil erosion due to exposed banks, discharge of factory water without treatment, dumping of solid waste by estate employees. (Extracted from risk assessment records, MC3)

Soil conservation is conducted as an essential agricultural practice and no records were previously maintained on the risk assessment of soil erosion. However, accountability practices have been transformed into a tangible document specifying why they engage in soil conservation. Similarly, estates were aware how natural water bodies become polluted through industrial waste, use of chemicals and environmental pollution through domestic waste disposal. However, there was no explicit accounting for risk beforehand nor production of mitigation plans: 'text' inscriptions were created to undertake these practices. As shown below, estates now account for how to mitigate identified possible risks in their local context as required by the certification, thus showing transformations towards Rainforest Alliance required accountabilities as a standard requirement of the company:

> Risk activity: Chemical spraying, Mitigation plans: follow up of Tea Research Institute advisory recommendation on chemical application, applying integrated pest management, maintain chemical spray tanks, training of chemical sprayers for proper chemical spraying, proper supervision, timing, use the correct nozzles. (MC2)

Inscriptions are not limited to the written documents: actors use various types of inscription such as videos, sign boards, wall carvings, and photos of physical changes and events. The following picture (figure 6.5) was part of the documents created to account for wildlife conservation. These types of pictures were displayed at various places within the estate for educating the workers and community on wildlife conservation:

Figure 6.5: Pictorial Inscriptions Maintained in Support of Wildlife Conservation



In other activities, the documentary review showed a range of collection of social and environmental data, of which some were qualitative, such as maps of water bodies and ecosystems, waste collection maps within estates, photos of physical changes such as cover crops, cross-bunds, buffer zones, bathing facilities and sign boards. Some data were quantified such as usage of fertiliser, chemicals, water, energy, number of personal protective equipment issued to sprayers, waste segregation and collection reports in volumes. All of these are Rainforest Alliance -driven new inscriptions. Health records for workers have been formalised and regularly followed up. Usual Key Performance Indicators (KPI) such as Made tea outturn (raw tea leaves input versus finished tea), factory worker output (MTKG/worker) which were regularly updated on factory notice boards were added with new KPIs after Rainforest Alliance of Electricity output (MT KG/UNIT) and Firewood output (MT KG/CM). Many estates display accident records updated on a daily basis as a compliance with other factory certifications. In addition to internal generated data, social and environmental compliance data were collected and maintained from third parties such as water test reports (drinking and waste water), soil test

reports and service providers' compliance checklists as some of the new tangible evidence to support accountability practices.

Improved social and environmental accounting mechanisms motivated local estate actors to innovate and improve social and environmental performance. The acceptance of these practices illustrates the process by which the certificate becomes blackboxed in the local context. For example, local actors have taken numerous initiatives to account for energy efficiency, targeting to achieve reduction targets as required by the certification. One such area where social and environmental accounting practices had changed relates to chemical usage. Adopters had to create accounts for chemical usage on their estates. Workers and the community were co-opted to reduce chemical usage as indicated below:

> Now another thing really happened with the Rainforest Alliance, we were discouraged from using chemicals. Lot of people [vegetable growers] got away from using chemicals because they were educated. (MC8M2)

A manager used accounting data to support the reduction of chemical usage and water waste by the estate. As explained below, accounting data appeared to be influential in evaluating and transforming social and environmental performance.

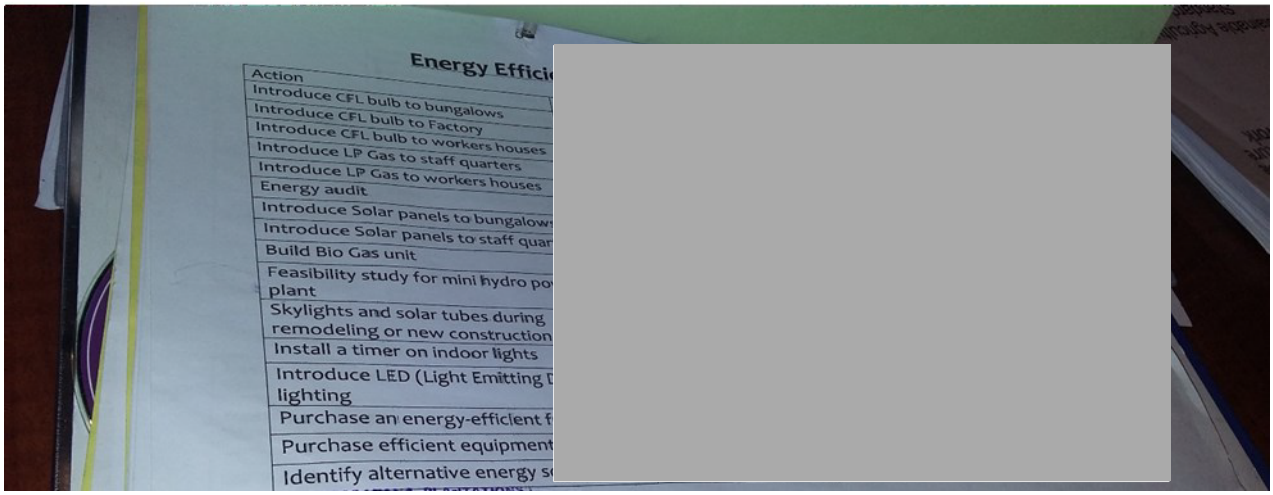
> After Rainforest Alliance was introduced we can see huge reduction of our chemical usages, huge reduction of water wastage. We have quantified it, not in financial [terms]. We can do it in financial terms as well because we just valued it and got it. Actually, more than a certificate it is good for the country. And for the end user it is guaranteed that your product is not contaminated. (MC2M1)

On the field visit the researcher observed that all the estates were marked with 'no chemical' zones near roads and schools with sign boards and set up coloured vegetative barriers restricting use of chemicals beyond the barriers.

Figure 6.6: Chemical Free Zone

In analysing the changes driven by the initiation of social and environmental accounting practices, the next example relates to energy, and reflects how the adoption of new accountability practices led to changes in energy efficiency. Energy is the second major cost component of tea production. Each stage of tea from drying tea leaves to grading the finished tea involves use of energy. As the estates mentioned, continued use of old machinery is the major reason for the high energy costs. Nevertheless, the study found they are now motivated by the energy usage records. Local actors have implemented numerous initiatives to manage and control the usage of energy, expecting to improve energy efficiency. In response to the standard operating procedures driven by the Rainforest Alliance standard requirements, estate management have prepared energy management and conservation plans. For example, the figure below shows how local actors have taken numerous initiatives to account for energy efficiency, constructing reduction targets as required by the certification.

Figure 6.7 Energy Efficiency Plan



The initiation of inscriptions such as plans and targets helps to effectively blackbox certification requirements for adopting tea producers. The review of such plans showed each major energy-consuming operational activity is continuously reviewed for improvements. Not only major operations: estates even pay attention to minimising lighting wastage. These initiatives have led to innovative energy efficiency plans. An estate has experimented with the use of cashew hulls as alternative to reduce energy costs and now this is in use, as described by the interviewee below:

> We can control the cost of the firewood also. When we [use] firewood, it takes some time to burn because it takes time to warm up… But cashew hulls are not like that - within seconds [they] burn [and] the firewood [then] heats quickly. If we use only the firewood, the temperature gets reduced and it takes time to come back. We tested [different methods] to go for energy savings. Things like cashew hulls are just waste items, they are not used for anything else. I am the one who introduced it first to the company (MC2M6)

Not only that, now factory workers are monitored for compliance with the social and environmental management system, for adherence to power saving instructions. For instance, they have been instructed how to switch on machines after power failures to avoid energy waste. They had to record electricity usage by taking measurements from meters, another instance of

the use of inscriptions as an interessement device to enrol actors for sustainability practices. The quote below shows how these have now aligned to standardise day-to-day practices:

> We control the KW [kilowatts]. Normally when [we have] power cuts… we have trained people to turn off the machines. Normally if we switch on two machines at once, KW [usage] is more. To reduce that KW, we first switch on one machine and only after a few minutes go for the next. All those things [were practiced by our] people only when those certifications come. Until then no one cares even when we tell them. Earlier what happened was when the power goes, workers keep on chatting and [do] not switch [the machines] off. So, when the power comes [on] all machines work suddenly and the KW units increase by about 5-10. For one KW, we must pay about 1000 rupees, so now all those things are controlled. (MC2M6)

This section sought to highlight the process and activities involved in accounting for social and environmental responsibilities as required by Rainforest Alliance. As analysed, the implemented changes effectively blackbox a range of accountability practices in social and environmental management systems within adopting estates that in turn provide tangible evidence necessary to support compliance.

Having discussed how composite Rainforest Alliance was formed through the mediation of non-human devices and social and environmental management systems, next we analyse what new practices were adopted by the local actors.

III. Adoption of new practices

This section seeks to analyse whether and how Social and Environmental Management System mediated in forming new activities in reaching actors' commercial goals through agricultural sustainability.

Even though Rainforest Alliance enrolment was initially driven by market requirements and the prospect of commercial sustainability, actors hinted that Rainforest Alliance offered a solution to other goals. For example:

> Although initially it is driven by the market, now there is an internal commitment beyond the market to do these requirements. Because people say anyway this is for the

plantation industry (RA2)

Whilst estates attended to workers commonly through providing medical facilities as a welfare activity and factory workers were covered in some estates due to their former factory certifications, chemical sprayers and the fieldworkers, who constitute the large workforce of tea estates, were not specifically attended to before for occupational health and safety. This was described by one interviewee below:

> OHAS [occupational health and safety] - with this principle we got certain new things: sprayers washrooms, personal protective equipment and certain systems to ensure [the] safety of sprayers. Certain working systems [were] introduced… for the field workers. This principle gave us more new [practices] than all other principles. (MC4M1)

As the researcher could observe during the field visits, estates have specific chemical mixing places, personal protective equipment and changing places arranged as per the required specifications (distance, two doors for entry and exit) with washing facilities and a display of sprayers' photos in protective clothes in the estate offices. While some have constructed expensive sites, especially early adopters, some have modified their existing buildings for this purpose. For them, this is considered as an expensive activity with construction costs and the provision of personal protective clothes and equipment is costly. Normally each estate has around 20-30 sprayers. They are concerned about recurring replacement costs for protective clothes and equipment, showing concern about how to form a composite Rainforest Alliance while minimising costs.

A key novel initiative is worker and community training. As part of the Social and Environmental Management System, the Rainforest Alliance requires educating actors from estate management level to workers/community on social and environmental management systems. Even though managers and other staff were aware of accountability practices, such

training and awareness had not been given to workers/community before. They claimed such training of workers has been initiated for the first time due to the Rainforest Alliance;

> Now… managers… middle managers and junior staff members are being trained all the time over 30, 40 years of our lives. We go for this seminar and that training every time. But the workers have never gone for any training anywhere. (MC2M1)

As the estates revealed, such awareness was amidst resistance as workers/community expected no such involvement by the estates to change their health and safety habits and demand environmental conservation practices. However, now it has become an estate's responsibility to train them to ensure the success of the Social and Environmental Management System, which is a means for reaching the composite goal. As reported, the workers/community are motivated through being convinced Rainforest Alliance brings those benefits:

> Now when certification starts, we can't just go and dump a certification on an estate. We should train them from the beginning, from scratch we had to start. We had to tell the workers why we are doing it. Then they ask us what is there for them. They know there is no monetary benefit. So, we should sell it. We have to tell them this is for your safety, your family or well-being of your children, your nutrition all that, all there in RA. (MC2M1)

With the new responsibility for making changes even at the level of workers, estates now continuously conduct awareness programmes and monitor them to uphold the well-being of workers/community as a means of achieving the composite goal. As an estate described how they keep their workers enrolled towards compliance practices:

> Initially there were some resistances, but now they know if they do [Rainforest Alliance] that is for their future, for the country. We could do [it] only through continuous talking to them. Initially it was difficult, for example, [require a] factory worker to wear a uniform. You know, you can force them or use some authority. We didn't go to that level. We made them aware, we showed them - this is for you [to] protect yourselves, so they got it. (MC1M1)

As reported, workers become interested in improved social and environmental aspects reflecting a transformation of local actors' interests towards sustainability aspects:

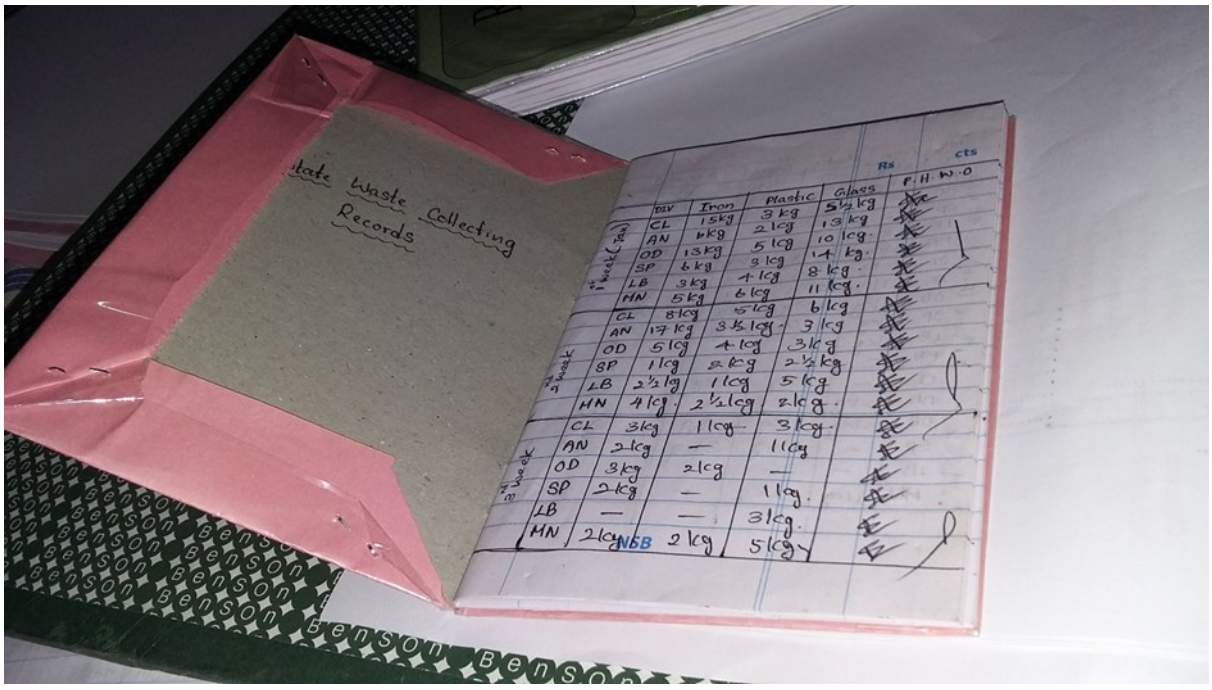
> We didn't change the mindset. They understood we are coming with a good idea, a good concept. Then they started to cooperate with us. Now most of the [certification requirements] in [name] estates… are done by the workers. Even the union leaders said, 'why [do] you… spend this amount of money from the company for this?' [But] this is for our benefit. We must do it… especially waste management. (MC4M1)

During the field visit the researcher talked to several workers from the tea factories and fields and representatives from the community. As per their feedback, for them Rainforest Alliance was mainly known as a requirement for proper waste disposal. This shows how estates experience changes in practices and implications of their social responsibilities:

> For Rainforest Alliance, we should segregate garbage. For that we are given buckets. We… put garbage into them… Once a week the lorry comes and takes them. They say to us not to throw coconut shells… here and there [so] we dig pits and bury them. (MC7W2)

Reviewing the inscriptions maintained to comply with the social and environmental requirements of the certification during the fieldwork visit indicated that estates initiated waste management practices. For example, Figure 6.8 show a book recording waste collections:

Figure: 6.8: Accounting for Waste Collection



During the field visit the researcher observed one awareness session, a street drama performed by children of the estate workers on the negative effects of the use of alcohol by parents and drawing boards on good health practices to prevent diseases. This was ceremonially conducted at the muster shed with the participation of all the estate officials before the workers' tea leaves were weighed, as replied by an organiser that this is to retain them for the programme.

Figure 6.9: Worker Awareness Session

In addition, each estate had displayed the Rainforest Alliance sustainability requirements.

Figure 6.10: Display of Rainforest Alliance Sustainability Message

Workers/community training mainly relates to household waste management and monitoring for compliance. For these initiatives, the study found that estates have enrolled a range of external actors. Such encouragement by the estates regarding external responsible bodies or coordination had not been there before. They now observe how local environments are cleaned and protected, thus forming a composite Rainforest Alliance collectively at the local level. Here, a company manager explained with photographic evidence of their initiatives in clearing community areas filled with polythene and waste with the support of the local authorities:

> In implementing the 'integrated waste management principle', [the] provincial council came and helped us out. We [the estate] introduced [a waste collection system] not them [the provincial council]. [Shows researcher photographs of estate collections] These are the challenges [of] reaching the farmers in the difficult areas. Sometimes we must go into jungles and farmlands to collect polythene - it was a big problem. (MC8M2)

As reported, most of these organisations were not properly discharging their services, especially waste management. Those activities were considered only the responsibility of the respective State organisations and now estates have mediated in waking the sleeping local authorities. Estates have now experienced changes in practices, of which they are a part. However, they are concerned about the time it will take for a real change:

> But the town council are also now doing some work. They are helping with the garbage disposal. They prepare disposal pit… and engage in recycling. But the people [estate community] are not knowledgeable on what… is happening when the town council collect garbage. It will take about 10 to 15 years for these people to understand. (MC2S1)

Another state officer involved is the Public Health Inspector (PHI). Estates network with them to persuade workers/community about waste management and there is a means of legal punishment through the PHI for any failures. This again shows instances of new associations created in the formation of composite Rainforest Alliance:

> To tell you frankly, the most critical one for us was the waste management of workers. I went and told them, but nobody cared. Then, I [was] accompanied [by a] policemen [and the] PHI and [we] visited workers' houses… and told [them to] remove this garbage. {the] PHI [said] they all will be fined if not… Then they feared the fine and then they did it. We got very good support from the government officers. We never thought that they will help us like that. (MC6 S1)

Some estates have strategically attracted other interested groups for training programmes. As one estate mentioned, new associations were formed in implementing new accountability practices:

> We bring Red Cross [in] and we have brought St John's Ambulance [in] to do first aid [and] fire fighting for the estate workers. Then we got [the] NGOs involved. I tell them that I want these areas covered [that re required by] Rainforest Alliance…. We don't say it's for Rainforest Alliance, we say [it's] for sustainability training [and] we need your support. So, they are very helpful because they are also mindful about sustainability issues. They say it is a very good thing that you all are… training people. (MC2M2)

Estate actors perceived these activities had strengthened their relations with the community, which was only limited to traditional CSR activities before. Now estates and community work together in cleaning the environment. Their view reflects improvements in social capital:

> When it comes to Rainforest Alliance, it is not only the estate. There is village integration as well. So, we must keep good relationships with them. They come and do some 'Sramadana' [voluntary] programmes, forest and gum planting and things like that (MC3M4)

Now these initiatives are taken to the school levels by the estates, estates perceive it as an obligation to protect the environment for the future. Certified estates commonly have programmes to educate school children about social and environmental responsibilities:

> We do programmes for school children also. They are the best ambassadors. When officers tell parents, they will just listen and forget about that. But at home when children tell their parents not to put waste everywhere, don't [pollute] natural water bodies, then they change. So, we educate the children about waste management and environment protection. (RA1)

The study found that the Rainforest Alliance's requirements that estates be responsible for household waste management and the improvement of the health and safety of workers have produced wider social impacts. Local actors perceived the improvement of domestic waste management has benefitted them by way of disease prevention, thus forming a composite Rainforest Alliance. Describing positive changes experienced after implementing Rainforest Alliance:

> Now [the workers] know what to do and what not to do… With that… estate medical [health has] improved. Because there were lot of TB patients, now it has come down and [we] now [have] no patients at all. [The] PHI highly appreciated the Rainforest Alliance work because it is part of his job. Now in our estate no one will get fined for dengue. When you do RA, when you do a good job, [dengue fever] never happens (MC7M3)

As a number of estates mentioned, the initiation of Rainforest Alliance certification led to improvements in health programmes. Estates identified their field workers as lacking iron and now give them iron tablets daily. An estate perceived even though this was initiated as a certification requirement for improving worker health incurring costs for medicine, it has benefitted them in turn:

> Our EMO (Estate medical officer) has identified Animi iron deficiency of our workers. We give them iron tablets daily now. It is done from the estate account. The thing is what we require and… what the standard requires. If we can [reduce iron deficiency for] these people, it is good. It is easy, not only for Rainforest Alliance certification, but… for the estate management and agricultural practices. (MC2M4)

Estates see changes in their responsibility practices as benefitting the workers and themselves. As per the view of tea estates, they mainly benefit by way of increased worker efficiency:

> Earlier the outturn [raw tea leaves input versus finished tea] was very poor. After giving iron tablets we have seen a huge improvement. [The] company [bought] those [iron tablets]. No NGOs or nobody [helped]. A tablet costs 60 cents, it is [taken] daily. (MC2M6)

Another manager opined that Rainforest Alliance helps in meeting the goals of State hospitals:

> MOH [Medical Officer of Health] said their allocation dropped by 40% and that money has been sent across other poor areas from savings accrued in [region]. This is direct rupees and cents. (MC7M1)

Social benefits were reported from a certified smallholder factory as well:

> I will tell you one classic example, [region] area where I worked was declared as a dengue [fever] high-risk area by the health dept. But after people … the workers, the farmers got used to these good Rainforest Alliance practices, they found that the dengue epidemic is drastically going down. Because the waste management was so good… they wrote [thanking] us and Unilever. (MC8M2)

As a smallholder of a company described, Rainforest Alliance had mediated in changing accountability perceptions, illustrating the process of composition:

> I separate all the polythene, coconut shells and other garbage – [I] keep my garden clean. We don't use any chemicals. I got good knowledge actually, not only [for] my tea plots [but] even for my personal development. I could get things from these programmes (MC8)

This section analysed the formation of a composite Rainforest Alliance in the local context. In this process, the Rainforest Alliance standard was translated into a local version, a local interpretation guide that inscribed local laws, regulations and conditions into the standard compliance requirements. Similarly, local tea producers have implemented and adapted the Rainforest Alliance standard requirements which mainly affected the accounting, management accountability practices and agricultural practices. As analysed, this has resulted in creation of range of novel accountability inscriptions, accountability systems and procedures that makes

explicit commitment and compliance to the local laws and regulations within the company and across the supply chain relations. More prominently, several costly new activities were initiated that were oriented towards improving the occupational health and safety of the field workers and community and workers awareness which benefited within short term through disease prevention.

Having considered how a local version of Rainforest Alliance was co-produced, the next section focused on how they would contribute to the stability of the Rainforest Alliance network.

6.4 Rainforest Alliance network stability

This section seeks to analyse how Rainforest Alliance stabilises (temporary) its local network. In terms of Actor Network Theory, the stability of the Sri Lankan Rainforest Alliance network depends on its ability to meet the goals/interests of local actors with no betrayal. As analysed in Section 6.3.1, local actors are commercially interested in the Rainforest Alliance network, and however as Section 6.3.2 revealed, both goals of commercial sustainability and agricultural sustainability have been synthesised in the enactment of the Rainforest Alliance within the local context. Therefore, the stability of the Rainforest Alliance as a composite goal depends on the outcome of composite actions and wider implications. These act as 'attachments' that bind the actors further to the network and help in stabilising it. This section presents several unintended outcomes of the certification that adversely affect the network stability and several other implications that would strengthen the Sri Lanka- Rainforest Alliance network.

In addition to the conception of 'attachments', the concept of 'delegation' helps to understand what meaning the Rainforest Alliance certification articulates in the local context; its delegated inscribed meaning of 'sustainability' or some different meaning.

6.4.1 Exclusion of smallholders

This section highlights a major unintended consequence of Rainforest Alliance in the local context. As mentioned in Section 6.2.1, because of complying with the mandatory criterion of Sustainable Agriculture Network Principle 1: separation of Rainforest Alliance -certified tea from non- Rainforest Alliance teas, all certified estates have excluded smallholders from the Rainforest Alliance certification. Smallholders grow tea leaves on small parcels of land, which is then sold to tea factories for processing (as indicated below):

> When you say smallholders, they may be [those] who own a half-acre plot. They are not the physical producer of the tea that comes to the auction. They supply the green leaf to the factories. The factory manufactures it. So, for the factory to say that his tea is certified, he must pass that message down to the smallholders, so the smallholders have to comply (BC3M1)

These factories belong to Regional Plantation Companies and private tea factories. Regional Plantation Companies' factories that are Rainforest Alliance certified exclude smallholder tea that is known as 'bought leaf' from the certification. One reason is cost. Interviewees referred to cost and control issues (as highlighted below):

> I think it is to do with the cost, I don't think they have enough funds to certify all their estates and smallholders. (BC2M1)

> You can't control [smallholder production conditions]… One plantation company [may] buy from more than 1500 smallholders - how can they control… 1500… waste water handling [conditions] and [other] things required [by] Rainforest Alliance. (RA2)

Another Regional plantation company actor said smallholder certification is difficult in practice, given the large number of smallholders:

> We buy from smallholders… [their tea leaves] are processed in a factory. It is very difficult [to ensure their tea complies with Rainforest Alliance], we must take the square root of [the number of smallholders] for auditing… [smallholder tea to ensure it complies with Rainforest Alliance] We are getting 3000 odd people as smallholders, so how many audits do we have to carry out? (MC2M2)

There is no system operating in tea producers that traces the bought leaf in terms of each supplier's identity (smallholders). On one hand, it is not a necessity nor a requirement for the

plantation companies to do so, instead they used to process tea (estate and bought leaf) together. On the other hand, the smallholders' supply to plantations depends on their discretion based on the price offered for their leaf by the plantations and the private tea companies. As mentioned, this is one issue that constrained enrolment of the smallholders into the certification by the plantation companies. However, when it comes to private tea factories, they maintain close relations with the smallholders as these companies survival depends on the smallholders supply, bought leaf. As the smallholder certified private tea company mentioned:

> Our survival is [the smallholders'] survival. If they are in the trade and supply to us, only [then] we can survive. As I told you, 99.99% of our intake is from the smallholders. So it involves lot of work, like being at their service. One of the most important things is to encourage them to grow…to plant more tea and to look after their tea. That [looking after smallholders] is very important because if we don't do that, they will not be encouraged to continue the supply. Otherwise they will feel this is not worthy and they will find somewhere else or try to do something else. (MC8M1)

This Rainforest Alliance certified private tea company had adopted a supplier traceability system even before the certification as a means of retaining and attracting smallholders by maintaining close relations. They described how their existed practices enabled them to easily get Rainforest Alliance certified:

> I have about 4500 smallholders. We have a register for them, we know who they are, whom we buy from. You would have seen the sacks, all marked [to identify each smallholder]. We had … traceability. So when Rainforest Alliance came, [separate recognition] was very easy for us to achieve. I think we are the only [private] tea factory still in the trade who may be doing this (MC8M1).

As the company owner mentioned, and agreed amount of the bought leaf payments is directly credited to the respective smallholders' children's bank accounts monthly and only the balance is paid to the mother or the father (smallholder).

However, complying with the certification requirement, some estates have excluded smallholder tea from the Rainforest Alliance certification. One company from the sample had stopped buying all smallholder teas as indicated by a manager:

> No now we don't buy [smallholder tea]. [We buy] estate leaf and interstate leaf from [X], [as] they are also Rainforest Alliance-certified. (MC3M3)

However, several certified estates adopted segregation procedures. As explained below, they created special recordkeeping systems to separately identify 'normal' tea and certified tea leaves:

> Only our [estate] leaf is being certified, not the smallholders' leaf. We are separating the bought leaf [tea bought from smallholders] and estate [Rainforest Alliance certified] leaf as… we can identify [estate leaf], we have our records. (MC4M1)

Mechanisms such as separate processing of Rainforest Alliance tea at each stage of production stage, made use of boards (Rainforest Alliance /Non- Rainforest Alliance) in production areas, use of colour separators, tea validation reports, etc. are examples which could be observed and such observable changes were photographed during visits to these factories.

Figure 6.11: Rainforest and Non Rainforest Tea Separation

The separation process in practice was explained by an Rainforest Alliance actor:

> They can [separate] because almost all the tea leaves from smallholders come in the evening and the estate crops comes during the noontime and morning. So, they clearly segregate time wise, and they keep some separate. First you process your tea, then keep some time gap and process. (RA 2)

However, during the field visits, mostly through informal discussions it was revealed that this segregation is not practical, mainly due to the limited supply of bought leaf. As revealed, sometimes estates' workers have mistakenly processed Rainforest Alliance tea sacks as non-Rainforest Alliance. In practice, for them Rainforest Alliance and non- Rainforest Alliance tea leaves make no difference (as indicated below):

> Sometimes they don't [segregate tea effectively]. I can remember that they [got] confused… they kept the non- certified teas at the top and they collect certified teas from the bottom (RA 2)

According to another estate response, they do not separately process, instead at the end of the processing, they separate the output according to the ratio of input of Rainforest Alliance versus

non- Rainforest Alliance. To avoid these practical difficulties, companies are trying to get their smallholders also certified from the inception. However, Regional Plantation Companies still certify only their own teas. As mentioned, one main difficulty in certifying smallholders is there are large numbers of smallholders supplying tea and a lack of control over them as they can either sell their teas to Regional Plantation Companies or private tea factories. Hence, Regional Plantation Companies are not willing to take the responsibility for smallholders at their expense. Describing these practical difficulties:

> The smallholder matter, what they [Rainforest Alliance] are going to do is not… [focus] on the neck [i.e. Regional Plantation Companies] but on the tail [the smallholders]… The problem is the group administration part. Who is going to hold the responsibility for compliance? (MC4M1)

On the other hand, smallholders' demand premiums for them to engage in agricultural practices as required by the Rainforest Alliance for which estates are not willing to pay beyond the minimum guaranteed price, as the estates themselves are not paid a direct price premium. Explaining further about the nature of resistances in enrolling the without direct monetary benefits:

> We had an issue on smallholders where I went to see the smallholders' houses and… we did some training. But they want rupees and cents. They say, 'sir I will do that, you should guarantee me 10 rupees more'… We said no, this is for your health and safety… They say… 'okay sir, I want money, we want money to [do] whatever we are to do'. (MC2M1)

Smallholders are paid only the State guaranteed minimum price for non- Rainforest Alliance tea, by the Sri Lanka Tea Board:

> What they do is they buy from the smallholders and pay them the bought leaf rate what is according to the formula specified by Sri Lanka Tea Board. (BC2M2)

The Rainforest Alliance brings no price guarantee, although an expectation of higher prices for some. So, estates and Regional Plantation Companies do not guarantee a price premium to the

smallholders. Smallholders are motivated by commercial sustainability, and Rainforest Alliance brings only extra costs but no foreseeable benefit in price or increased future demand (unlike the bigger producers who see the tea auction, tea catalogue and perceive the future benefits). Smallholders are guaranteed a fixed price anyway by the Tea Board and the excess beyond the general price formula under which they are paid is a cost to the State. With this background in the local context, the estates are even less likely to offer them a premium for Rainforest Alliance tea. Illustrating this point:

> But [smallholders] will struggle when the price goes down. That is why the government intervened and said that there is a guaranteed price of 80 rupees per kilo. I don't know whether it is going to work, it is going to cost the government about 7 billion. (LA2M1)

The study found in the local context, only one private tea company was Rainforest Alliance certified covering the majority of its smallholder tea suppliers. Their certification implementation manager revealed he was interested in Rainforest Alliance as it would economically benefit their smallholders.

> I know this because I foresee the future. I am from a village, I am a village boy, so I know the villagers' aspirations. I know their difficulties. I want to give them a better deal… more than a certification…. I am very passionate about people and I value people more than anything else. (MC8M2)

He showed me evidences as to how Rainforest Alliance benefitted the private tea company financially, as noted in the field notes:

> Manager (X) showed me graphs, Power Point slides as evidence of increased Net Sales Average after Rainforest Alliance and how he was even personally rewarded by the company.

As a manager mentioned, smallholders benefitted financially as the company initially enjoyed premium returns after gaining Rainforest Alliance certification:

> Smallholders… were in the mud houses before and [then] moved to nice tiled houses. If you go, we [will see] documentary evidence how they were living after we got

> Rainforest Alliance - you can see… the house size, they were not depending on the government. They were depending on the company where they were economically well. (MC8M2)

However, the Rainforest Alliance certification was subsequently abandoned by the company due to disappointment in the expected financial returns for tea grown in low altitude regions. As revealed, monitoring and controlling of smallholders on Rainforest Alliance practices was costly and not affordable. This led eventually to non-adoption by most smallholders:

> Unfortunately, the certifications are not helping us. Up-country teas are benefitted to a certain extent. Because most of the up-country teas are going to the European market. European countries are asking for these ETP and Rainforest Alliance. But low-grown teas go mainly to the Middle East markets. They are not bothered very much about certifications. Unilever, just to satisfy us, bought our tea on two [or] three occasions [paying higher prices]. (MC8M1)

As mentioned above, local actors enrolled by expectations of higher price/demand, however, unlike the bigger producers who see the tea auction, tea catalogue and perceive the future benefits, smallholders are not motivated for the certification in the absence of a direct financial benefit. Exclusion of smallholders as the largest tea growers is considered an unintended consequence of Rainforest Alliance certification in the local context, where otherwise Rainforest Alliance certification as sustainability oriented certification is not intended to marginalise the smallholders. This is evident in the recognition of smallholder farms as the Rainforest Alliance's target actor category:

> The SAN General Interpretation Guides further clarify objectives of the Sustainable Agriculture Standard … for audit processes of plantations, smallholder farms and group administrators. (General Interpretation Guide of the Sustainable Agriculture Standard, 2014:4).

Rainforest Alliance is also interested in enrolling smallholders into the certification and has already commenced programmes at the local level as a means to ensure the stability of the local Rainforest Alliance network. During the field visit the researcher participated in a two-day

planning session for which Rainforest Alliance was networking with UN programmes to launch Rainforest Alliance training programmes (as described below):

> At that time, I had this IDH [Rainforest Alliance sponsor] budget. When it expired, I let [the smallholders] know - I don't have budget for [smallholder traiing]. I told [the smallholders] to wait till the UN programme comes. Now it is approved and now we are almost there. The monitoring and evaluation part is done now. Once we do the training module, we can go ahead. We are expecting to start the training in September (RA)

Rainforest Alliance currently works with the Global Environmental Facility (GEF) funded project on land degradation in five identified Asian tea producing countries including Sri Lanka. The aim of Rainforest Alliance is to minimise the environmental impact associated with the improper land use practices by the smallholder farming in those countries and thereby encouraging those smallholders enrolment into its certification system. This is motivated by a success of a similar project in enrolling large number of smallholders in Kenya. The Rainforest Alliance acknowledges the support of the multinational tea buyers such as Unilever and Tata Global Beverages in this. This new joint project has identified several issues specific to the smallholder tea farming in Sri Lanka and focuses on the South Western wet zone, a large smallholder farming region of the country. Among them are issues related to land usage such as land limits, the amount of smallholdings below one hectare, fragmented tea lands that also accommodate housing and other activities, use of improper land for tea farming, creating new plantation versus redeveloping existing ones, and the inadequate supply of quality planting materials. Furthermore a lack of knowledge and financing to adopt sustainable land use practices, inadequacy of incentives (subsidies), lack of support from relevant authorities in providing technical knowledge, absence of feedback mechanisms between the smallholders and authorities, and law enforcement issues are also on the agenda of the Global Environmental Facility. Apart from those, other factors that contribute to the land degradation are reluctance

to adapt technology, gem mining and smallholders' dependency on the private tea factories for advice (Rainforest Alliance workshop materials, internal). Rainforest Alliance has involved certified tea producers, Rainforest Alliance tea buyer/exporters (Unilever), and the local authorities (Tea Smallholders Development Authority and the plantation ministry) responsible for smallholders in the smallholder enrolment initiatives. Rainforest Alliance seeks strong support from the State institutions as it helps to pursue their goals such as soil erosion, contamination and conservation of water bodies (as indicated below):

> In [the] UN programme, we address soil degradation. We are planning for that [with] cooperative societies under the TSHDA [Tea Smallholdings Development Authority]. All smallholders are registered under these… societies. We are training the tea inspector and the TOT [Training of Trainers]. When they are trained and ready for certification, these farmers have to supply their tea to a certified tea factory, otherwise there don't get any benefit for it. This [UN] programme [hopes to train] 14000 smallholders [by 2020] [who would provide a] big supply chain for Regional Plantation Company factories (RA)

As mentioned above, these endeavours have attracted different international funding programmes strengthening Rainforest Alliance stability through the creation of new associations:

> In United Nations environmental projects, there is another division called GEF [Global Environment Facility]. We have another project with them that is also already signed. We have signed it from January this year [2015]. That is to address the land degradation in Sri Lanka - everything that [comes] under the sustainable agricultural standard. Although it is called the land degradation directly, indirectly it covers all the requirements of the SAN standard. So [the] target in that project is to educate 14000 small farmers. (RA)

This shows how the Rainforest Alliance certification is limited to few large plantations locally and excludes the largest local grower sector as an unintended outcome of the certification, thereby failing to achieve its intended goal of sustainability in the local context. As revealed, due to practical difficulties plantations avoid enrolling smallholders into certification. On the other hand even the enrolled smallholders are disassociated from the network as the Rainforest Alliance has failed to provide solutions to their interest of commercial sustainability. This shows this is a threat to the network stability the Rainforest Alliance is seeking to address.

6.4.2 Developing local certifications

The study found this to be another unintended consequence of the Rainforest Alliance. The introduction of the Western Rainforest Alliance has inadvertently led to more local certifications more sensitive to the Sri Lankan context.

Discussion with the managers of the Central Environmental Authority revealed that they are planning for a new initiative, a voluntary certification of green branding, which is in addition to the current national green award. Informal discussion with the staff involved in the development of these policies revealed that they have studied international certifications and became interested in their provisions, including the Rainforest Alliance. Describing how they are motivated to use Western certifications to develop local standards and not to encourage adoption of foreign certifications:

> At the moment, there are private things. But those are not branded systems. We are to go for a certification called 'Green Labelling'. We have already developed criteria. We have studied those certifications also. But depending on our country's requirements we develop weightage for them. We have planned to categorise the industries as to blue and green and then a marking scheme is prepared. (M1)

Similarly, two other institutions, Sri Lanka Tea Board and Sri Lanka Standards Institution have developed a local certification, called SLTB- SLSI product certification, to improve the quality of Ceylon tea:

> We jointly do a certification called [the] SLSI- SLTB product certification. So, we have developed criteria after having studied all those certifications. That will be implemented. We hope that will be the best certification in the world. (L5M1)

On the other hand, another certification with a different aim to that of Rainforest Alliance's interests in promoting social and environmental sustainability can be considered as another instance of an unintended consequence of the Rainforest Alliance certification. This is being developed to distinguish Ceylon tea on product quality instead of process quality oriented

certifications. As actors mentioned, a review of international standards provided them with the opportunity to identify loopholes in existing certifications:

> That is because all the other schemes including Rainforest Alliance are system-based certifications. They cover only the system of the organisation. But this product certification is for the final product. That is what we are testing, the final product. Final product certification is very important in order to detect… pesticide residues. (L5M1)

A review of this new certificate promoting document revealed:

> In order to facilitate the commercial benefits from the improved quality standards, a certification programme, where participation is voluntary, is… to be established by the controlling authority for Ceylon Tea, which is the Sri Lanka Tea Board together with a national standards body Sri Lanka Standards Institution, to review and certify the quality of tea. (SLSI & SLTB, Ministry of Plantation Industries).

Moreover, this certificate covers not only tea producers, but other parties as well (tea packers and exporters). In addition to development of these new certifications, Sri Lanka Tea Board continues to promote Ceylon tea in its major markets; Russia and Middle East which are not attractive markets for the multinationals. Their views implies Rainforest Alliance is not essential for Ceylon tea unless focussed on Western or Japanese markets:

> When the markets are very volatile, MNCs… don't invest. I think that is why we remain number one in those markets [Russian and Middle East] and also a reason why we are exporting to these volatile markets. Because, when it is a stable market, they [MNCs] go with the promotion that we cannot match as a small country. We cannot match with their promotion budgets. So it is difficult for us to compete with them in a stable market. But still, Europe and the USA is growing and the Far East - Japan, China. (M3)

Quality is the key aspect of Ceylon tea promotion and in the recent past it is coupled with the Ozone friendly logo for environment sustainability, as explained below, local quality certificates are focussed on promoting Ceylon tea exports to major markets rather than being explicitly concerned with social and environmental production conditions.

> These – [the] lion logo, [the] Ozone friendly logo, ISO certificates - are for marketing… not social responsibility [or] community. (L1M3)

Promotion of this local certification may impact on the stability of the Rainforest Alliance network in the future, especially in betraying tea producers' expected commercial goals through the Rainforest Alliance. This demonstrated the effectiveness of 'soft law' to the Sri Lanka government and further as analysed next it is evident as a means of enforcement of existing local laws.

6.4.3 Enforcement of local laws

The study found the implementation of Rainforest Alliance in the local context mediated in enforcing local social and environmental local laws meeting the goals of the State, thus helping strengthen the local Rainforest Alliance network.

Historically, producers had committed to philanthropic forms of social responsibility including activities based around employee and community welfare such as donations, sponsorship and participation in cultural and religious events.

> CSR is… an ongoing process…. CSR activities do not entirely relate only to the Rainforest Alliance requirements…. Our CSR activities are mainly [motivated by] some need. Maybe it is on healthcare, social infrastructure development or development of soft skills. A few are for the employees, [a] few are based on village integration extended to the society in the area (MC3M2)

These traditions related to the cultural notion of "Dāna" (Alawattage and Fernando, 2017), a historically and culturally contingent local conception of social responsibility that differs to Western conceptions of 'sustainability'. This notion of Dana means helping people to satisfy their basic needs either by giving money or providing such requirements free of charge. Within the local context, a cultural and religious interpretation of sustainability was emerged as 'a give and take method': this focused on the notion of fulfilling obligations before expecting rights and linked back to the ancestral agricultural practices. Good outputs could only be expected after the just and moral treatment of all inputs.

> We don't have to get any of these certificates to be sustainable… We have to go back to our predecessors and take what they have done: the world's best agricultural practice is the paddy field. As Sri Lankans we had that. We are talking that we will go for sustainability in 2020. That is [a] problem. We should first know what sustainability is. This is a give and take method. When it comes to sustainability. If you can properly treat to the others – environment, people or the other – then you get the dividend. That is what you call sustainability… When it comes to Buddhism, what Lord Buddha said, 'Do your obligation, then you will get your rights automatically'… that is what you call sustainability (MC4M1)

In contrast to this cultural "Dāna" form of social responsibility, Rainforest Alliance certification embeds a more procedural approach. That is, social and environmental sustainability is expressed in terms of compliance with explicit rules and guidelines. Indeed, a key part of the Sustainable Agriculture Network standard inscribed in the Local Interpretation Guideline was an explicit commitment to comply with local laws and regulations. For example, the certification manual of one tea producer stated that it would:

> Promote the wellbeing of all workers by complying with national laws and international conventions, without any discrimination on race, colour, religion, sexual preference and marital status, promote the wellbeing of smallholders supplying leaf to the factory by following national laws, other rules and regulations governing private factories and facilitate the development of the tea growing community attached to the factory'. (M).

However, it became clear that many local actors had not been aware of the existence of certain regulatory requirements and some laws had been widely neglected before the introduction of Rainforest Alliance. The following voice illustrates one such instance of water pollution and illegal waste burning before adopting Rainforest Alliance. The following voice illustrates one such instance of water pollution and illegal waste burning before adopting Rainforest Alliance

> When it comes to water conservation [a SAN standard requirement] we were not doing [the] required conservation practices. When we started Rainforest Alliance, there were instances [where] we had polluted the water. But now, we have almost practiced the Rainforest Alliance requirements, we do not dispose waste water without proper waste water treatments. Earlier we used an incineration system, but according to Sri Lankan law we can't have an incinerator. We must get an incineration licence. Open-air burning is prohibited – [it] amounts to a violation of national requirement. (MC4M1)

The situation was similar on other estates as well. A manager who was then in charge of the Rainforest Alliance activities of a company explained how they were changed to comply with legal requirements by handing chemical cans and hospital waste only to legally authorised persons. Chemical cans were previously tendered and given to the highest bidder and not to the approved collectors:

> Waste management was a problem… Now we must hand over our waste, especially these chemical cans and bottles, only to a person who is certified in the CEA [Central Environment Authority]. Its registered person is only legally authorised to dispose them. Earlier we tendered them. (MC2M2)

Some of the estates have even started to punch holes in chemical cans to avoid the risk of their use by workers and the possibility of selling them to outsiders.

The data showed how irresponsible waste disposal had been a common practice in the industry and how the Rainforest Alliance has mediated in changing those practices. As they reported, making such a change was difficult:

> It [legal disposal of waste] is happening now. Now even for recycling we have certified buyers. So, all that is coming into place with Rainforest Alliance. But the only thing is the process was a little slow initially, but now it is happening. (MC3M5)

As illustrated above, the enactment of Rainforest Alliance transformed local responsibilities towards local regulation, and came to be seen by regulators as a means to improve social welfare and environmental conservation issues. Soil erosion was a particular concern as it is considered a must for the sustainability of the tea industry itself.

> Actually, Rainforest Alliance programmes are very good; the awareness programmes are very good… The real message is going to the people. Now growers are not only the old generation people. Others also should know about soil conservation. It is very important, it is a must. We have to conserve our soil really. (L3M1)

A top executive at the Tea Research Institute explained that they release guidelines (not regulations) from time to time on various aspects to improve the agricultural sustainability of

the industry. However, they experience poor compliance from tea producers, particularly on soil conservation:

> If you take Rainforest Alliance, it is a good thing. You should look after the environment, you should look after the people and at the end of the day we are looking at sustainability… [Whether] they [Regional Plantation Companies] don't look after [workers and the environment] adequately or not is the question. For example soil… is the key thing when it comes to the tea plantation. Especially for tea grown on the top of the hills, you should have soil conservation measures. If you don't do that, what will happen, sustainability will be gone… Then workforce, without them you can't do anything. When it comes to a certification, you have to look after all these things, it is good. (M1)

In addition, Rainforest Alliance mediated practices helps in achieving the goals of the tea industry regulatory bodies, as certified estates now automatically become a part of the Tea Board programme (B60) on tea leaf quality targets:

> Estates who have the Rainforest Alliance certificate are automatically covered with B60. (MC7M4)

Therefore, the Rainforest Alliance certification gained the support of actors representing regulatory and government bodies because it offered a means to pursue their goals. As commented by the manager of one certified producer:

> If you follow Sri Lankan laws, we don't need any of those certifications. The Soil Conservation Act was done in 1965, and amended in 1982 or something. No one knows about it, even I knew [only] after this certification. That is why I am saying, because of this certification we got to know most of these things. (M)

The Rainforest Alliance certification also encouraged compliance with other regulations. For example, regulation prohibiting the clearance of forests to grow tea had been introduced in 1993 but there were cases of noncompliance and poor enforcement.

> What I say is if forest land is converted into a tea estate, then the standard 772/22 of 1993, called Environment Impact Assessment regulation [applies] and this is with some amendments. If you look at this, it [should] also suffice… This [772/22 Environment Impact Assessment] is a requirement, but when the tea estates were [converted from forest] before this [the regulation] was not there then and [the estate owners did] not get caught. (M1)

A director of a government body explained how estates receiving Rainforest Alliance certification improved compliance, and also prompted local regulators to review certain regulations relating to waste disposal into natural water bodies, the disposal of chemicals to legally authorised persons and associated monitoring systems.

In contrast to the above interests, some have no reliance on private certification bodies' implementers.This section analysed how commercial sustainability and agricultural sustainability goals were synthesised in the formation of a composite goal in the local context and in the process how accounting, management and agricultural practices were transformed and how new practices were adopted as a composite Rainforest Alliance. As a result, composite actions yielded positive and even unintended negative consequences affecting the stability of the Rainforest Alliance network.

6.5 Chapter summary

This analysis chapter presented the findings on Rainforest Alliance certification's agency in the local context in three separate sections as a process of the formation of a composite Rainforest Alliance. The first section analysed why/how different local supply chain actors were interested and found that some actors perceived Rainforest Alliance as providing solutions to their commercial interests and therefore enrolled into the Rainforest Alliance network. The second section analysed how an influential subprogramme led to changes in the social and environmental management and accounting information system of certified tea producers in reaching the composite goal. Implications in the local context were analysed last as contributing to Rainforest Alliance stability (temporarily). These findings are discussed together with the theory and literature in the next chapter.

CHAPTER 7

DISCUSSION AND CONCLUSION OF THE AGENCY OF RAINFOREST ALLIANCE AND ITS IMPACT ON THE LOCAL TEA INDUSTRY

7.1 Introduction

This chapter aims to discuss how the research findings are integrated with the literature and theory, and to present the conclusions and contributions of the thesis. The existing literature on accountability certifications has focused on why they have emerged, how they are constructed in the developed economies and 'pushed' onto the developing economies by powerful human actors in the supply chain and the impact on local workers. It is therefore silent about the agency of the certifications themselves and underemphasises the agency of local actors in terms of how they choose to implement global accountability certifications in developing countries (Mzembe et al., 2015, Knorringa and Nadvi, 2016, Prado and Woodside, 2015). Hence, drawing from the broad conception of sociomateriality and more particularly from Actor Network Theory (ANT), this study aims to contribute to an enriched perspective on certifications, and the agency of the certification itself.

The Rainforest Alliance is a North America NGO certification aiming to improve the sustainability of agricultural activities by inscribing sustainability standards into the certification system and relying on market mechanisms to promote sustainable consumption and production. Rainforest Alliance certification was first introduced to the Sri Lanka tea industry by two leading multinationals to promote sustainable production as a major developing economy tea supplier. The study aims to explore the certification's agency, in line with the key research question, How does the Rainforest Alliance certification translate a conception of sustainability in the local tea industry. The agency of the certification is perceived as enacted

through a network of relationships in which relationships of local actors can construct/modify a local version of the certification that meets their needs, shaping local practices with some unintended consequences. Thus, the study contributes to the sustainability and certification literature by showing how a new form of 'knowledge', the Sri Lanka - Rainforest Alliance certification, is co-produced.

The notion of 'technical mediation' has been employed as the theoretical framework to analyse the certification's agency in translating a conception of sustainability within the local tea supply chain. As explained in the theory chapter, Rainforest Alliance certification, like other accountability certifications and devices, is viewed as a technology (Lowe, 2001, Mouritsen et al., 2001, Funck, 2015, Vinnari and Dillard, 2016). Taking the Sri Lankan tea supply chain as the unit of analysis, the study focused on how Rainforest Alliance mediates in enrolling the local supply chain actors into its network and then, targeting the local tea producers as Rainforest Alliance certifiers, how it mediates in making them accountable for the social and environmental sustainability of agricultural activities and finally the study focuses on the stability of the Sri Lankan Rainforest Alliance network.

By using the first two meanings of technical mediation, 'goal translation' and 'composition', the enrolment of local supply chain actors into the Sri Lankan Rainforest Alliance network (RQ1) and changes of management, accounting and agricultural practices in the certified tea-producing companies (RQ2) have been analysed respectively. The ANT's latest emphasis on 'attachments' has been employed to analyse how intended and unintended consequence of the certification affects the Rainforest Alliance certification stability (temporary) in the local context (RQ3). The notion of 'circulating reference' has been used to explain the process of the translation of a conception of sustainability via Rainforest Alliance certification from a context of a North American NGO to the local context. This chapter is organised in four sections. The

transformation of the concept of sustainability into a certification technology at the level of a North American NGO is discussed in section 7.2 and section 7.3 discusses how the Rainforest Alliance mediates in circulating a sustainability conception in the Sri Lankan tea industry. Implications of this study's findings to the literature and theory is discussed in section 7.4 and the last section 7.5 addresses limitations of the study.

7.2 Transformation of a concept of 'sustainability' into a certification technology: Circulating reference

Latour's (1999) notion of circulating reference helps in understanding how the Rainforest Alliance transforms a concept of 'sustainability' into a certification technology and its process of translation across groups of supply chain actors. As presented in Chapter 3, the Rainforest Alliance, a North American NGO, is a network of fourteen not-for-profit organisations, the majority in Latin American countries, initiated in 1986 with the aim of conserving forests vulnerable to harmful economic activity by constructing an agricultural sustainability certification. In order to do so, the Rainforest Alliance adopted the sustainable agricultural standards developed by a member NGO, the Sustainable Agricultural Network (Sustainable Agriculture Network) based in Costa Rica. Sustainable Agriculture Network was established by the Rainforest Alliance as their agricultural standard-setter. Sustainable Agriculture Network and the Rainforest Alliance together promote the Rainforest Alliance certification internationally as a certification for sustainability.

In the case of the Rainforest Alliance, the conception of 'sustainability' is circulated through 'standardisation' (Latour, 1999:71). The Sustainable Agriculture Network standard represents a referent to agricultural sustainability. As Timmermans and Epstein (2010:70) state, "standards

and standardisation aim to render the world equivalent across cultures, time and geography" and thereby seek the mobility, stability and combinability of actions universally (Timmermans and Berg, 1997), featuring possible actions at a distance (Latour, 1987). The Sustainable Agriculture Network standard is based on ten sustainability oriented principles that commonly apply across all types of agricultural crop certification (e.g. tea, coffee, cocoa). The principles of the Sustainable Agriculture Network, and therefore the Rainforest Alliance, are based on a 'Theory of Change' (Sustainable Agriculture Network, 2017:3), which is an outcome-based strategy as explained in section 4.3.2, for reaching the sustainable transformation of agricultural lands.

To gather knowledge about how this certification reached the Sri Lankan tea industry and how it has been implemented and transformed, the discussion continues in the next section.

7.3 Mediation of Rainforest Alliance certification in circulating a sustainability conception in the Sri Lankan tea industry

In order to gather knowledge about how Rainforest Alliance certification transforms its conception locally, the study explored how it acts and is enacted in the local context. The study used an ANT methodology to explore its actions and transformation by following the network of actors, analysing local actors' interests to understand why/how they are interested in the certification and trace their relations not only with human actors but also with non-human devices/systems. The first subsection discusses how ANT helps in understanding the mediation of Rainforest Alliance certification in enrolling local supply chain actors into its network by analysing the actors' interests regarding enrolment.

7.3.1 Goal translation: The enrolment (or not) of local supply chain actors

The study found Rainforest Alliance certification mediates in translating the goals of local actors to adopt it. Under ANT, actors are enrolled where the certification technology provides a solution to their respective goals, and the certification must enrol sufficient actors to 'exist' in the Sri Lankan tea industry. Where the certification fails to provide the anticipated solutions to enrolled actors, they may seek to change the certification or simply leave the network, thereby endangering its stability. The sections below discuss how Rainforest Alliance has been able to provide solutions to the interests of different actors in the local supply chain.

- **Initial 'mandatory' adoption**

Within the local Sri Lankan context, Rainforest Alliance certification was initially adopted only by two first-tier suppliers that were local entities of large multinationals: a multinational producer (Finlay) and a multinational buyer/exporter (Unilever). Their adoption of the Rainforest Alliance was not voluntary, instead it was forced as a procedural compliance with the parent company's sustainable production and sourcing strategies that demanded the production and purchase of Rainforest Alliance tea. For local entities of global groups, adoption is not explicitly motivated by social and environmental sustainability interests, but rather by internal pressures to conform to parent company expectations (Beddewela and Herzig, 2013, Momin and Parker, 2013) as they are visible actors in the tea supply chain (Lund-Thomsen and Nadvi, 2010, Lund-Thomsen et al., 2016b). Multinationals are enrolled by the Rainforest Alliance in circulating the Rainforest Alliance certification towards the export-oriented tea supply chain in Sri Lanka. This is in line with the certification promotion strategy of the Rainforest Alliance NGO which relies on the acceptance of its certification by large

multinational producers who promote the certification among consumers and across their supply chains. This is evidenced by commitments from large multinationals such as Kraft, Mars, Unilever, Mondelez and Tata Global to source Rainforest Alliance -certified tea, coffee and cocoa (Rainforest Alliance, no date). Such dependency on multinational corporations, whom the NGOs expect to monitor social and environmental compliance in their supply chain, raises problematic concerns over the effectiveness and legitimacy of private certifications (Wells, 2007). Leading multinationals in the tea industry commonly promote Rainforest Alliance certification as a sustainability certification (IDH, 2011) as a response to global pressure to undertake corporate responsibility, even for activity not under their direct ownership or control (Andersen and Skjoett-Larsen, 2009, Burritt and Schaltegger, 2014). Mainly export-oriented local supply chains in developing economies are subject to external pressure to adopt CSR strategies (Kolk, 2005, Mamic, 2005). In turn, for multinationals, improvement of supply chain conditions in developing economy suppliers is a means for 'commercial sustainability' (Gereffi and Lee, 2016, Lund-Thomsen et al., 2016b, Yu, 2008), and acts as a means of differentiation (Giovannucci and Ponte, 2005). As revealed in the study, for the multinational parents of local entities, Rainforest Alliance certification is indeed a means for commercial sustainability.

The findings from producers who were a direct party of a multinational supply chain support the existing studies that reveal multinationals adopt accountability certifications to enhance their reputation, profitability, legitimacy and thereby commercial sustainability (Lund-Thomsen and Nadvi, 2010, Henson and Humphrey, 2010, Yu, 2008, Kolk and Van Tulder, 2002).

Next, in focusing on the transformation of the Rainforest Alliance certification within the local supply chain, as mapped out in the methodology chapter, this study followed Rainforest Alliance actors beyond the first tier of the supply chain to understand why/how they are interested (or not) in Rainforest Alliance certification. They included tea producers (Regional Plantation Companies and a smallholder tea company), exporters/buyers, brokers and state regulatory and monitory bodies and an industry association. This represents the Sri Lankan Rainforest Alliance network, the unit of analysis of the study. The section below discusses why and how the Rainforest Alliance actor network expanded locally.

- **Expansion of the local Rainforest Alliance actor network through market dynamics**

The introduction of Rainforest Alliance certification even just by the initial adopters discussed above changed the dynamics of the tea market and led to some (but not all) firms choosing to voluntarily adopt the certification. Alterations to market dynamics rest on the distributed actions of human and non-human actors: market participants, market devices and industry regulatory/monitory bodies. The introduction of Rainforest Alliance through the direct supply chain of multinationals altered the network relations. In the local context, Unilever as a larger buyer of Ceylon tea promoted Rainforest Alliance certification at the auction by choosing, but not guaranteeing, to pay a higher amount for Rainforest Alliance tea. It seems that they do a pay a premium and this has been observed by market participants. Unlike some other certifications, the Rainforest Alliance NGO does not require buyers to pay a guaranteed variable/fixed premium that could compensate for the costs of adoption; instead, Rainforest Alliance expects the certified producers to benefit from the market via acceptance of the quality (Kolk, 2012). Furthermore, with Unilever's declaration to source only Rainforest Alliance-

certified tea globally by 2020, there emerged a likelihood of a future demand for Rainforest Alliance tea. Driven by expectations of Unilever for demand and the possibility or expectation of a price premium, local market participants observed an alteration in the market dynamics. Moreover, Rainforest Alliance -certified tea became visible at the Colombo tea auction in material devices, the 'tea catalogue', that carry the message 'certified' across the supply chain, thereby altering market dynamics and offering a means to differentiate tea (Giovannucci and Ponte, 2005). The tea catalogue differentiated 'certified tea', but it can be any certification, which led some participants to perceive that those batches were of higher quality and worthy of higher prices. In accordance with the theoretical notion of circulating reference, the Rainforest Alliance logo, a certified imprint, inscribed in the auction catalogue represents a 'text' (Latour, 1999:71), a reference to 'sustainability'. This enables certified Sri Lankan tea to be perceived to be faithfully representing the conception of 'sustainability' conceived in developed economy, America by the Rainforest Alliance.

In addition, Rainforest Alliance tea is supported by actors representing industry regulatory/monitory bodies because it offers a means to pursue their goals. One interesting area is Rainforest Alliance's mediation in environmental conservation, mainly soil erosion, which is considered poorly attended to by the tea producers especially after privatisation. Similarly, Rainforest Alliance certification encourages compliance with certain local regulations, such as clearing of forest areas that were poorly enforceable before. From a critical perspective, it can be argued that the NGO network and adopting multinationals are filling regulatory gaps and getting control over local tea supply (Constance and Bonanno, 2000). From a commercial perspective, they seek the Rainforest Alliance's help in positioning Ceylon tea as being of high quality in Western markets and in preserving future export income.

The introduction of Rainforest Alliance also affected network relations involving tea brokers and tea producers. Brokers at the Colombo tea auction observed that the demand/price premium afforded to some Rainforest Alliance -certified tea producers enabled them to increase their brokerage fees. They in turn would communicate their observations of the auction to client tea producers of the increased demand and pricing afforded by Rainforest Alliance -certified tea. This shows how viewing through an ANT lens enables capturing different local actors beyond the first tier (brokers, smallholders and industry regulators/associations) into the analysis of local interactions. In addition to the human actors, it provides an opportunity to incorporate non-human actors such as market devices. Therefore, ANT can be considered as a solution to the call for a theoretical framework for analysing local voices and dimensions (Tallontire et al., 2011). The section below summaries the agency of the certification in enrolling local supply chain actors into its network.

- **Reflections on the agency of the Rainforest Alliance certification in enrolling local supply chain actors**

As discussed, these market dynamics that change network relations, price/demand expectations and support from the statutory bodies became attractive to some actors (but not others) to voluntarily adopt the Rainforest Alliance certification. In analysing the formation of the Sri Lankan Rainforest Alliance network, as the unit of analysis of the study, the study found that a number of local actors are enrolled into Rainforest Alliance through expectations of a competitive advantage, based on price. As the study revealed, an independent Regional Plantation Company not directly affiliated to a multinational supply chain worked for Rainforest Alliance certification at the same time as a multinational local producer in the hope of competitive advantage. The motivation to adopt the Rainforest Alliance was boosted when

Unilever offered to pay a direct premium for the procurement of 'refuse tea'[11] to a number of Rainforest Alliance -certified Regional Plantation Companies. The hope of price-based competitive advantage further altered network relations, and motivated some other actors to expand the number of their Rainforest Alliance -certified estates.

Several other actors enrolled as they perceived a need for certifications in order to sell to Western buyers. The findings demonstrated the notion of the certification being written by an NGO based in North America and therefore pushed onto the developing economies by multinationals based in the developed economies (Blowfield, 2003, Leigh and Waddock, 2006, Tallontire et al., 2009, Kolk, 2012).

The local Rainforest Alliance network is strengthened where actors perceive that it offers a solution to their commercial goals. However, the stability of the network is threatened where the expected commercial benefits do not arise. For example, one of the first adopters of the Rainforest Alliance and the only producer representing smallholders later gave up the certification due to disappointing commercial returns and a lack of support for promoting sustainable practices amongst their 600 certified smallholder growers. For them, the Rainforest Alliance failed to provide a solution to their commercial interests. For other tea producers unattached to those multinationals committed to sourcing Rainforest Alliance tea, the certification offered no commercial advantage and was ignored. Whilst Rainforest Alliance enrolment had been mainly due to alterations in market dynamics, some believed, especially the latest Rainforest Alliance seekers that Rainforest Alliance and agricultural sustainability are essential for the sustainability of the tea industry, which theoretically represents how their enrolment is influenced as a formation of a composite goal. In addition, foreign buying

[11] Off-grade tea often processed further to extract tea for teabags that can be sold by commercial producers.

companies from Japan and the Netherlands who had worked with the Rainforest Alliance in other countries had sponsored selected Regional Plantation Companies to adopt Rainforest Alliance certification via a local Sri Lankan Rainforest Alliance agent.

The findings showed that tea producers enrolled in the Rainforest Alliance network because it provided a solution to their goal of commercial sustainability, rather than environmental or agricultural sustainability. The Rainforest Alliance was simply perceived as a means of differentiating tea on the basis of 'process quality' (De Neve, 2009), rather than denoting agricultural sustainability. It thereby offered a commercial solution to some tea producers and intermediaries where it was perceived to provide the opportunity for secure demand and/or higher prices.

The 'original' conception of agricultural sustainability inscribed into the Rainforest Alliance by a North American NGO underwent transformations in the local context – a goal translation. Decoupled from the aspirations of consumers in the Global North, local tea producers and intermediaries were enrolled and 'attached' to the Rainforest Alliance as a simple means of differentiation and competitive advantage. The discussion continues on how the Rainforest Alliance mediates the tea producers in implementing the certification requirements as a means to pursue their goals, thus forming a composite Rainforest Alliance.

7.3.2 Composition: Changes in local management, accounting and agricultural practices

Local producers and other actors adopted Rainforest Alliance due to expectations of commercial advantage (their goal is commercial sustainability). But the goal of the Rainforest Alliance NGO is to promote agricultural sustainability (environmental sustainability). How can the Sri Lankan Rainforest Alliance network fulfil both goals? This section discusses how the

Sri Lankan- Rainforest Alliance certification network interacts to produce a composite goal (fulfilling the commercial aims of local producers and other actors, and the environmental aims of the Rainforest Alliance NGO) through effectively blackboxing the process of certification. ANT helps in analysing how a range of internal and external human actors, material devices and systems interact in the adoption process forming a composite Rainforest Alliance and its unintentional effects. As revealed from data, a major form of device used to blackbox the process of certification is the Local Interpretation Guideline

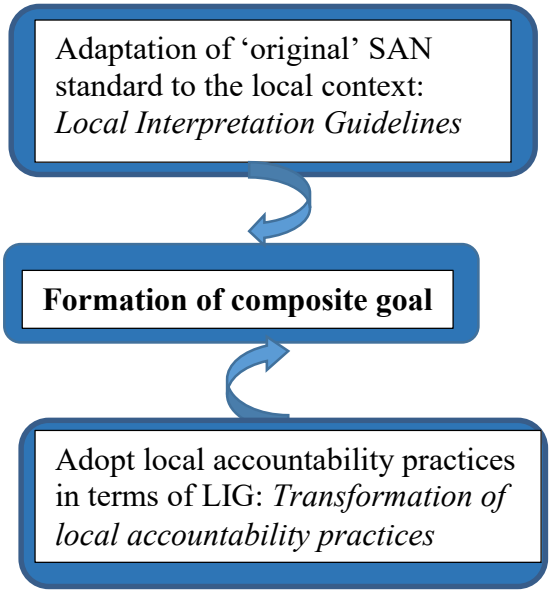
- **Reversible Blackboxing: Formation of a Local Interpretation Guideline**

A translation of certification requirements was inscribed into Sri Lankan 'Local Interpretation Guideline' developed over a three-year period since 2011 by the Rainforest Alliance NGO collaborating with local prospective/certified producers and others. This was due to the lack of a local Rainforest Alliance representative and therefore for early adopters of Rainforest Alliance in Sri Lanka, the Sustainable Agriculture Network standard was initially interpreted by the local tea producers themselves. Resistance from local tea producers included the scope and applicability of particular requirements of the Rainforest Alliance within the local context as disclosed in Section 6.2.1 of the analysis chapter: illegal encroachments, lack of control over natural ecosystems such as mini-forests, streams/rivers and worker houses within the estate boundaries as they belong to the government. Furthermore, Rainforest Alliance considers how certain requirements are not legally binding, such as ground water extraction, domestic waste disposal and use of incinerators for waste burning as uncommon local practices.

Whilst this shows how the 'original' Sustainable Agriculture Network (SAN) standard was adapted as a local interpretation guide fitting the local environment, in analysing further the transformation of Rainforest Alliance, the next section discusses how the goals and practices of

local tea producers adapted as Rainforest Alliance was implemented, forming a composite Rainforest Alliance.

Figure 7.1: The Formation of Composite Rainforest Alliance in the Sri Lankan Context



As illustrated in Figure 7.1, both sides transformed to meet the composite goal.

Although Section 7.2.1 reveals how the agricultural sustainability goal of the Rainforest Alliance NGO was translated by local tea producers as commercial sustainability, this section details whether (and how) both goals were synthesised in the enactment of the Rainforest Alliance within the local context.

The discussion draws on the ANT concept of 'composition' as shown in the theoretical framework to understand whether and how the Rainforest Alliance mediates the practices of tea producers in providing solutions to the goals of both agricultural and commercial sustainability. The Rainforest Alliance is viewed as a certification technology, and as Latour (1999) argues, a technology is programmed for a set of actions ('specific subprogrammes').When this

technology is entangled with human actors, a 'sociotechnical' hybrid actor emerges and a composite or combined goal is achieved through specific subprogramme/s. Thus, the analysis focused on how these subprogrammes create social and environmental accountabilities, and measure, evaluate, monitor, make visible and communicate compliance.

The Sustainable Agriculture Network standard and the certified tea producers interact (as a sociotechnical 'hybrid actor') in adapting the requirements of the standard (the subprogramme/s) to ensure they can meet their own commercial goals through the certification.

Although tea producers and intermediaries were enrolled into the network by expectations of commercial rather than agricultural sustainability, the subprogramme/s are active in ensuring the composite goal of commercial and agricultural sustainability is achieved. The composite Rainforest Alliance is formed through enacting the sustainability standard through the influential requirement (subprogramme) for a Social and Environmental Management System (SEMS).

- **Reversible Blackboxing: The role of the standard operating procedure manual**

The requirements of the Rainforest Alliance certification (its subprogramme/s) were inscribed as standard operating procedures within a certification manual prepared by the head office of the Regional Plantation Companies. From the theoretical viewpoint, this manual represents a transformation of the Local Interpretation Guideline through 'particularity' (Latour, 1999:71), enabling circulation of agricultural sustainability within the levels of tea estates. The manual, which is a referent to the Local Interpretation Guideline, acted as a 'spokesperson' for the head office within individual tea estates.

An influential subprogramme emerged commonly across all studied cases of the Regional Plantation Companies adopting Rainforest Alliance. This represents an adaptation of the Rainforest Alliance standard's first principle that requires certified farms to set up a specific 'Social and Environmental Management System' and to provide evidence of its existence via management and accounting inscriptions. The study finds that certified tea producers have formalised social and environmental management and accounting information systems and formally inscribed agricultural practices into devices that can be monitored that have transformed local responsibilities towards agricultural sustainability. At the corporate level, specific policies were developed for all ten Sustainable Agriculture Network standard principles involving, for example, waste, soil, wildlife conservation, wages and chemical usage. A key feature of each of those policies was an explicit commitment to local rules and regulations.

Guided by the head office Rainforest Alliance Manual, estate actors have initiated accounting for social and environmental aspects. For instance, they have created performance indicators representing both quantitative and qualitative measurements. Quantitative indicators included inventories of flora and fauna, measurements of ground clearing and the usage of chemicals, fertilisers, and water and energy sources. Qualitative indicators related to, for example, worker/community training, health and medical records, boundary plucking, waste collection reports, water maps, waste disposal plans and third-party reports such as water/soil sample laboratory reports. The Rainforest Alliance certification inscribed within evidence of compliance: documents, written records, event photos/videos and as well as observable infrastructure and other physical changes which are powerful inscriptions used in management accounting systems (Kastberg and Siverbo, 2016). These inscriptions circulate the message of the Rainforest Alliance across the supply chain, enabling it to "act at a distance" (Robson, 1992).

Social and environmental internal auditing was another Rainforest Alliance -mediated practice. This has become an integral part of the management activities, appointing a specific person at the head office for monitoring and controlling of Rainforest Alliance -required activities at the level of certified estates.

The study revealed that improved social and environmental accounting mechanisms such as the use of Key Performance Indicators, budgetary controls and cost controls motivated local estate actors to innovate in operational and cost efficiency and control and improve social and environmental performance. For example, one Regional Plantation Company estate revealed that they improved their waste disposal targets by producing firewood alternatives from refuse tea. Tea producers had experienced high costs of production through the continued use of old machinery, leading to high energy costs and low yields with low rates of replanting and new planting. Improved waste management practices and worker/community health and safety awareness have resulted in reduction in disease (for example dengue fever) as another social as opposed to environmental benefit. Whilst the Rainforest Alliance certification is mainly focused on environmental and biodiversity aspects, its social benefits/impacts requirements are limited to the occupational health and safety of workers. These types of accounting focused on sustainability are known as 'accounting-sustainability hybridisation' as they help to transform practices (Thomson et al., 2014:453). Even though agricultural production becomes subject to calculative practices, problems can arise in turning environmental and biodiversity aspects into accounting calculations (Cuckston, 2013).

- **Transformed local accountability practices**

Apart from accounting for social and environmental aspects generating inscriptions, tea producers have also formalised their activities. In particular, a number of key Rainforest

Alliance activities, waste management, occupational health and safety of workers, soil conservation and ecosystem conservation have led them comply with local laws and regulations. These created a number of interessement devices such as corroborative working structures enrolling actors from all functional areas towards the Rainforest Alliance network. Their enrolment was further strengthened by giving responsibility for creating inscriptions as part of their usual job role, such as for field officers to account for wildlife citing, welfare officers to record worker/community engagement activities, estate doctors to maintain health records of sprayers, thus another example of the use of interessement devices. The study found that tea producers adopting the Rainforest Alliance reported observable changes in agricultural practices, infrastructure and field-level changes such as plantation boundaries, demarcation of buffer zones, animal crossing areas, cover crops and cross-bunds.

Historically, tea producers had only committed to philanthropic forms of CSR, including worker welfare activities and community activities such as sponsoring of cultural and religious events, spectacle donations and sponsored annual picnics for workers and their families. These activities relate to the cultural notion of 'Dana' (Alawattage and Fernando, 2017:1). By generating explicit corporate 'sustainability' strategies, certified tea producers widened the scope of their social and environmental accounting responsibilities towards agricultural sustainability beyond their current CSR engagements of philanthropic activities (Jamali, 2014) and employee pay and welfare (Welford and Frost, 2006). Thus, this is a part of the process of composition, showing adaptation of the historical and cultural notion of CSR (Dana) to incorporate some of the agricultural and environmental notions of 'sustainability' inscribed within the Rainforest Alliance standard conceived in North America.

- **Adoption of new accountability practices**

Apart from the initiating of new accounting and management information systems within tea producers via the creation of inscriptions and formalising previous activities, the Rainforest Alliance has mediated in introducing new practices as a composite goal and includes two such activities in common. One key activity relates to the initiation of activities to improve the occupational health and safety of the chemical sprayers and fieldworkers whose welfare was often previously ignored. This led to costly infrastructure developments and recurrent costs relating to the health and safety of the largest workforce, the fieldworkers.

The other key new activity which was common to all certified actors was training/educating workers/community related to social and environmental aspects, mainly on domestic waste management. This again has been conducted on a continuous basis to enable the composite goal. These two activities have mainly brought about wider social benefits such as the improvement of the health care of workers and community. As presented in the analysis chapter, the enactment of these Rainforest Alliance activities has mediated in improving relations between workers, community local interest groups including Public Health Inspectors and state medical officers who have been able to redirect dengue fever to other hospitals. As reported, most of the state organisations responsible for social and environmental issues were not properly discharging their services, especially the waste management authorities. Those activities were considered only the responsibility of the respective state organisations, and now estates have mediated in awakening sleeping local authorities. This shows how private certification is playing a regulatory role, and the literature reveals how regulation is being outsourced to the private sector (Chiapello and Medjad, 2009). Estates now experience changes in practices, of which they are a part. However, they are concerned about the time it will take for a real change.

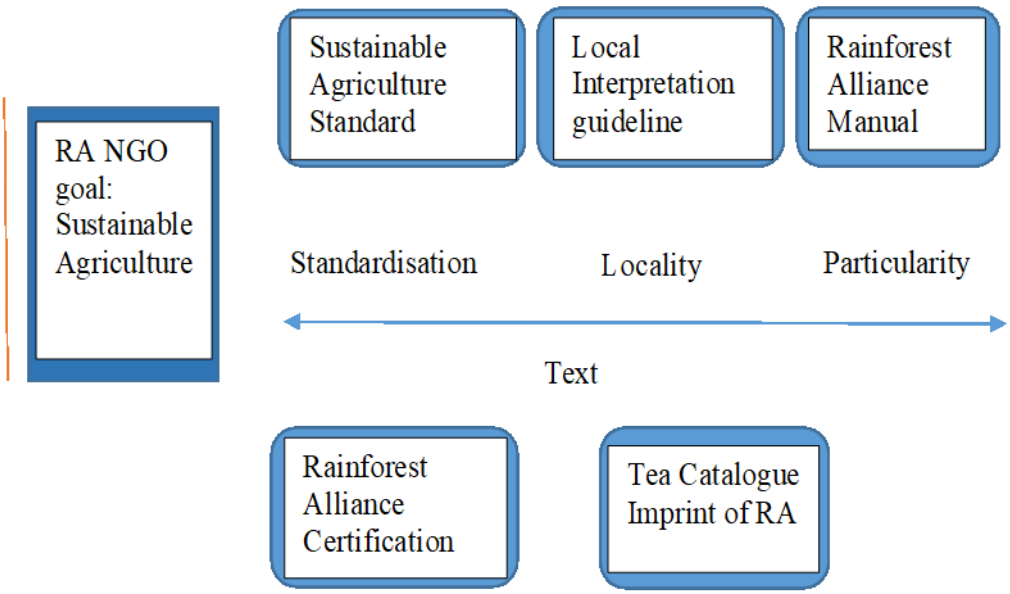
Within the tea producers, the findings suggest that the new social and environmental responsibilities were considered as of strategic importance and actors were mainly committed to compliance. This is consistent with prior studies even from different countries/contexts commonly recognised as adopted for commercial benefit rather than a genuine focus on improvement of social and environmental conditions in the local supply chain (Yu, 2008, Perry et al., 2015, McPhail et al., 2016)**.** However, the findings of the study supports a coordinated approach to accountability certifications. A study provides evidence that a coordinated approach as a new system has improved worker conditions in this multinational's large number of suppliers' factories through collaborative problem-solving, sharing of information, benchmarking of best practices, probing into root causes, and auditors changing their role from policing to consultancy (Locke et al., 2009). The section below summarises the agency of the Rainforest Alliance certification in changing local accountability practices.

- **Reflecting on blackboxing the certification process: the formation of a composite goal**

As discussed throughout the above two sections, Figure 7.2 illustrates how a conception of agricultural sustainability is inscribed into a certification and series of transformations from the North American Rainforest Alliance NGO to the local tea industry which are traceable back and forth as references. The notion of circulating reference helps explaining whether the local Sri Lanka - Rainforest Alliance (although different), is seen as a faithful representation of the global Rainforest Alliance. This depends on the chain of transformations. The transformation of the sustainability conception to Rainforest Alliance certification via standardisation is discussed in Section 7.1 as the first form of circulating reference. Another form of reference is the Local Interpretation Guideline. The Local Interpretation Guide represents a transformation of the 'original' Rainforest Alliance standard through 'locality', fitting to local requirements enabling

circulation (Latour, 1999:71). This became the faithful representation of the sustainability standard to the local tea producers and mainly to the Rainforest Alliance auditors in certifying compliance practices in the Sri Lankan context. Similarly, the Rainforest Alliance Manual has become a faithful representation of the standard/Local Interpretation Guideline which specifies the standard operating guidelines in forming a composite Rainforest Alliance in the local context. Actors at the tea estate level who implement Rainforest Alliance practices adopt the Rainforest Alliance Manual as a faithful compliance to the sustainability standard/Local Interpretation Guideline. The tea catalogue imprint of the Rainforest Alliance logo adds another form of reference to the chain of transformation of the North American NGO's conception of sustainability via its inscription as 'Rainforest Alliance -certified tea'. That carries the message of compliance across the market participants at any distance, as with the original Rainforest Alliance, which can be traced back and forth to any number of faithful transformations involved in between. In addition, as shown in the fieldwork photo (figure 6.9), Rainforest Alliance displays in the estates show another circulating reference (to the frog, even though it has through quite a series of transformations). Finally, irrespective of the number and nature of transformations involved in between, Rainforest Alliance certification is evidence of sustainability compliance as sought by the North American NGO convincing a wider range of stakeholders such as global tea consumers, NGOs, buyers, retailers and a range of other actors. For all of them, the certification is a faithful text (Frandsen, 2010) that carries a common representation of compliance with a North American conception of sustainably produced agricultural products.

Figure 7.2: An Illustration of the Circulating Reference of 'Sustainable Agriculture'



In summary, the work of producing a Sri Lankan variant of the Rainforest Alliance certification, through the creation of the Local Interpretation Guideline and the certification manuals, can be seen here to be vital to securing and stabilising the adoption of Rainforest Alliance certification within the Sri Lankan tea industry. The Guideline and manual effectively blackbox the process of certification, such that it becomes accepted as a quality standard within the industry. On the one hand, the certified tea producers interacted with the Sustainable Agriculture Network standards embedded in Rainforest Alliance, and adapted the requirements to ensure they could continue to meet their own commercial goals through the certification. On the other hand, the requirements inscribed in the certification manuals led to changes in practices perceived to have social and environmental benefits, thereby meeting the social and environmental sustainability goals of Rainforest Alliance.

Having discussed the process of transformation of the Rainforest Alliance certification from the North American NGO level to the local tea industry and understanding the local adoption

as a means for composite goals, the next section discusses how the Rainforest Alliance would stabilise its network further.

7.3.3 Attachments: Rainforest Alliance certification's intended/unintended consequences on its stability

The study found unintended outcomes of the certification that adversely affected its network stability and several factors that would strengthen its network.

i. Unintended consequences: The exclusion of smallholders

This subsection highlights a major unintended consequence of the Rainforest Alliance certification in the local Sri Lankan context. One aspect of the Sustainable Agriculture Network standard inscribed in the certification manual required the separation of Rainforest Alliance and non- Rainforest Alliance tea.

In the local context, smallholders are significant as the largest grower sector (59% of the total local tea-growing land extent) and contributing to the total green leaf production (72%) in contrast to the corporate sector (Regional Plantation Companies and the state). Smallholders sell tea to private tea factories (some private tea factories themselves are smallholders) and to Regional Plantation Companies who buy leaf tea in addition to growing tea on their own estates. Regional Plantation Companies adopting the Rainforest Alliance had therefore to separate their own tea (grown in accordance with the Sustainable Agriculture Network standard) from tea bought from smallholders. Due to the practical difficulties in separately processing two batches of tea that were previously processed together, the Regional Plantation Companies faced a dilemma. They had to enforce a segregation of non- Rainforest Alliance tea bought from smallholders that incurred additional costs. Alternatively, they could encourage smallholders to grow Rainforest Alliance tea but were unwilling because they then bore responsibility for the

conditions under which smallholder tea was grown, even though they had little control over the smallholder estates. Due to the additional costs and absence of direct control over (but responsibility for) smallholders, some Regional Plantation Companies had to exclude their own estates from getting Rainforest Alliance -certified. Others who continued with bought leaf excluded smallholder tea from Rainforest Alliance certification. In both cases, the Rainforest Alliance certification was limited only to the Regional Plantation Companies own estate teas. This led to a loss of competitive opportunity at the tea auction for smallholder teas and in turn, they were paid only the minimum guaranteed price by the Ceylon Tea Board. On the other hand, excluding the smallholder sector itself as the largest grower sector in the local tea industry impacted negatively on the Rainforest Alliance's intention of promoting sustainability. Local industry institutional actors expressed concerns over risks of market accessibility in the future with smallholder teas;

> Tea is a big industry. I don't know how long it will be sustainable.[The] industry is taken over by smallholders… [Certification requirements] will come to [the] smallholder level. (LC2M1)

This represented an unintended consequence of Rainforest Alliance certification in the local context threatening to destabilise the Rainforest Alliance network. As mentioned before, the North American NGO aims to improve the social and environmental aspects of agricultural activities. It aims for the farming community to benefit economically and socially from adopting best agricultural practices that will in turn ensure the conservation of biodiversity and the environment. However, as revealed, certified tea companies have excluded smallholder tea from the certification and certification has been limited only to a few large plantations in the local context. As a result, on the one hand smallholders' earnings are limited to the minimum price guaranteed by the state and deprived of price premium benefits available for certified teas, thus negatively affecting their economic sustainability and the social sustainability goal of the

Rainforest Alliance. On the other hand, smallholder agricultural practices are not certified as sustainable and therefore may negative impact on the environment. So excluding smallholders from the Rainforest Alliance certification, as the largest local grower sector, amounts only to a partial fulfilment of the social and environmental sustainability goals of the North American NGO in the Sri Lankan tea industry context. This can be a source of destabilisation – if you're not applicable to most growers, the network can disintegrate

Outside the local context, this unintended consequence has become a major concern of the Rainforest Alliance NGO itself. In response to this finding highlighted in the analysis, the Rainforest Alliance certification body is currently networking with environmental conservation-interested bodies such as the UN environment programme for sponsorships and with local supply chain actors including the Tea Smallholding Authority, who are aiming to enrol 14,000 smallholders into the Rainforest Alliance. Furthermore, as part of tea smallholder certification-oriented initiatives in Africa and Asia, the Rainforest Alliance and Unilever have entered into an agreement to certify 700 local smallholders supplying one large producer, Finlay. Unilever sponsors training these smallholders into sustainable agricultural practices (Unilever, 2017). As per previous smallholder certification systems in the local context, Finlay as the certification holder of targeted group of smallholders would incur the certification costs as part of their commitment to Rainforest Alliance certification as a sustainable production strategy. Given the funding (&fees) seem to be from the adopting companies/buyers as revealed in the section 4.3.1, this suggests Rainforest Alliance must meet their interests (perhaps more so than the tea producers).

This illustrates the ignorance of some local priorities and conditions in the implementation of global certifications. On one hand, this is due to the design of accountability standards focused only on plantations disregarding the capabilities of understanding and implementation by

smallholders (Giovannucci and Ponte, 2005, Blowfield, 2003). As one study on Ethical trade reveals, the ethical standard does not incorporate smallholder priorities in the tea, coffee and cocoa supply chains such as security of land tenure, a clear and fair legal system, fair price and timely payment, and hence ethical trade have failed to deliver real benefits to smallholders (Blowfield, 2003).

On the other hand, a stream of the literature claims that supply chain CSR is context/country-specific (e.g.Lund-Thomsen et al., 2016a, Campbell, 2007). For instance, several studies report that even though child labour is prohibited by North/Western NGOs' initiatives, it provides them an informal education and a means to sustain life in certain areas of some countries in South Asia (Khan, 2007, Ruwanpura and Roncolato, 2006). Compliance with accountability certifications may not provide any assurance that harmful social and environment impacts are minimised. For example, it was reported that even certified factories have caught fire in Bangladesh and Pakistan losing the lives of large number of workers (Clean clothes campaign/SOMO, 2013). Another study reports in the context of compliance of accountability certifications by the garment suppliers in several other Asian countries, issues relating to auditing such as the use of inaccurate information, bias, and beyond these, absence of reward/punishment by the buyers (Locke et al., 2009). A recent study of Bangladesh garment industries reveals that the implementation of industry accountability certifications as have led to number of unintentional effects such as avoiding recruitment of unskilled workers for the industry, making them unemployed, stoppage of free lunch due to costs of implementing certification requirements and increased workload by reducing overtime (McPhail et al., 2016). With these weaknesses and the unintended consequences of global accountability certifications, they often fail to address specific social and economic issues (e.g.Belal and Roberts, 2010, Lanka et al., 2017) and scholars call for studies to report on how different voluntary

mechanisms would bring unintended consequences to distant supply chains (Timmermans and Epstein, 2010).

ii. Developing local certifications

The introduction of the North American Rainforest Alliance certification has inadvertently led to the formation of more local certifications more sensitive to the Sri Lankan context. As the study reported, state bodies are involved in formulating local certifications to distinguish Ceylon tea on finished product quality, instead of process quality oriented voluntary certifications. The literature reports this tendency of the development of private accountability standards at the level of developing economy suppliers. As reported, these developing economy based standards have benchmarked international certifications such as Global GAP and developed national brands to promote their exports in Northern and Western markets, for example, Kenyan GAP and the Horticulture Ethical Business Initiative (HEBI) of the cut-flower industry in Kenya and Chile GAP (Tallontire et al., 2011). Similarly, a study reports countries around the world have responded to the international private forestry certification, Forest Steward Council by developing alternative local certification schemes (Auld et al., 2008).

This can be considered as an opportunity to add value to exports as an owner of a developing economy based standard, but as Henson and Humphrey (2010) question, the problem is with difficulties in brand establishment and acceptance by developed economy retailers. Particularly, in the food sector, private accountability certifications that are recognised as risk management mechanisms, such as the International Food and SA 8000 that standardise food safety and non-food safety attributes, will continue to stay in the food value chain. On the other hand, other types of certification such as Rainforest Alliance and Forest Stewardship Council that are recognised as mechanisms of product differentiation are used as a competitive strategy by

powerful supply chain actors who increasingly promote them in the food supply chain (Henson and Humphrey, 2010, Duguid, 2003).

As, the study has found, beyond the development of local certifications as a means to promote Ceylon tea in the export markets, private accountability certifications have awakened certain state environmental monitory/controlling bodies to address local social and environmental issues through setting up local mechanisms. The local green labelling initiative is one such which seeks to make industries comply with local priorities such as sound pollution in addition to social and environmental aspects addressed by the Rainforest Alliance certification (and other certifications). In addition, they have taken steps to revise environmental protection laws (the tea industry is planned to change from a low-risk pollution category to a high-risk category) which otherwise continues to certify tea producers as green under existing laws even though the tea industry continues to pollute natural water bodies by disposing of tea wastes.

The success of these local initiatives in term of their acceptance by the actors in the tea supply chain and possibility of managing local sustainability issues with the awakening of local legal bodies would negatively impact on the Sri Lanka - Rainforest Alliance's network stability. As highlighted in the analysis, the Rainforest Alliance certification is articulated with an inscribed meaning of 'sustainability' and it is delegated to sustainably transform agricultural supply chains. As the next section discusses, in the local context, the Rainforest Alliance certificate articulates the enforcement of local laws.

iii. Delegation: Articulation of a meaning of local law enforcement

A key part of the Sustainable Agriculture Network standard was a requirement to comply with local regulations. As mentioned before, local laws and regulations were specifically inscribed in the 'Local Interpretation Guideline'. As presented in the Section 7.1, industry

regulatory/monitory actors were attached to the Rainforest Alliance network due to its indirect enforcement of local environmental regulations. Then Section 7.2 presented how the existence of certain regulatory requirements such as the Soil Act became known to local tea producers only after Rainforest Alliance, and how tea producers now comply with relevant social and environmental laws in conducting agricultural practices. As shown, tea producers educate and encourage their service providers, suppliers, workers and community around local law compliance. Hence, local law enforcement represents an attachment that binds the local industry regulatory/monitory actors, local rules and regulations and the tea producers to the Rainforest Alliance and help stabilise the network.

As noted in the literature review, private accountability standards are known as 'soft laws' that fill the regulatory vacuum by setting up social and environmental standards. However, their role over hard laws are controversial in the literature. Some argue even though these private standards in the form of non-binding regulations provide clear guidance on labour standards, other social aspects and environmental standards, expecting to change corporate behaviour, are weak in terms of transparency and also in other core areas such as implementation, monitoring and compliance (Adeyeye, 2011) and are 'too weak for the job' (Wells, 2007:51). Therefore, they need enforcement through hard laws; for instance, the United Nations Convention Against Corruption (UNCAC) is considered such an accountability initiative that seeks to enforce through hard laws and even includes a provision to regulate to take actions against multinational corporations' corruption. However, so far it has only been enforced in the US through the Foreign Corrupt Practices Act (Adeyeye, 2011). On the other hand, it is evident how states have 'outsourced' regulation to private standard-setting bodies such as by the European Union to IASB, and critiqued as "wholesale subcontracting of standard-setting to a private organisation" (Chiapello and Medjad, 2009:449) rather than private actors involved in the standard-setting

process. Similarly, fishing industries are globally regulated by the Marine Stewardship Council (MSC), which was set up by the World Wildlife Fund and Unilever as a "supranational regulatory mechanism" (Constance and Bonanno, 2000:125).

In contrast, some studies provide evidence that soft regulations enforce the hard laws and that both soft and hard regulations work complementarily in improving workers' conditions in the apparel sector in the Dominican Republic. Both parties, private and state, are identified as having their own strengths and weaknesses and therefore when both work for the same target (apparel sector worker conditions) this has resulted in improved worker conditions (Amengual, 2010).

The findings of this study, in the context of Rainforest Alliance certification, support this notion of soft regulation illustrating how global certification acts within the regulatory space as a form of soft law. The Rainforest Alliance as a private sector North American NGO certification has mediated in the creation of a 'regulatory space' in which it combines tea producers, the Tea Board and other regulators who collectively define and enforce local 'regulations'.

There is, therefore, a sense in which the Rainforest Alliance certification is an articulation of compliance with laws and regulations that have long been supposed to govern practice in the industry but have historically been poorly enforced. That is, social and environmental sustainability, as expressed by this certification, here comes to mean a greater compliance with legal and regulatory requirements. Thus, the adoption and implementation of Rainforest Alliance certification in the Sri Lankan tea industry may be understood to articulate movement towards an industry that is seen to be more effectively regulated and governed.

7.4 Implications

Certification studies commonly perceive certifications as already originated in a different context (developed economies) and being pushed by powerful buyers/suppliers to implement them in another context (developing economies). Traditionally, multinationals are conceived as powerful actors in the supply chain who dictate, *what/where to produce* and *how to produce* their supplies (Gereffi and Lee, 2016). Therefore, 'power' is traditionally conceived as being held by multinationals as they push certifications on the local industry, dictating social and environmental conditions in their supply chain as well (e.g.Soundararajan and Brown, 2014). This underemphasises the agency of local firms and actors in terms of how they chose to implement sustainability certifications and is silent about the certification's agency (Mzembe et al., 2015, Knorringa and Nadvi, 2016, Prado and Woodside, 2015). Drawing on Actor Network Theory, this study views certification differently, as Northern certifications co-constructed in developing economy supply chains contributing to the body of knowledge in three aspects: theoretical, empirical and providing suggestions for policy decisions, as discussed below.

7.4.1 Theoretical contribution

The Rainforest Alliance, the focused certification of this study, was developed by a North American NGO for promoting the sustainability of agricultural activities. As the first key theoretical contribution of the study, ANT enables sustainability certification to be viewed as being co-constructed in the tea supply chain in Sri Lanka. Accordingly, this study conceptualises the Rainforest Alliance certification as co-constructed in a different space which can no longer be called Northern/global, but is instead a 'global-local' certification, that composites Rainforest Alliance and local interests as a 'hybrid' certification. This co-production is explored as a process of Rainforest Alliance certification agency and addresses

the agency of local actors in how they co-construct and implement a 'new' form of knowledge 'Sri Lanka - Rainforest Alliance certification'. Thus the 'original' Rainforest Alliance becomes transformed. More particularly, it supports analysing at the effects of certifications through ANT as it enables one to see the 'reality' of the certification at the local level, something that is underemphasised in prior research.

A specific ANT contribution is its illustration of goal translation, composition and circulating reference as form of transformations between the North America NGO and local Sri Lanka actors. To this end, the first meaning of technical mediation, 'goal translation', enables an exploration of certification agency in terms of the enrolment of local actors beyond the first tier of the supply chain, providing solutions for their interests. The second meaning of technical mediation, 'composition', facilitates investigating how the Rainforest Alliance mediates in changes in the management, accounting and agricultural practices of certified tea producers through subprogrammes in reaching a composite goal. In both cases, the notion of circulating references helps in understanding the process of transformation of the Rainforest Alliance. As is shown, the sustainability interests of a North American NGO, the Rainforest Alliance, are transformed into sustainability through developing a sustainable agriculture standard. Local interpretation guidelines show the transformation of the former Sustainable Agriculture Network standards. At the level of individual tea producers, the local interpretation guidelines have been transformed into a manual. The message of 'sustainable agri product' is circulated across the local supply chain through the tea catalogue and across spaces through the 'Rainforest Alliance certified' certification. As Latour (1999) shows, circulating creates a gap between the reference and referent. As shown in the study (Figure 7.3), the circulation of the conception of 'sustainability' is reached through standardisation, locality, particularity and text.

Finally, the notion of 'attachments' helps in understanding how the Rainforest Alliance's wider intended and unintended outcomes in the local context could help to stabilise (temporary) the Rainforest Alliance further.

The findings of the study suggest that even if the meanings of technical mediation are suggested as discrete meanings, with respect to the first two discrete meanings (translation and composition), they are related and represent two key stages of the process of technical mediation.

In particular, this study is an application of ANT in the sustainability field that, unlike other theories widely used in the field, enables the examination of the wider integration of local actors beyond the first tier of the supply chain and enrichment by including non-human actors such as market devices, management and accounting information systems and standard operating manuals in translating a Northern NGO's conception of sustainability in the local context. Prior literature from the governance perspective has limited the understanding of certifications to issues of buyers and suppliers, mainly the first tier of suppliers (Lund-Thomsen and Lindgreen, 2014). Even the governance framework modified by Gereffi et al. (2005) incorporating governance complexity in global supply chains still undermines the impact of local institutional factors beyond first-tier suppliers. Next we discuss the empirical contributions of the study.

7.4.2 Empirical contribution

This study provides several empirical contributions. One is the unintentional effects that can occur in the implementation of global certifications (Soundararajan and Brown, 2014). As this study finds, the implementation of Rainforest Alliance has led to the exclusion of tea smallholders from the Rainforest Alliance certification, which is counter to the aims of Rainforest Alliance NGO that seeks the economic and social well-being of the farming

community and the sustainability of agricultural activities in the local tea industry. As discussed before, on one hand these smallholders lose the opportunity to get increased prices by producing Rainforest Alliance tea, and on the other hand, their agricultural practices as the largest local grower sector are not subject to sustainable certification.

Another empirical contribution of the study is the finding on the effects of global certification in changing social and environmental practices. The study revealed that while local tea producers have initiated several accountability practices such as worker/community education and training and the occupational health and safety of field workers and sprayers as novel activities, most of the existing practices have not been subject to fundamental changes, instead being formalised via compliance with local rules/codes/regulations and creation of management and accounting practices and procedures that visibly account for social and environmental practices as sought by the Rainforest Alliance NGO. A previous study related to the Ceylon tea industry shows that colonial accounting and control systems have evolved aiming to manage and control labour (Alawattage and Wickramasinghe, 2009a). However, after the nationalisation of the tea industry, colonial accounting and control practices were subject to changes by local industry actors, who were then marginalised but later empowered by politics and unions (Alawattage and Wickramasinghe, 2009b). This study on Rainforest Alliance certification enriched the knowledge of local management and accounting practices of the tea industry beyond limiting it to labour-oriented accounting practices and including an examination of how accounting, management and agricultural practices have been transformed by a sustainability certification.

Consistent with the aims of the study in the introduction chapter, this study does not limit defining accounting to traditional financial and management accounting practices. The study

contributes to the accounting literature by revealing how broader conceptions of accounting for social and environmental responsibilities become enacted; observing, risk assessment, recording, analysing, comparing and continuous improvements to improve social and environmental performance. In this context, these new accounting functions mainly include non-measurable qualitative data, which take different forms from animal citing records, waste segregation records to key inscriptions such as biodiversity research reports. The study reveals how new social and environmental accountabilities become implemented through, for example, marked buffer zones, separation of forest patches, waste water drainage systems, and segregated bins for degradable and non-degradable waste. Qualitative data from these practices are then used to influence decisions on social and environmental responsibilities. Prior impact studies on accountability certifications mostly reveal only social effects of the certification and limits to child labour, workers and their working conditions and reports as tangible aspects are improved (Yu, 2008). While the findings on Rainforest Alliance certification support these findings, they enable the revealing of non-tangible benefits as well: improved community relations (Giovannucci and Ponte, 2005) and enforcement of local laws (Egels-Zandén, 2014). This study adds several other wider implications, such as the adaptation of historical and cultural CSR perceptions of local actors to incorporate North America notions of 'sustainability' and social benefits such as the improvement of worker healthcare and prevention of diseases. Certification studies that evaluate environmental impacts are limited. Thus, this study shows how management, accounting and agricultural practices have been transformed as well as environmental compliances and provides information about certain impacts such as the reduction of chemical/fertiliser usage and improved soil conservation. As shown, these social and environmental aspects are integrated as an information system and provide information for internal decisions and external disclosures.

As far as the researcher was able to observe, there are no studies that have focused on Rainforest Alliance certification with respect to the tea industry. Prior studies that focused on other certifications in other contexts, for instance, Forest Stewardship Council and Fair Labour Organisation (Gandenberger et al., 2011) limit the sustainable impacts to a comparative analysis of market and governance and certification characteristics. Another similar study (Raynolds et al., 2007) compares Rainforest Alliance certification in the context of the coffee industry with several other certifications and concludes that Rainforest Alliance is a certification that helps to maintain social and environmental conditions rather than improving them. However, this study on Rainforest Alliance certification in the tea industry contributes by specifically revealing its social and environmental effects as it is experienced by the actors in the Sri Lanka tea industry, including unintentional effects as mentioned above.

Another empirical contribution is the illustration of how global certification acts within the regulatory space as a form of soft law. As discussed previously, the findings show that it helps in filling the existing regulatory gaps and enforcing local laws that combine state bodies, tea producers and the Rainforest Alliance in defining and enforcing the local laws and beyond, making corporates accountable towards the adoption of locally accepted best agricultural practices. As revealed, the Rainforest Alliance has mediated in the formalisation of management, accounting and agricultural practices complying with local laws and best practices that would help in sustainable transformations if continuously practised. Therefore, this study suggests for policy-makers the necessity to strengthen local laws and regulations to gain the maximum benefit from voluntary adoption. Similarly, the importance of paying attention to local sustainability priority issues where those certifications have not focused, such as product quality and high cost of production (as reported during interviews and documentary reviews due to low labour productivity, high wage rates, continued use of old machinery by tea

factories, and low-yielding tea bushes with a lack of replanting) which may continuously limit sustainable agricultural practices only to compliance. It is apparent that Rainforest Alliance is collaborating with the Tea Small Holder Authority in getting smallholders into the certification network, and thus improved attention on such collaborative support from the state level to private certification initiatives would benefit from the introduction of local laws targeting smallholder levels that suits the local conditions and the improvement of the monitoring system of private certification.

Studying Rainforest Alliance certification as a co-production of global and local interests has revealed the agency of the certification itself in enrolling local supply chain actors and in the transformation of accountability practices interacting with the local human and non-human actors, thus forming a composite Rainforest Alliance.

7.4.3 For policy decisions

The study includes actors from industry, regulatory and monitoring bodies who associate with the local supply chain and the Rainforest Alliance certification. The study finds that Rainforest Alliance has mediated in offering solutions to these actors' interests: as a means to position Sri Lankan tea as high-quality tea export in Western markets (and helping to preserve future export income) and as a means to enforce local laws and regulations. Rainforest Alliance is supported by those actors as it is it perceived as a means to pursue their goals. Thus, this study provides suggestions for the policy makers in the local tea industry, mainly the Sri Lanka Tea Board.

The findings of the study suggest that, despite presence of strong local laws, regulations and best local agricultural practice codes/guidance, these are poorly enforceable if they are not pushed through market forces such as the Rainforest Alliance. Thus, this study shows how Rainforest Alliance has mediated in articulating a meaning of local law enforcement, revealing

how its delegated role of sustainability is transformed in the local context. Local tea producers adopted Rainforest Alliance as a form of 'rules of conduct' voluntarily and it was recognised by certain local statutory bodies either formally or informally as a certification that creates responsible business (Van Schooten and Verschuuren, 2008:223). Thus, the findings suggest the necessity of such soft law to improve the local social and environmental conditions by way of defining locally suitable best guidelines, enforcing local laws and filling regulatory gaps. Therefore, formal state involvement is necessary for their legitimacy if they are to be treated as a form of 'regulators' in the local context (Van Schooten and Verschuuren, 2008:223).

Through the process of composition, the thesis finds adopting actors in the local supply chain have implemented changes in their practices in line with the Rainforest Alliance NGO's conceptions of agricultural sustainability, even though this did not initially or primarily motivate many actors to support the certification. The changes taking place at the level of tea producers therefore show signals of broadly realizing the outcome of the Rainforest Alliance NGO's strategy, articulated within a 'theory of change', which aims to transform agricultural lands over the long term.

The results provide information for policymakers on the detailed process of transformation embedded in the relations between actors that have hitherto been neglected in the industry. They also reveal significant barriers in the pursuit of the Rainforest Alliance NGO's strategy, as exemplified by the exclusion of smallholders.

Beyond these issues, considering the significant role of Rainforest Alliance as a voluntary certification in changing local practices towards sustainability, its costs matters for the tea producers, as it incurs not only direct costs but, many hidden costs such as time spent on information seeking, travelling (Giovannucci and Ponte, 2005), meeting time and lost worker

hours in training. Therefore, it is vital to re-emphasise the common suggestion of the necessity of a mechanism to share the cost of certificate implementations amongst the parties in the supply chain without pushing the whole burden onto developing country suppliers. The Rainforest Alliance certificate is perceived as a form of economic imperialism, by benefitting the multinationals rather than the local growers (Khan and Lund-Thomsen, 2011). For local actors who are motivated to adopt certifications expecting commercial sustainability, it provides another aspect of competition (Yu, 2008).

The findings of the Rainforest Alliance study suggest that since many of the social and environmental returns are not measureable in monetary terms (e.g. prevention of diseases, improved worker health and safety, proper disposal of waste, improved soil conservation), and benefits are to emerge in the long term (e.g. biodiversity conservation via the protection of wildlife, water resources and forests, change of CSR perceptions of local actors beyond philanthropy), commercial sustainability oriented tea producers should be encouraged towards such accountability practices via financial encouragement to ensure the continuance of these short-term accountability practices to realise the sustainability goal. This links to the notion that the effects of accountability certifications are not necessarily assessable by financial and/or calculative practices (Cuckston, 2013).

However, finally it should be stated that Rainforest Alliance certification in the coffee industry is recognised as helping to maintain social and environmental conditions by way of specifying minimum social and environmental compliance requirements instead of improving them (Raynolds et al., 2007), which is similar to the tea industry and Rainforest Alliance as well: such practices can be limited to compliance only, and hence the above suggestions are worthy of the attention of policy-makers.

7.5 Limitations of the study

ANT relies on identifying networks in order to uncover the sociomaterial relations, but this can be difficult in practice. For instance, when it comes to plantation workers, all are from a different ethnic group (Tamil) with a different language to the researcher, and therefore, interviews were attended by an interpreter from the company, hence their views on certification interactions may not be free of bias and fully represented in the study. As another point, practical restrictions in the fieldwork led to the fact that not all tea-producing estates could be visited, many of which were in different geographical locations.

Another limitation relates to ANT's relational ontological stance itself. Scholars who anticipate specifying the nature of the ontology in a theory criticise this relational ontological reality (e.g.Lee and Hassard, 1999, Ahrens and Chapman, 2007). Thus, ANT's reliance on identifying networks in order to uncover sociomaterial relations can be difficult in practice. For example, it is not specified when to stop following actors. Thus, an incomplete list of actors would not provide a realistic complete story (Ahrens and Chapman, 2007) but this is common to any research (Lowe, 2001).

Appendix 1

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Appendix 2

Research Information Sheet & Informed Consent Form

UNIVERSITY OF BIRMINGHAM

RESEARCH INFORMATION SHEET

Introduction & Purpose of the research

I am a doctoral researcher at the University of Birmingham in the UK and I am seeking your agreement to participate in a study on '*The Adoption of Corporate Social Responsibility Practices & Certifications in the Sri Lankan Tea Industry'*. The purpose of the study is to understand how global CSR certifications such as the Rainforest Alliance (RA) are adopted by tea plantation companies and across the supply chain.

Type of Research Method

This research will involve your participation in an interview that will last up to one hour.

Participant Selection

You are being invited to take part in this research because your experience in the field of corporate social responsibility activities of the organisation and the tea industry can contribute to the understanding of the research issue.

Voluntary Participation

Your participation in this research is entirely voluntary. It is your choice whether to participate or not. If you wish to withdraw your participation, please email me by MAM@bham.ac.uk

Procedures

If you accept, you will be asked to discuss your experience relating to the corporate social responsibility activities of the organisation and the supply chain. You do not have to share any knowledge that you are not comfortable sharing. The information recorded is confidential, and no one else except me will access to the information documented during your session. The recording will be kept secured within the University of Birmingham., UK.

Confidentiality

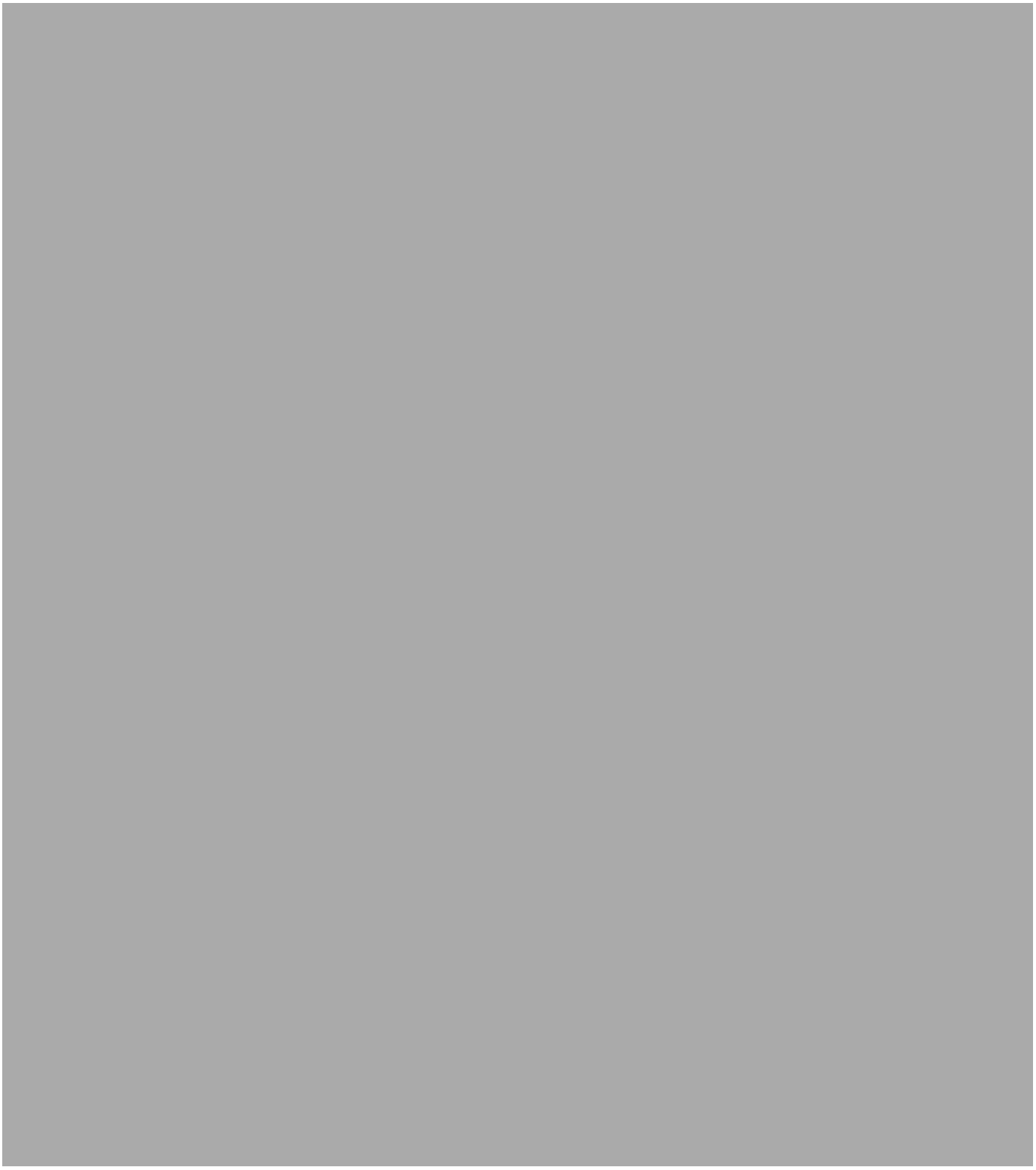
The information that is collected from this research project will be kept private. Any information about you will have a number on it instead of your name. Only the researchers will know what your number is and it will not be shared with or given to anyone.

Contact

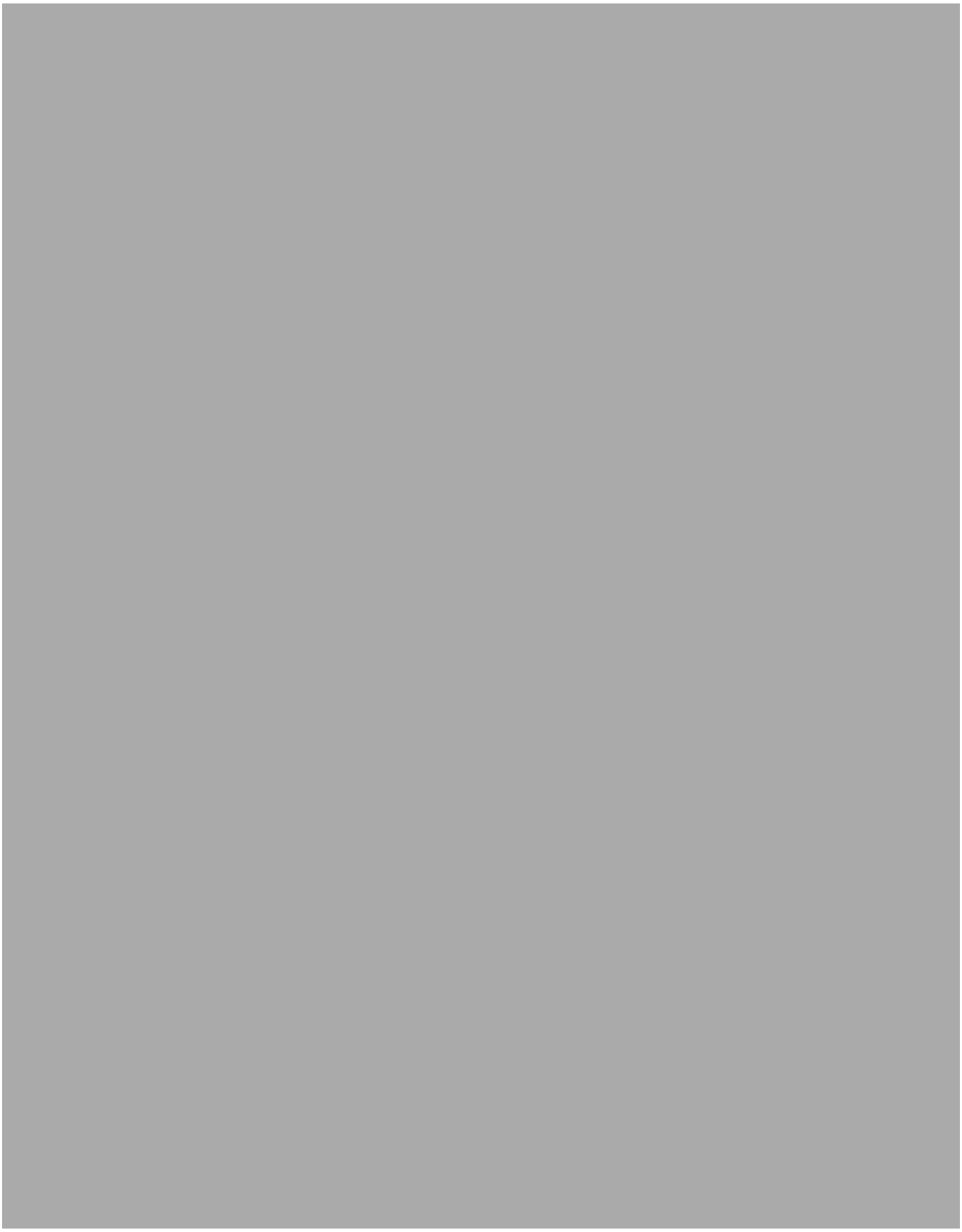
If you have any questions, you can ask them now or later. If you wish to ask questions later, you may contact me via email:

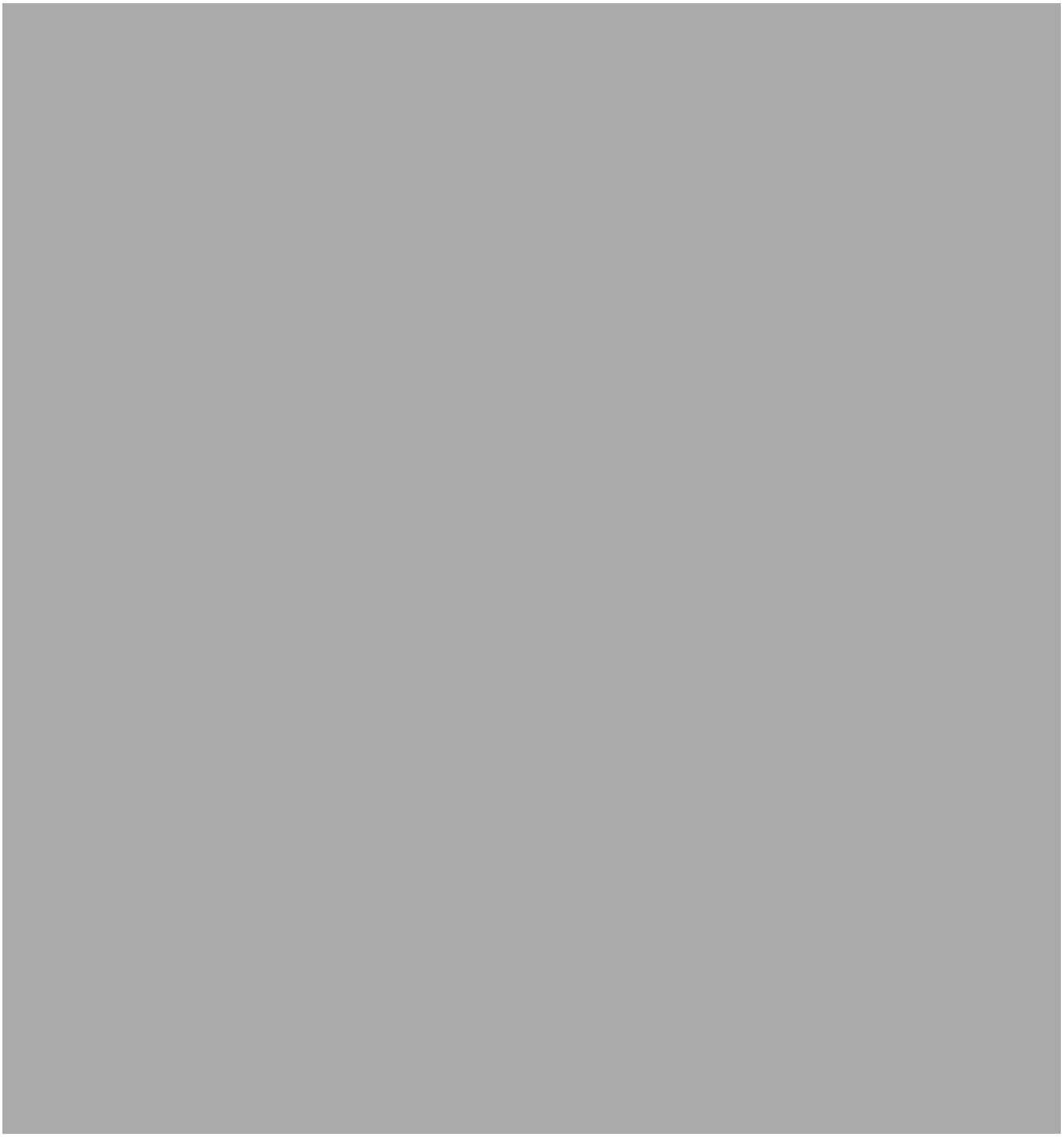
This proposal has been reviewed and approved by the University of Birmingham Humanities and Social Sciences Ethics Committee whose task it is to make sure that research participants are protected from harm.

INFORMED CONSENT FORM



Appendix 3





Appendix 4

Interview Guide

Questions	**Detailed questions**	**Type of data needed**	**Methods and Data sources**
1. What does CSR/sustainability means to different people in the supply chain?	I. What do you understand by CSR?	- To identify given meaning	Interview- Each actor in the supply chain *
Theoretical explanation ANT	***This would represent each actors interest/goal in terms of CSR***		
2. What does RA certification means to different people in the supply chain?	I. Are you aware of the RA certification of the particular tea plantation company? II. How do you interpret RA certification?	- To identify how the actors give identity to the RA certification.	Interview- *Each actor in the supply chain
This would represent intended outcome of the non- human actants(CSR certification as a technology)			
3. How was the planation company motivated for obtaining RA certification?	I. Who are the leading actors involved in obtaining the certification	- To identify the key actors involved	Interview Managers at planation co. head office, estates and factory and the other actors.
	To identify actors to follow		
	II. What motivated them for obtaining certifications	- To identify factors/ influences	Interview The key actors identified above.
This would represent how interest of actors were translated for certification, may represent boundary objects, matters of concern over matters of fact.			
4. What does RA certification requires to do?	I. What CSR activities are required to be implemented?	Detailed list of required CSR activities of RA	Documentary analysis – RA websites, standards, guide lines, manual etc. -Interview- Resource persons from RA or related authoritative body
	II. How are they expected to be carried out?	Details of expected procedures in terms of	

		measuring, reporting and auditing of RA activities.	-Interviews- *Actors of the planation company and the supply chain
Intended outcome of non -human actants -CSR certification/technology, OPP			
5. How the planation company initially motivated and planned for CSR certification and experienced?	I. Who were involved in planning? II. What activities were planned for? III. How were they planned for?	To identify the key actors To identify planned RA activities To identify measuring, reporting, control mechanism for certification.	Interview- Managers of the head office and plantations, other actors involved
Problematisation and Interplay between agency (of human actors) and the structure(technology)			
	IV. Were there any resistances? V. How were they tackled?	To identify reasons for such resistances and the resisted groups. To identify how those plans/actors got changed?	Sample of resisted actors

In terms of ANT, resistances means there had been no translation of interests instead a diffusion only.			
6 How does the plantation company enact the certification at present?	I. What CSR/RA activities are been implemented? II. How are they implemented? III. Who are the actors currently involved in these activities IV. How the actors are enrolled for the functions	Detailed list of RA activities To identify measures, reporting , controlling mechanisms and auditing procedures To identify the responsible actors To identify the persuading, control mechanisms	Documentary analysis Annual reports, internal documents, web sites etc. Interviews CSR manager/equivalent actors involved in the process
How the actors are persuaded, enrolled and mobilised. How inscriptions(accounting for CSR certification) are used and presence of mediator and intermediaries			
7 How do the other actors in the supply chain motivate for RA/ certification?	I. Which actors in the supply chain implement RA/CSR activities? II. What motivated them for such move?	To identify the actors in the supply chain To identify the factors/forces	Interview- *actors in the planation company and actors in the supply chain
This would represent translation of interest of actors in the supply chain, boundary objects, interessessment			
8. How the CSR/certification practices are implemented by different actors in the supply chain?	I. What activities are implemented II. How are they practised?	To identify the RA related activities To identify how they are measured, reported and also whether audited	Interview *Key actors in the supply chain

Interplay between agency and structure, persuading, enrolling and mobilisation of actors, presence of mediator and intermediaries			
9. How does the plantation company involve in CSR/RA practises of their supply chain?	I. What is the nature of the supply chain? II. How do the plantation company interact with its supply chain for RA activities?	To understand the form and actors of the supply chain To identify interactive procedures	Interview – *planation company and supply chain actors
Use of inscriptions and action at a distance, Certification as a OPP for them			
10. How do upstream supply chain actors perceive certification in the industry?	How do you perceive RA certified tea with non - certified ones?	To identify how they give identity to certification	Interview- buying and selling tea brokers, tea traders, buyers
Spokesperson			

Appendix 5

Third Party Editor Declaration Form