Accounting for Sustainable Livelihoods: The dialectic between Fairtrade and Biodiversity

Sanjay Venkata Lanka

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ESSEX BUSINESS SCHOOL

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Declaration of authorship

I, Sanjay Venkata Lanka, hereby declare that this thesis and the work presented in it are entirely my own. Wherever the work of others has been referred to, it has always been clearly referenced.

Signed:

Date: 05-10-2016

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Abstract

This thesis investigates whether using agricultural biodiversity, smallholder farmers are closer to having a sustainable livelihood as compared to when they depend on promises made by Alternative Trade Organizations (ATOs) such as Fairtrade. The framework within accounting for biodiversity has not considered the loss in biodiversity and the potential role played by agricultural biodiversity in providing sustainable livelihoods. Further, studies about Fairtrade's accountability have focused on the household when there is a need to investigate the accountability of Fairtrade at the co-operative level since the Fairtrade system mostly works with co-operatives of farmers.

The main research questions of this thesis are: What does a sustainable livelihood in the coffee supply chain entail at the level of a co-operative? Does Fairtrade deliver on its promise of providing a sustainable livelihood at the level of a coffee producer co-operative? Whether and how agricultural biodiversity would affect the livelihoods of a co-operative of coffee farmers?

A dialectic/historical materialist methodology is used in combination with multiple methods for a case study of a coffee co-operative in India. A theoretical framework was developed that incorporates the labour theory of value along with the science of agroecology to detail the challenges to the achievement of sustainable livelihoods.

Fairtrade fails to deliver sustainable livelihoods at the level of the coffee co-operative. Agricultural biodiversity using an agroecological approach supports sustainable livelihoods to the extent of reducing the dependence on external inputs but challenges remain due to a continued dependence on *corporate value chains*. This thesis contributes to the literature in accounting by introducing the concept of sustainable livelihoods as a means to check the accountability of NGOs such as Fairtrade. The focus on agricultural biodiversity extends the field of accounting for biodiversity to incorporate the social and environmental impacts on agriculture.

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List of abbreviations

AOL – Araku Originals

AP – Andhra Pradesh

ATO – Alternative Trade Organization

CAG – Comptroller and Auditor General

CBD – The International Convention on Biodiversity

CC – Community Coordinator

CDM- Clean Development Mechanism

CLAC – Coordinadora Latino Americana y del Caribe de Comercio Justo (Caribbean and Latin American Co-ordinator for Fairtrade)

CoSP – Cost of Sustainable Production

CPP – Cow Pad Pit

DAP – Di-ammonium Phosphate

FAO – Food and Agricultural Organization

FLO – Fairtrade Labelling Organization International

FTMP – Fairtrade Minimum Price

GCC – Girijan Co-operative Corporation

GHG – Greenhouse Gases

GM – Genetically Modified

GPN – Global Production Network

HYV – High Yielding Varieties

IAASTD – International Assessment of Agricultural Knowledge, Science and Technology for Development

ICA – International Coffee Agreement

IARC – International Agricultural Research Centres

IMF – International Monetary Fund

IPM – Integrated Pest Management

ITDA- Integrated Tribal Development Agency

IUCN – International Union for the Conservation of Nature

Livelihoods 3F – Livelihoods Fund for Family Farming

MACS – Mutually Aided Co-operative Society

MGNREGA – Mahatma Gandhi National Rural Employment Guarantee Act

MGNREGS – Mahatma Gandhi National Rural Employment Guarantee Scheme

MOP – Muriate of Potash

MRP – Maximum Retail Price

MT – Metric Tons

NDC – National Development Council

NGO – Non-governmental Organization

NITI – National Institute for Transforming India

NLI – National Labelling Initiatives

PD – Planting Density

PDS – Public Distribution System

PRA – Participative Rural Appraisal

SAMTFMACS – Small and Marginal Tribal Farmers Mutually Aided Cooperative Society

SR – Society Registration

ST – Scheduled Tribe

TNC – transnational corporation

UNFCCC – United Nations Framework Convention on Climate Change

VDC – Village Development Committee

WB – World Bank

WTO – World Trade Organization

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Appendix 1: Report from the Fairtrade Foundation .....

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Chapter 1: Introduction

> The environment makes up a huge, enormously complex living machine that forms a thin dynamic layer on the earth's surface, and every human activity depends on the integrity and the proper functioning of this machine. Without the photosynthetic activity of green plants, there would be no oxygen for our engines, smelters, and furnaces, let alone support for human and animal life. Without the action of the plants, animals, and microorganisms that live in them, we could have no pure water in our lakes and rivers. Without the biological processes that have gone on in the soil for thousands of years, we would have neither food crops, oil, nor coal. This machine is our biological capital, the basic apparatus on which our total productivity depends. If we destroy it, our most advanced technology will become useless and any economic and political system that depends on it will founder. The environmental crisis is a signal of this approaching catastrophe.
>
> - Commoner, in *The Closing Circle*, 1971, p.13

1.1 Introduction

There have been reductions in the amount of value that goes to the producers of agricultural commodities in international trade under the World Trade Organization (WTO) (Burch & Lawrence, 2009; McMichael, 2005; 2009; 2012; Pechlaner & Otero, 2008; 2010). By "value" is meant the combination of "use value" and "exchange value" deriving from the agricultural commodities that are produced. "Use value" relates to when the producers use the commodities for their personal consumption and "exchange value" relates to when they sell these commodities on the marketplace (Marx, 1976). The focus of this thesis is on the relationship between the "use values" produced by human labour specifically smallholder farmers and the reduction in their "exchange values". Marx (1976, p.133), defined labour:

> as the creator of use-values, as useful labour, [which] is a condition of human existence which is independent of all forms of society; it is an eternal natural necessity which mediates the metabolism between man and nature, and therefore human life itself.

The reduction in value received by the producers of agricultural commodities has challenged the survival of smallholder farmers who cultivate these commodities

and has led to the development of NGOs known as alternative trade organizations (ATOs) to ensure a greater share of value to the producers. These ATOs have created labelling initiatives or certification schemes to promote more equitable trade, principal among which is the Fairtrade label. According to Bebbington and Larrinaga (2014) within the field of accounting there is a need for studies which address issues related to certification schemes in the context of global supply chains. This thesis has included in its focus an investigation of the accountability of such certification schemes using the Fairtrade coffee value chain from the standpoint of the challenges faced by smallholder coffee producer co-operatives.

An account of smallholder coffee farmers is consistent with the 'giving and receiving of accounts' (Gray, 2002, p.689) since "accounts themselves determine what is accounted for" (Gray and Laughlin, 2012, pp. 231-32). The accounts of subaltern (Graham, 2009; Jayasinghe and Thomas, 2009) smallholder farming communities are made visible in order to see a different accounting reality. Spivak (1988) defines the "subaltern" as those whose perspective is repressed in the discourse of the dominant class. Sengupta et al., (2007) define smallholder farmers as those farming on less than or equal to 2 hectares of land. Smallholder farmers are representative of the subaltern, and their realities are often under represented, if visible at all, in accounting research and other social science disciplines. Thus, the perspective of the most marginalized of society is taken, since it is their voice from the margins that could provide an account to test the effectiveness of policy and practice in the field of agriculture.

In this thesis I develop the concept of "accounting for sustainable livelihoods", through an investigation of the accountability of Fairtrade and the role played by agricultural biodiversity from the perspective of a coffee co-operative.

Accountability is about "the giving and demanding of reasons for conduct" (Roberts and Scapens, 1985, p. 447) and "entails a relationship in which people are required to explain and take responsibility for their actions" (Sinclair, 1995, pp.220-21). In doing so, I utilize the dialectic method developed by Marx to engage with the role played by Fairtrade and biodiversity in delivering sustainable livelihoods using a theoretical framework that combines the labour theory of value with the science of agroecology. As noted by Ollman (2003, p.14):

> dialectic research begins with the whole, the system, or as much of it as one understands, and then proceeds to an examination of the part to see where it fits and how it functions, leading eventually to a fuller understanding of the whole from which one has begun.

Firstly, this thesis will question if Fairtrade which developed on the promise of providing sustainable livelihoods to small farmers delivers on this promise. Secondly, this thesis will present an account of the small farmer to question the role that agricultural biodiversity can play in mitigating the adverse impact of the practices of monoculture agriculture (Altieri 1983; 1993; Altieri and Toledo, 2005; van Rikxoort et al, 2014). An account of the role that agroecological practices have played in promoting biodiversity and sustainable livelihoods is provided. Such accounts are not yet visible in the accounting for biodiversity literature and hence this paper contributes to providing a new perspective on the value of biodiversity in terms of providing sustainable livelihoods to indigenous smallholder farmers.

The Fairtrade movement has built its reputation on its promise to provide a sustainable livelihood to farmers and there is a need to assess if it has been fulfilled. Hence one of the key points of discussion of this thesis will be to investigate whether Fairtrade is able to provide a sustainable livelihood to farmers. This will require an understanding of what is a livelihood and what makes it sustainable. Scoones (1998) defined a "sustainable livelihood" as being achieved by having – a reduction in

poverty, improvement in well-being and capabilities, reduction in the vulnerability of the household and sustainability of the natural resource base. This thesis contributes to the accounting research on Fairtrade by extending the work of Gray et al., (1997) and Dey, (2007) to dealing with issues of accountability in the Fairtrade system at the level of the producer co-operative. Non-governmental organizations (NGOs), such as Fairtrade have a mission that defines the purpose of their existence and, by their very nature of existence, this relates to improving the situation faced by their beneficiaries. Lehman (2007) defines NGOs to represent any non- profit organization that depends to a certain extent for its ability to fulfil its mission on charitable donations and voluntary service and despite increased professionalism in these organisations, they continue to have as their defining principles – altruism and voluntarism. There is a need therefore to check the accountability of NGOs like Fairtrade that makes this accountability to their beneficiaries implicit.

Further, this thesis will investigate if smallholder farmers can have a greater chance to obtain a sustainable livelihood through the use of agricultural biodiversity and the ecosystem services it provides through a reduction of their dependence on external inputs and the diversification of their sources of income. This thesis provides a socio-ecological account of the role that agroecology plays in supporting biodiversity and promoting sustainable livelihoods, by presenting a case study of marginalized indigenous smallholder farmers from a coffee co-operative in India implementing an agroforestry project. In doing so, it extends the accounting for biodiversity literature to the field of agriculture. In the context of the farming industry, the accounts that are used to determine the efficacy of agricultural policy and practice need to be questioned, and those of marginal, small-scale farming communities need to be made visible in order to see a different accounting reality. It

will particularly seek to redress the absence of biodiversity in the discourse of the mainstream agricultural industry by giving voice to accounts from the margins as represented by the indigenous farmers from an Indian coffee co-operative. Taking their perspective also helps to deal with an issue with accounting in that there is a great deal of emphasis on understanding the economic aspects of a situation without giving due consideration to the political and social aspects of the situation which are taken for granted and not given a detailed level of analysis (Tinker, 1980).

1.2 Motivation of the study

The need for downward accountability within Fairtrade

NGOs tend to measure their organizational effectiveness in terms of the symbolism that they generate in the public consciousness leading to an enhanced public profile and increased monetary contributions, instead of staying focused on their core mission and measuring their success through their ability to fulfil this (Luke, 1997). This relates to measuring the accountability of NGOs since the challenge is that their achievement of their mission might not be quantifiable, so that they choose to measure their success in terms of the funds that they are able to raise or the public relations that they are able to mobilize (Lehman, 2007). Thus it is important to critique the role of NGOs in civil society by starting with a review of their mission statement and related objectives. This will provide the basis by which to judge the implementation of these values that NGOs “hold dear” by comparing them to actual behaviour of the NGOs with respect to the people that they claim to serve by their actions. There is little research on NGOs implementing this downward accountability. There is even less research that provides evidence of benefits from NGO activities to these so called beneficiaries.

There is a need to question if NGOs benefit themselves and their donors at the expense of the beneficiaries. The evidence of this possibility is provided by investigating the working of the Fairtrade system. Fairtrade is an ATO that claims to provide sustainable livelihoods to participating farmers and their communities. At the same time, there is a need to acknowledge the existence and preponderance of an upward accountability within NGOs that is focused on meeting the needs of its funders. O'Dwyer and Unerman (2008) defined hierarchical accountability as being focused on upward accountability to donors and other such stakeholders who provide access to key resources. This brings out an issue raised by O'Dwyer and Unerman (2008, p.802) that there is a:

> potential for inappropriate accountability mechanisms to damage, rather than enhance the social and environmental benefits that many NGOs seek to realize ... [Further], the emerging dominance of upward hierarchical accountability to donors at the possible expense of more holistic accountability to a broader range of stakeholders, especially beneficiaries, has created concerns that NGOs accountability priorities are being distorted.

Discussions of accountability in the context of NGOs are especially relevant to international NGOs such as ATOs that are focused on promoting advocacy and development (Vakil, 1997). Accountability is a subjectively constructed concept based on account giving, which is used to rationalize decision making (Demirag and Khadaroo, 2013). This means that "'why', 'to whom', 'for what' and 'how' we give an account will have significant implications" (Demirag and Khadaroo, 2013, p.439), to the effectiveness of the process of providing accountability. Holistic accountability in the NGO context is about (O'Dwyer and Unerman, 2008, p.804):

> broader forms of accountability for the impacts that an NGOs actions have, or can have …[on] the stakeholders to whom an NGO might be considered accountable [including] the groups on whose behalf the NGO advocates.

Within the market for Fairtrade products, the market for coffee has shown the fastest growth. With its historical roots of colonialism (Raynolds and Wilkinson,

2007), coffee is also the best exemplar to test the accountability of Fairtrade since it is the second most traded commodity in the world after oil (Ponte, 2002). The issue is that the value that is created is exclusively at the retail or consumer end of the value chain (Daviron and Ponte, 2005). This means that it benefits the multinational corporations that own the brands that carry the Fairtrade label. This thesis has included in its emphasis an investigation of the accountability of such certification schemes using the Fairtrade coffee value chain from the standpoint of the challenges faced by smallholder coffee producer co-operatives.

Monoculture agriculture's role in rural decline and environmental degradation

The field of agriculture is an exemplar of the practice of corporations to introduce new technologies whose only aim is to increase their profits at the expense of the natural environment (Commoner, 1971). Industrial agriculture can be defined based on its emphasis on agricultural productivity as defined by increases in the productivity of labour, seed and livestock in producing greater amounts of yield of agricultural commodities and hence is also a prerequisite for the transformation towards the development of a modern capitalist economy (Weis, 2010).In the context of this thesis, which is focused on the labour invested by smallholder farmers, I define an increase in the productivity of labour using the definition given by Marx in *Capital, Vol.1*(Marx, 1976, p.431):

> By an increase in the productivity of labour, we mean an alteration in the labour process of such a kind as to shorten the labour-time socially necessary for the production of a commodity, and to endow a given quantity of labour with the power of producing a greater quantity of use-value.

The dominance that industrial agriculture has on the scientific community means that agricultural research is very narrowly focussed (Nesheim et al., 2015; O'Brien and Flora, 1992). It aims to simplify and standardize the phenomenon under investigation using positivist ontology by creating controlled and uniform

environments (Chambers, 1992). The recommendations that come out of this research lead to rural decline and environmental problems (Bjørkhaug and Richards, 2008). Therefore, the current accounts that are used to determine the efficacy of agricultural policy and practice need to be questioned. My motivation in this thesis is to investigate the role of agricultural biodiversity within the sphere of agriculture using a case study within the context of the coffee industry with a geographical focus on India.

There has been limited research on accounting and indigenous peoples in LDCs (Graham, 2009). There has been limited amount of accounting research with regards to agriculture and micro organizations (Hopper et al., 2009). There is very little research in the field of accounting on agriculture consisting of gross margin accounting (Jack, 2005; 2006), a study of corporate power in the context of UK agriculture (Jack, 2007), an attempt to standardize management accounting in the context of Agriculture in Australia (Jack, 2015) and the adoption of strategic management accounting tools in the context of post subsidy reform in the field of agriculture (Jack, 2009). Jack (2007) found that the implementation of post-world war II subsidies in agriculture has resulted in the over production of food, based on price support programs, which in turn caused the devastation of agriculture in the developing world as a result of the dumping of this overproduction at lower prices. In the period starting in the 1980s and going into the first decade of the twenty first century, she also documents an increase in corporate power (Jack, 2007).

Despite the focus on agriculture in Jack's research (2005; 2006; 2007; 2009; 2015), she has however made clear that she has stayed away from engaging with the impact of environmental policies and practices and focused instead on the business and management issues within the context of agriculture (Jack, 2007). Even her most

recent work is focused on food fraud, and how eliminating fraud would improve profitability in the agri-business supply chains (Gee, Jack, and Button 2014). Farming has become dependent on the inputs provided by the nexus between the government and large agri-business corporations (Jack, 2007). At the same time, farming is also dependent on the large corporations to sell the outputs of agriculture which is limited to a few of them as a result of both horizontal as well as vertical integration within food supply chains (Jack, 2007). Jack (2007), brings attention to the nature of the modern food supply chain wherein the farmers are left to take all the risk, while the few large agri-business companies that control the supply chain are able to buy food cheaply based on the subsidies provided to the farmers by government in Europe and the U.S.

This thesis will focus on farmers who use sustainable farming practices based on agroecology and make use of the services provided by nature. It will use Marx's conception of the relationship between the human and nature. Marx in the German Ideology (1970, p.117) said that:

> Men's restricted attitude to nature, determines their restricted relationship to one another. And this restricted relation to one another determines their restricted attitude to nature.

Here Marx is bringing out the dialectical relationship between Man and Nature with a focus on the exploitation of nature and how during the industrial revolution society was rapidly transformed through the exploitation of nature. This goes hand in hand with the exploitation of social classes, which in turn depends on our exploitation of nature. This means that smallholder farmers who do not degrade nature in the process of their cultivation could ensure with their sustainable farming practices that its material conditions of production get reproduced. Agroecology is a framework that has been developed to define sustainable agriculture. Agroecology is

the application of ecological principles and concepts to the design and management of sustainable agroecosystems (Gliessman, 2007). Agroecology helps mitigate the adverse impact of the practices of monoculture agriculture (Altieri 1983; 1993), including in coffee based agroecosystems (van Rikxoort, Schroth, Läderach and Rodríguez-Sánchez, 2014).

1.3 Research questions

This thesis will examine the accountability of the Fairtrade system from the perspective of an Organic and Fairtrade certified coffee producer cooperative. The governance of the Fairtrade coffee commodity chain in terms of the accountability of Fairtrade at the level of and from the perspective of a coffee producer cooperative is examined. Since NGOs are supposed to fill an ethical void in civil society, if we cannot agree on their role in civil society, how can we determine their effectiveness and how can an NGO have the greatest chance of fulfilling its proper mission? This brings us to the question of the need for NGO accountability as it could be argued that if an NGO is not meeting the goals put down in its mission statement, then what is the purpose of its existence? This will require an evaluation of the activities of an NGO and their impact on the people that it is supposed to benefit. Lehman (2007) sees the need for this to be undertaken from a critical approach because the role of NGOs as accountability mechanisms in civil society has not been effectively theorized. Further, not enough effort is being put into ensuring that they are in fact fulfilling their goals hence an exploration of any weakness in their implementation of these goals must be undertaken.

O'Dwyer and Unerman (2008) have engaged with the issue of accountability within NGOs by developing a framework of hierarchical and holistic accountability. They found a preponderance of hierarchical accountability to external stakeholders

such as donors, which seemed at odds with the mission of the organization (O'Dwyer and Unerman, 2008). They acknowledge the need for a holistic accountability that should not only acknowledge the needs of the less powerful stakeholders, but also align the working of the NGO to be able to prioritize the needs of the intended beneficiaries who are unfortunately side-lined in the process of prioritizing upward accountability (O'Dwyer and Unerman, 2008; Unerman and O'Dwyer, 2006a). In this thesis I use the coffee value chain to investigate the accountability of ATOs using Fairtrade as the representative ATO. Fairtrade falls into the hybrid category of NGO that combines welfare and advocacy activities (Gray, Bebbington and Collison, 2006; Unerman and O'Dwyer, 2006b).

Fairtrade which is the dominant ATO today, was set up as an attempt to circumvent the dominant role of neo-liberal capitalism and the transnational corporation through the promotion of ethical trade (Jaffee, 2007). The Fairtrade movement has established ATOs with the promise of sufficient returns, safe working conditions, and environmentally sustainable production in the post 1990 International Coffee Agreement (ICA) scenario (Bacon, 2005; Hira and Ferrie, 2006). Based on its rhetoric Fairtrade is an attempt to establish a form of interim global market justice (Walton, 2010) based on a vision to provide farmers with sustainable livelihoods. In providing market justice, Fairtrade claims that it covers the average costs of production for the farmer, thereby ensuring a sustainable livelihood for the farmers and their families (Smith, 2013). It hopes to provide a degree of financial stability to the farmers through long-term trading relationships that provide access to pre-finance (access to credit), enabling the farmers to plan their production and invest in the necessary agricultural inputs (Bacon, 2005).

Brunsson, Rasche and Seidl (2012) make the point that for standards organizations such as FLO, their challenge is to legitimize themselves, since they lack legal authority. Supporting Fairtrade through the buying of products with its label is equated to being an ethical consumer (Guthman, 2009). Suchman (1995, p.574) defines legitimacy as:

> a generalised perception or assumption that the actions of an entity are desirable, proper, or appropriate within some socially constructed system of norms, values, beliefs and definitions.

Further, it is only by acquiring legitimacy (Deegan, 2007) that they are able to create positive market signals which lead to the growth of their markets (Brunsson, Rasche and Seidl, 2012).

Thus when these retail corporations saw the possible higher margins to be made in the Fairtrade market, they saw Fairtrade as a business opportunity to maintain or potentially augment their profit margins while being seen as ethical and sustainable (Lockie, 2008). This is a use of the legitimacy generated by Fairtrade as a public relations tool for the benefit of the TNCs (Davies and Ryals, 2010). Society confers legitimacy on an organization and this is desired by the organization which finds it beneficial (Deegan, 2007). In situations where an organization feels that it lacks legitimacy or is concerned about losing it, the organization will pursue strategies that will enable it to retain or acquire legitimacy. The acquisition of legitimacy is based on the ability to communicate it effectively.

Fairtrade has changed considerably since its early days resulting in a greater variety in the interpretations of Fairtrade (Ballet and Carimentrand, 2010). Hiding these divergences behind the labels is increasing the risk that the movement will lose its credibility raising serious questions about its future viability (Ballet and Carimentrand, 2010). Since the credibility of the certified labels like Fairtrade rests

on their ability to provide a positive impact to the lives of the beneficiaries, there is a need for a greater level of engagement with the beneficiaries and their communities along with an emphasis on downward accountability (Getz and Shreck, 2006).

The tremendous growth in the sales of certified Fairtrade products since the introduction of the first of these goods in the Netherlands in 1988 has been due in large part to the increasing involvement of corporations (Reed, 2009).[1] A study by Pharr (2011) looked at the mainstreaming of Fairtrade products and the increasingly routine presence of Fairtrade certifications on consumer goods with a number of large companies stepping forward to alter their procurement or production processes to claim Fairtrade status for their brands. There has been a phenomenal growth over the past 10 years in the sales of Fairtrade goods especially those which carry the Fair Trade Labelling Organizations International (FLO) certification mark (Nicholls, 2010). However, this success raises the issue of Fairtrade having "sold out" to the mainstream (Davies and Ryals, 2010). It has generated a debate if the popularity of Fairtrade has made it susceptible to being "co-opted" by the mainstream food sector (Lockie, 2008). The success of Fairtrade in the consumer sphere is due largely to its efforts at mainstreaming by adopting a market oriented approach (Doherty, Davies and Tranchell, 2013).

While the market for Fairtrade certified continues to grow, there is a need to test its accountability from the perspective of the smallholder farmers who are intended beneficiaries. I will do so in this thesis by delving into the ability of Fairtrade to deliver on its promise of providing sustainable livelihoods to these smallholder farmers. To understand how the Fairtrade system impacts the livelihoods of farmers, there is a need to understand that Fairtrade only works with cooperatives.

[1] According to Haight (2011), in 2004 the sales of Fairtrade certified coffee equalled 24,222 metric tons (MT) of green beans. This has since increased to 83,709 MT of green beans in 2013 according to Fairtrade International (2014).

So, when we talk about producer prices, in the case of Fairtrade they are not really giving a producer price, but what is in fact being considered is the price at the level of an organization. So the price that is paid by Fairtrade as the "producer price", is in fact the price to the cooperative and must therefore take into account the overhead costs of running the cooperative, before anything that is left can then "trickle down" to the coffee producer/member of the cooperative. The discourse of Fairtrade is that their price is going to a farmer, but the reality is that the price is actually not going to a farmer, but to a farmer organization. To get an understanding of this, there is a need to account for Fairtrade from the perspective of the smallholder farmer co-operative and hence the first two research questions of this thesis are:

- What does a sustainable livelihood in the coffee supply chain entail at the level of a co-operative?
- Does Fairtrade deliver on its promise of providing a sustainable livelihood at the level of a coffee producer co-operative?

While considering the accountability of Fairtrade to deliver sustainable livelihoods to a co-operative of coffee farmers, it becomes relevant to consider the other factors which are impacting on the livelihoods of the coffee farmers. This would be consistent with the dialectic approach that proceeds from the whole to the part, from the macro to the micro and was developed by Marx with a focus on achieving (Ollman, 2003, p.15):

> his double aim of discovering how something worked or happened while simultaneously developing his understanding of the system in which such things could work or happen…

While considering the factors impacting the livelihoods of smallholder farmers, it is pertinent to begin by looking at the system of agriculture of which they are a part. There are additional monetary costs that get included in the commodities

that are produced as a result of the use of chemical inputs such as fertilizers and pesticides. This monetary cost does not as yet include the impact of these farming practices in terms of environmental degradation. This industrial form of food production replaces local markets and local cultures that have traditionally been places of crop diversity, promoted through the ingenuity of farmers to evolve new breeds through the conservation of seeds and plant varieties (Shiva, 2000). Smallholder farmers are faced with a dependence on the technologies of the industrial revolution (Altieri, 2002) and domination by development strategies of third world governments that subsidize large agribusinesses (McMichael and Raynolds, 1994).

Farmland biodiversity is an important characteristic when assessing sustainability of agricultural practices but has seen a drastic fall due to the adoption of herbicide resistant crops almost twenty years ago (Tappeser, Reichenbecher and Teichmann, 2014). Glyphosate and its related herbicides are the most widely used in the world and apart from being toxic to plants, have adverse effects on mammals, some invertebrates, aquatic species and the soil micro flora and are particularly toxic to amphibians (Tappeser, Reichenbecher and Teichmann, 2014). An estimated amount of 239 million kg of additional herbicides were applied due to the rising dependence on glyphosate in the whole period of 1996-2011, with herbicide resistant soybean accounting for two thirds of the total increase (Tappeser, Reichenbecher and Teichmann, 2014). Despite this, the industrial method of farming is actively promoted by the large transnational corporations (TNCs), governments and civil society organisations alike accompanied with the rhetoric of a responsible approach to business (Craig and Amernic, 2004). There is however clear evidence that intensive high input farming is one of the main drivers of ongoing biodiversity losses in agricultural landscapes (Tappeser, Reichenbecher and Teichmann, 2014). This is an

attempt to marginalize local markets and agroecosystems by TNCs and their agro-food supply chains by undermining the work done by ATOs and grassroots organizations supporting food sovereignty for farmers (Friedmann and McNair, 2008). The negative impact of agro industrialization has been brought into the public eye through the work of global farmer movements (McMichael, 2016).

Modern agriculture is based on the premise that without adding external inputs such as fertilizers, pesticides and herbicides, enough food cannot be produced to feed the world. This thesis will specifically question this premise by looking at the accounts of smallholder farmers who have chosen nature and its biodiversity through the provision of ecosystem services as their provider of inputs. According to Costanza et al. (1997, p.254):

> Ecosystem services consist of flows of materials, energy, and information from natural capital stocks which combine with manufactured and human capital services to produce human welfare.

This thesis will investigate the argument of whether agricultural biodiversity can promote the sustainable livelihood of small farmers as opposed to conventional agriculture using chemical inputs and mechanization (Altieri, 1983; 1993; Martínez-Torres and Rosset, 2014). Seufert, Ramankutty, and Foley (2012) in a meta-analysis of studies comparing the yields of organic to conventional agriculture found that on average the yields of conventional cultivation were higher, but did acknowledge that the factors in these studies were much more conducive to conventional cultivation such as the availability of extensive inputs including irrigation facilities. On the other hand, the studies on the organic side especially in the developing countries happened to be with farmers who depended on rain fed agriculture and were mostly small farmers (Seufert, Ramankutty, and Foley, 2012).

Agricultural biodiversity could provide services to farmers which might replace the need for the costly inputs required by the agro-industrial complex (Altieri and Toledo, 2005). The argument that is investigated in this thesis is whether agricultural biodiversity can promote the sustainable livelihood of smallholder farmers as opposed to conventional agriculture using chemical inputs and mechanization (Altieri, 1983, 1993; Martínez-Torres and Rosset, 2014). There are two food systems in the world, one industrial and one of smallholders. The industrial food chain uses 70 percent of agricultural resources to provide 30 percent of the world's food, whereas smallholder farmers produce the remaining 70 percent using only 30 percent of the resources (Bittman, 2013). The impacts of industrial forms of agriculture have been immense. This system is often referred to as "green revolution" and represents the combination of using extensive chemical inputs in combination with genetically modified hybrid seeds as the basis of food cultivation (Shiva, 1991; Shiva, 1997). These seeds have been modified to enable them to survive and grow under the duress of the toxic chemical inputs which would decimate seeds otherwise (Shiva, 1991; Shiva, 1997).

In order to consider the evidence regarding the effectiveness of biodiversity as compared to the technologies of the "green revolution" (Rosset and Martínez-Torres, 2012) will require a change in attitude so that traditional subsistence agro-ecosystems are no longer regarded as "primitive" and as the product of ignorance, but rather as the product of ecological rationales (Altieri, 1983; 2008). The "green revolution" was a movement funded by the Rockefeller foundation and assisted by the governments of the US and participating developing countries including India, which focused on agricultural modernization consisting of transitioning farmers to use the products of industrial agriculture (Nally and Taylor, 2015; Patel, 2013). It is important to

understand that historically the indigenous communities inhabiting the forests have been the protectors of the forest and its biodiversity which makes a bottom-up approach from their perspective critical (Altieri and Masera, 1993; Altieri, 2002). In the context of coffee cultivation, Ninan and Sathyapalan (2005) have found that coffee farmers see the value of promoting biodiversity for its ability to promote their livelihoods as well as for its provision of ecosystem services. The focus of this thesis will be on a co-operative of indigenous farmers from the Southern Indian state of Andhra Pradesh (AP) who cultivate coffee which is both Organic and Fairtrade certified.

This thesis will investigate if using biodiversity and its services, the farmers are closer to having a sustainable livelihood as compared to when they have to invest in the costs mandated by industrial agriculture. There is evidence that industrial agriculture imposes on small farmers farming practices that involve using high cost inputs such as genetically modified seeds (GM), fertilizers, and pesticide/herbicide (Tappeser, Reichenbecher and Teichmann, 2014; Deshpande and Arora, 2010; Hebbar, 2010). What this has tended to do is to lead the smallholder farmer to get into debt and they are seldom able to generate enough income from their farms to be able to break this cycle (Deshpande and Arora, 2010; Hebbar, 2010; Revathi and Galab, 2010; Reddy, 2010). As a result, smallholder farming communities and their food production practices are in danger of becoming ever more marginalized, losing their voice and visibility (Vaidyanathan, 2010). As the threat of global markets taking over from local markets increases, there is a danger that diversity will be replaced by monocultures (Shiva, 2000).

This thesis provides a socio-ecological account of the role that agricultural biodiversity could play in mitigating the adverse impact of the practices of

monoculture agriculture (Altieri 1983; 1993; Altieri & Toledo, 2005; van Rikxoort et al, 2014). The research presented in this thesis is a case study of an agroforestry project that aims to build biodiversity habitats that enable sustainable livelihoods (Agrawal and Gibson, 1999; Salafsky and Wollenberg, 2000). It provides evidence of how an agroecological transformation has the potential to use the environmental services provided by agricultural biodiversity, to promote the livelihoods of indigenous coffee farmers from a coffee co-operative in India. In providing evidence of the role that agroecology could play, this thesis extends the accounting for biodiversity literature initiated by Jones (1996; 2003) to the field of agriculture. Thus another research question in this thesis is to understand the role that agricultural biodiversity could play in promoting sustainable livelihoods in the context of a smallholder coffee co-operative:

- Whether and how agricultural biodiversity would affect the livelihoods of a co-operative of coffee farmers?

This question will be answered within the context of a Fairtrade and Organic certified cooperative which is based in the Araku valley in the Paleru Integrated Tribal Development Agency (ITDA) in the state of AP, India. It consists of indigenous farmers who grow coffee as their primary cash crop. India is relevant for looking at this issue since it has the highest number of certified Organic farmers in the world at over 650,000 (FiBL and IFOAM, 2015). The coffee co-operative has also undertaken an agroforestry project that has been promoted as a model of "ecosystem regeneration" and "strengthening community resilience" with a goal to plant around 6 million saplings during a five-year period approved by the Government of India under the Clean Development Mechanism (CDM) of the Kyoto

Protocol. This project is a partnership between the Coffee co-op, the Livelihoods Group (Danone) and Naandi foundation (Mahindra & Mahindra).

The funding of the Haryali project was facilitated by the Livelihoods Carbon Fund led by the French multinational Danone and the support provided to the Coffee Co-op by the Naandi foundation led by the Indian Conglomerates Dr. Reddy's Laboratories and Mahindra and Mahindra. The Haryali project was based on Danone's belief in a hands-on approach to sustainability (Danone, 2011). In addition to the purchase of carbon credits to offset their emissions, the hope was for an approach that would deliver strong social and economic impact through the restoration of ecosystems (Danone, 2011; 2015). This is a new approach, since despite the central role that biodiversity plays through its provision of ecosystem services (Altieri, 1983; 1993), it is not valued in organizational accounts (Jones and Solomon, 2013).[2]

1.4 Contributions of the thesis

Contribution to theory and the literature

This thesis extends the work of O'Dwyer and Unerman (2008) on holistic NGO accountability to emphasize downward accountability by engaging with the working of ATOs specifically represented by Fairtrade. This is achieved by bringing in the literature on sustainable livelihoods into accounting. In addition, this thesis develops a framework to explain the working of the Fairtrade system at the level of a producer co-operative using the labour theory of value and the science of agroecology. This

[2] "In 1997, the global value of ecosystem services was estimated to average $33 trillion/yr in 1995 $US ($46 trillion/yr in 2007 $US).The estimate for the total global ecosystem services in 2011 is $125 trillion/yr (assuming updated unit values and changes to biome areas) and $145 trillion/yr (assuming only unit values changed), both in 2007 $US. From this the loss of eco-services during the period 1997 to 2011 due to land use change can be estimated to be $4.3–20.2 trillion/yr. It is important to understand that valuation of ecosystem services (in whatever units) is not the same as commodification or privatization. Many ecosystem services are best considered public goods or common pool resources, so conventional markets are often not the best institutional frameworks to manage them. However, these services must be (and are being) valued, and we need new, common asset institutions to better take these values into account." (Costanza et. al, 2014)

framework provides a basis for explaining the challenges related to downward accountability and is a contribution to NGO accountability theory and practice.

Under the guise of promoting the growth of sustainable agriculture based on smallholder farmers, alliances between corporations and NGOs have been set up in the name of eradicating hunger, but with the goal of representing the interests of agribusiness in promoting genetically modified organisms (GMOs) (Patnaik, Moyo and Shivji, 2011). They promote the industrial agriculture model, based on intensive technology, use of chemical fertilizers, herbicides, pesticides, and high-breed seeds which is ideologically consistent with the "green revolution", which had ruinous effects on the environment and smallholders while benefitting big farmers and the rich peasantry (Patnaik, Moyo and Shivji, 2011). This idea is consistent with McMichael (2009) who sees neoliberalism manifesting itself in the global food system leading to the elimination of peasant agriculture. The current food regime is about neoliberal globalization and agricultural biotechnology (Pechlaner and Otero, 2008).

Pechlaner and Otero (2010) have provided evidence of how agricultural biotechnology could transform the political economy of agriculture from one where the peasants are surviving to one in the neoliberal food regime, where they might lose their rural livelihood and have to move to urban areas as manual labour. This is based on the challenges posed to their sustainable livelihoods by their possible inability to compete with the mechanization, and high input costs of biotechnology (Burch and Lawrence, 2009). Moyo, Yeros and Jha (2012) have focused on the aspects of the food system dealing with the fact that almost 80% of all food is consumed where it is grown, and most of it is grown by smallholder farmers, who are being globalized in the age of neoliberalism. On the other hand, there is a threat that tariffs and quotas

will continue to protect wealthy corporate farmers in the global North such as US sugar producers (Moyo, Yeros and Jha, 2012). This idea is consistent with McMichael (2009; 2016) who sees the danger of neoliberalism manifesting itself in the global food system leading to the possible elimination of peasant agriculture.

The use of the concept of sustainable livelihoods (Scoones, 1998) is introduced into the field of accounting for biodiversity as well as NGO accountability by this thesis especially the impact of shocks and crisis on livelihood. This is achieved by developing a theoretical framework that combines the science of agroecology with the labour theory of value. This theoretical framework is then used to question Fairtrade's promise to delivery sustainable livelihoods in the context of the coffee value chain at the level of a coffee co-operative as well as the ability of biodiversity to ameliorate this situation. In doing so, this thesis answers the call of O'Dwyer and Unerman (2016) to engage with issues central to social sustainability such as fair trade. It does so by engaging with the Fairtrade certification system which is meant to bring in fairer trade in the age of neoliberalism. In its engagement with the accountability of Fairtrade this thesis also answers the call of Bebbington and Larrinaga (2014) to engage with issues of accountability within certification schemes. The field of Accounting for Biodiversity initiated by Jones (1996; 2003) and problematized in the *AAAJ special issue on Accounting for Biodiversity* in 2013 is extended in this thesis to understand the value of agricultural biodiversity (nature) as a provider of ecosystem services. This thesis provides a framework to critique the underlying reasons for the loss of biodiversity, by providing an alternative using the science of agroecology. Agricultural biodiversity, through the practice of agroecology provides services to farmers which replace the use of costly inputs (Altieri 1983; 2002) and promotes the sustainable livelihood of smallholder farmers as opposed to

conventional agriculture using chemical inputs and mechanization (Altieri, 1983, 1993; Rosset & Martínez-Torres, 2013). Thus agroecology promotes sustainable livelihood security (Chambers, 1992) especially in terms of preventing distress migration and core exploitation. Core exploitation is the situation where farmers end up losing their land due to indebtedness and are then forced to migrate (Chambers, 1992). This will require that biodiversity is approached from the perspective of the coffee farmer in the context of the services that it provides to their agriculture and thus to their achievement of a sustainable livelihood. Biodiversity represents a cost effective means of soil conservation, water conservation, as well as ecological pest and weed control (Shiva, 2000). The long term viability of farming requires the maintenance of a functional diversity in soils, crop species, trees, animals and insects to maintain ecological balance and nutrient cycles (Weis, 2007). It is important to understand that historically the indigenous communities inhabiting the forests have been the protectors of the forest and its biodiversity which makes a bottom-up approach (Altieri, 1983; Altieri, 2002) from their perspective critical. This thesis makes a theoretical contribution by bringing in the labour theory of value through a focus on the unpaid labour relating to the labour invested by the farmers in growing crops whose value is not paid to them when they sell their produce into the value chain. Further, this thesis makes the theoretical contribution of the concept of "labour provided by nature" using the principles of agroecology, which enable farmers to utilize the services provided by agricultural biodiversity.

Contribution to methodology and methods

This thesis makes a methodological contribution by answering the call of Gray and Laughlin (2012) to take into account marginal perspectives by looking at the field of agriculture from the perspective of a farmers' co-operative which is

consistent with the notion of accounting from the margins. The situation at the ground level from the farmers' perspective with regards to the social and environmental impact of agriculture has not been looked at within the accounting literature and this research also fills this gap. This is the implementation of an enlarged conception of accounting which while being challenging (Deegan, 2013), will require giving due consideration to the people on the fringes of the social systems that are created (Dillard, 2007). The empirical contribution is the account provided by the coffee co-operative and its members in India.

This thesis will take into account the perspective of the indigenous farmers of an Indian coffee co-operative about the extent to which the Fairtrade premium is beneficial to them. Their perspective will need a consideration of the cost of having this Fairtrade premium which is borne by the farmers in terms of the labour time that they need to invest to ensure it. This raises a question if Fairtrade is assisting the MNCs in their sustainability discourse by portraying that the situation is better for the coffee producers than it really is (Davies and Ryals, 2010). This brings into question the ability of Fairtrade to deliver on its promise of providing sustainable livelihoods. Further, to be sold as Fairtrade coffee producer co-operatives need to also take on the burden of Organic certification (Valkila, 2009). Thus studying the perspective of a Fairtrade and Organic certified coffee would provide the opportunity to check the promise of social and environmental justice on the ground.

Another contribution of this thesis is with regard to the use of an innovative method of data collection relating to the use of journals to document the process of participant observation. Further details of this approach will be provided in the Chapter related to methodology and methods.

Contribution to policy and practice

This thesis examines whether and how Fairtrade delivers on the promise of sustainable livelihood at the level of the farmer co-operative. Initial research on Fairtrade argued that it could reduce livelihood vulnerability (Beacon, 2005), through the provision of "fair prices" that not only cover the cost of sustainable production, but also provide a sufficient surplus to ensure a sustainable livelihood (Smith, 2013). More recent studies on Fairtrade point out that it is not as good as it used to be (Beacon, 2010) and might in fact be perpetuating economic marginalization in dead end livelihoods (Smith, 2013). Parvathi and Waibel (2016) looked at the additional benefits to smallholder farmers who had both Organic and Fairtrade certification and found that membership in Fairtrade marketing systems did not increase the income of Organic farmers in the Indian context.

Thus there is "a need for additional research concerning Fairtrade impacts, costs of sustainable production and governance" (Beacon, 2010, p.113). This thesis will contribute to the accounting research on Fairtrade by extending the work of Gray, Dey, Owen, Evans, and Zadek (1997) and Dey (2007) – the focus of these studies was on the performance of a fair trade organization in the global north. This is a contribution to help improve both the policy as well as practice within the Fairtrade certification system.

Industrial agriculture with its monopoly power within the agriculture industry which is further strengthened by patents over seeds and industrial chemicals is destroying biodiversity thereby forcing farmers to buy their inputs and when their crops fail, they end up losing their livelihoods. The industrial method of farming currently incentivizes monocultures and cash crops and is one of the main drivers of ongoing biodiversity losses in agricultural landscapes (Altieri, 1983; Shiva, 1997)

which has contributed to the overshooting of the biodiversity planetary boundaries (Rockström et al. 2009). Monocultures by their very nature of representing uniformity without diversity are vulnerable to ecological catastrophe while compromising the survival of nature's diversity by promoting large scale species extinction (Shiva, 1997).

In order to mitigate the stresses and shocks related to the purchase and use of external inputs and achieve a sustainable livelihood, farmers could utilize the services provided by agricultural biodiversity using the principles of agroecology. There is evidence that farmers who practice farming using the principles of agroecology are in a better position to ensure their sustainable livelihoods (Bengtsson, Ahnström & Weibull, 2005; Butler, Vickery & Norris, 2007). The evidence of the effectiveness of biodiversity as compared to the technologies of the "green revolution" (Rosset & Martínez-Torres, 2013) requires a change in attitude so that traditional subsistence agro-ecosystems are no longer regarded as "primitive" and as the product of ignorance, but rather as the product of ecological rationales (Altieri, 1983; 2008; Vidyarthi & Rai, 1985). This is a contribution to policy and practice in the field of agriculture.

1.5 Thesis Outline

This thesis will consist of eight Chapters including the current Chapter, Chapter one. The second Chapter will provide a literature review of the main topics of the thesis and the topics that will be covered begin with a discussion of the field of accounting for biodiversity and introduce the need for incorporating agricultural biodiversity. This Chapter will then cover the concept of sustainable livelihood along with a discussion of Agroecology. The broad theme of this thesis is on agriculture and food and hence the concept of food regime as the manifestation of neoliberalism is

discussed next. Fairtrade which was developed as a response to neoliberalism will be introduced within the context of the coffee supply chain since the goal of Fairtrade is to deliver sustainable livelihoods. Chapter two concludes with the development of a theoretical framework that combines the labour theory of value with the science of agroecology. Chapter three details the methodology and methods that have been utilized in this thesis and will provide the rationale for the methodology and methods used in the thesis which will include a justification of the critical approach. In this Chapter, I also go over the research methods utilized and provide context and details of the field site where the primary research was conducted. Chapter four is a context setting Chapter and will include a discussion of agriculture in the Indian context in the present detailing the impact of the "green revolution" as well as the implementation of neoliberal policy reforms. Further, this Chapter will detail the Indian government's agricultural policy at present and juxtapose it with the agrarian crisis facing smallholder farmers. This Chapter will also provide the background of the creation of the coffee co-operative along with details and roles of the actors involved.

Chapter five is the first empirical Chapter and will begin with a broader context of the conception of delivery of sustainable livelihoods by the Fairtrade organizations. It will then focus in on the challenges being faced by the coffee cooperative which is the focus of this thesis. These issues will consist of the vagaries of the Fairtrade coffee supply chain as they manifest themselves at the level of this cooperative. This Chapter will include an analysis of the cost structure of the co-operative detailing how being at the producer end of the coffee commodity chain challenges the amount value received at this level from the overall value generated in the chain.

Chapter six consists of the second empirical Chapter which will seek to provide an alternative to Fairtrade by presenting the potential of agricultural biodiversity using the 'Haryali' project. The basis of this project is the idea of promoting biodiversity as the means to achieve sustainable livelihoods. Evidence will be provided through interaction with some farmers who have already incorporated biodiversity into their coffee farms to show what impact this has had in their case. While it is too early to make a conclusion at the level of the co-operative, this does provide incentive for more extended research into this area.

Chapter seven will consist of discussion and analysis which will relate the empirics in Chapters 5 and 6 to the topics covered in the context setting Chapter, the literature review and the theoretical framework. Chapter eight is the concluding Chapter of the thesis, which will bring together the findings of the thesis including the contributions made from a theoretical, policy and practice perspective. It will also provide details of the avenues that have been opened up to future research as a result of this thesis.

1.6 Conclusion

In this Chapter I have introduced the purpose of this thesis detailing its motivation and the research questions that it aims to answer. In the following Chapter, I will present a literature review that will enable a better understanding of these research questions as well as develop a theoretical framework that will be utilized to answer them.

Chapter 2: The promise of sustainable livelihoods: Biodiversity and Fairtrade

> …the claim made by governments, intellectuals, business, and the media that neoliberal growth produces development… is one huge confidence trick. Economic growth under neoliberalism consistently, persistently, in a broad array of contexts, benefits a minority of the population. Neoliberal growth has spectacular effects, in the way of building tall office buildings, opulent houses, high levels of conspicuous consumption, 'modern-looking' young people… Things, however, look differently from the other side –from the perspective of people who, rather than being "left out" or "left behind" …have instead been massively ravaged by neoliberal growth. Neoliberal development is predicated on the underdevelopment of the vast majority of people…from the perspective of the excluded majority…neoliberalism's main socioeconomic product is inequality…the main outcome of inequality is poverty…neoliberalism cannot solve social problems because it causes them.
>
> – Ahmed, Kundu and Peet (2011, pp.2-3)

2.1 Introduction

This Chapter will provide a literature review of the main concepts of the thesis. Research bringing together the areas of sustainable livelihoods, Fairtrade, agroecology and accounting for biodiversity will be looked at to answer the call of Bebbington and Larrinaga (2014) to extend the area of accounting for sustainable development into interdisciplinary areas dealing with agriculture. In this Chapter, section 2.2 introduces the field of accounting for biodiversity along with the basis for the commodification of nature. It presents the argument for the rationale to incorporate agricultural biodiversity from the perspective of the people who depend on it for their livelihood. This section also introduces the concept of sustainable livelihood along with literature from the field of agroecology as a means to incorporate agricultural biodiversity. Section 2.3 introduces the concept of neoliberalism and how it relates to capital accumulation and discusses the current agricultural system using the concept of food regime theory which is a manifestation of neoliberalism within the field of agriculture. Section 2.4 details the Fairtrade

certification system which was set up as a means to mitigate the adverse impact of the food regime on the livelihoods of smallholder farmers. Finally, section 2.5 presents a theoretical framework that uses the labour theory of value along with the science of agroecology to explain the situation faced by the smallholder coffee farmers. The following section will begin with an introduction to the current literature on "accounting for biodiversity" and make the case for the need to value agricultural biodiversity.

2.2 Sustainable livelihoods using agricultural biodiversity through agroecology

Accounting for biodiversity

The field of "accounting for biodiversity" (Jones, 1996; 2003; Jones and Solomon, 2013; Boiral, 2014; Sizemore, 2015) was initiated by Jones (1996) with a framework to measure the value of corporate natural assets. The accounting system in this framework consists of a hierarchical model of counting the habitats and the species of flora and fauna within these habitats in terms of an inventory and total population count (Jones, 1996; 2003). Jones (2003) tested this framework in the Elan Valley nature reserve in the UK by providing an inventory of the habitats, flora and fauna with an estimate of their monetary value. Siddiqui (2013) applied the natural assets framework to the largest mangrove forest in the world, the Sundarbans, using secondary data from government reports and newspaper articles.

There have also been accounting for biodiversity studies that have looked at corporate sustainability and biodiversity reporting (Freeman and Groom, 2013; Rimmel and Jonäll, 2013; van Liempd and Busch, 2013). Freeman and Groom (2013) tried to measure environmental damage using the concept of full cost accounting (FCA) developed by Herbohn (2005) by using various discount rates and found that managers do not value projects that provide common use resources to the broader

society. Rimmel and Jonäll (2013) looked at the biodiversity reporting of 29 Swedish companies who were selected based on the fact that all of their operations impacted biodiversity, but despite this they provided very limited and inconsistent information. Another study that looked at the biodiversity disclosure of 27 large Danish companies came to a similar conclusion about the paucity and variability of the information provided (van Liempd and Busch, 2013).

Corporate reporting tends to be inconsistent with sustainability, since it often fails to fully account for all the ways in which corporate behaviour impacts "on the carrying capacity of given ecosystems" (Gray and Milne, 2002, p.5). Milne (2007) also questions the ability of accounting to make the changes necessary to take sustainability seriously, since it has had limited success with updating its values and beliefs. Boiral (2014) argues that corporate biodiversity reporting is similar to their sustainability reporting in terms of being an exercise in building and retaining legitimacy through impression management. The centrality of biodiversity has not been evidenced in corporate sustainability and biodiversity reporting (Freeman and Groom, 2013; Rimmel and Jonäll, 2013; van Liempd and Busch, 2013). None of these studies delved into third party reports of the biodiversity impacts of these companies' operations thereby missing an opportunity to look at the causes for the loss in biodiversity.

To ensure the preservation of biodiversity and mitigate its loss, the International Convention on Biodiversity (CBD) was established at the Earth summit in Rio de Janeiro in 1992. The CBD according to Shiva (1993, p.151) was "an initiative of the North to globalize the control, management and ownership of biological diversity…to ensure free access to the biological resources…needed as "raw materials" for the biotechnology industry". Further, "the CBD is very much a

top-down process imposed on local communities" (Banerjee, 2007, pp.107). This has led to a valuation of biodiversity based on the logic of the commodification of nature, which leads to "disembedding of people from land, and of land from nature" (Sullivan, 2010, p.112), leading to the transformation of nature into a form, whose value can be captured and traded for monetary benefit (Sullivan, 2009; 2010).

Markets for the services provided by nature enable the monetization of the environmental crisis that results from the economic exploitation of natural resources (Sullivan, 2009). The market for carbon is principal among the markets and mechanisms that have been created to monetize nature's services under the clean development mechanism (CDM) of the Kyoto protocol. The Kyoto Protocol was signed at the third Conference of Parties to the United Nations Framework Convention on Climate Change (UNFCCC) held during 1997 in Kyoto, Japan (Jacob, 2005). It fixed legally binding targets to reduce the emission of greenhouse gases (GHGs) by the countries listed in Annex I of UNFCCC, which were legally obliged to reduce their collective CO2 emissions to at least 5.2 per cent below their 1990 emission levels by 2012 (Jacob, 2005). The protocol established three major flexible market instruments to help the Annex I countries meet their GHG emission reduction targets cost effectively and of these, clean development mechanism (CDM) allows Annex I countries to invest in climate-friendly projects in non-Annex I countries (Jacob, 2005). The carbon market is based on the ability to trade the carbon sequestration services provided by community owned forests and tree plantings to make up for the large scale carbon emissions in the industrialized world termed as greenhouse gas emissions (GHGs) (Sullivan, 2010). The linkage between the role of carbon sequestration in promoting livelihoods especially "that larger forest size and greater rule-making autonomy at the local level are associated with high carbon

storage and livelihood benefits", (Chhatre and Agrawal, 2009, p. 17667) for the people that inhabit the forests was ignored.

Tregidga (2013) studied the relationship between carbon accounting and the use of tropical biodiversity to offset carbon emissions using the annual reports of a company from New Zealand. Tregidga (2013, p.826) brought out the dangers in undertaking the measurement of biodiversity and its impacts under the guise of the idea that "in order to be protected, nature and biodiversity must be integrated into economic decision-making". This does not give due consideration to its complexities which can lead to accounting being used as a tool to rationalize both habitat and species destruction. The Jones (1996) framework is the first step in this process since to trade the services provided by nature, there is a need to value them in financial terms. Based on the idea that natural resources are exploited because they do not have value, it is thought that placing a monetary value on nature will prevent future environmental crisis. This is consistent with Büscher et al.'s (2012, p.4) conception of "neoliberal conservation" based on the understanding that nature can only be "saved" through its "submission to capital and its subsequent revaluation in capitalist terms".

A critique of Jones's (1996) approach to "accounting for biodiversity" is that it does not account for the degraded habitats or missing flora and fauna leading to the reduction in biodiversity that is taking place due to "habitat loss and modification as a result of intensified agricultural practices" (Sizemore, 2015, p.145). The financialization of nature ignores the question of how the trade in nature, impacts the livelihoods of the people who live in the places that are being commoditized (Sullivan, 2009). The interrelationships between biodiversity and sustainable livelihoods have been mostly ignored. By disregarding the traditional practices of indigenous people based on which their subsistence based livelihoods are built, it puts

them in danger of being modified or even lost in the process of turning their surroundings into financialized commodities (Sullivan, 2009).

This is consistent with the concept of alienation as defined by Marx (1988, p.72) in the *Economic and Philosophic Manuscripts of 1844*, which is based on the relationship between the human and nature:

> nature provides labor with the *means of life* in the sense that labor cannot *live* without objects on which to operate, on the other hand, it also provides the *means of life* in the more restricted sense – i.e., the means for the physical subsistence of the *worker* himself.

Alienation can be defined as the hardship caused to the worker through dependence on an external entity, which is a creation of the worker (Marx, 1988). The concept of "alienation" is another way of understanding the submission of labour to capital. Essentially, the workers through their labour are ensuring their continued subservience to capital, leading to their alienation. This "accumulated capital" is transformed into "private property". Thus private property is the outcome of the process of "alienated labour" (Marx, 1988). But, it is also the source of "alienated labour" since the start of the process required the capitalist to own "private property" or capital to begin with.

In the context of agriculture, which is the focus of this thesis, the interaction between the individual farmer (the subject) and their farm (object) involves the alienation of labour (of the farmer) as well as that of nature (the farm). To explain this, firstly it is important to understand that the farmer (the subject) is a part of nature (the farm –object). In the words of Marx (1998, pg.76):

> Man lives on nature – means that nature is his body, with which he must remain in continuous intercourse if he is not to die. That man's physical and spiritual life is linked to nature means simply that nature is linked to itself, for man is a part of nature.

This dependence of the farmer on nature, since the farmer is a part of nature enables us to understand the relation between labour and nature. In this regard the farmer (worker) represents labour and according to Marx (1998, pg. 72):

> The worker can create nothing without nature. It is the material on which his labour is manifested, in which it is active, from which and by means of which it produces … nature provides labour with the means of life in the sense that labour cannot live without objects to operate…it also provides the means of life in the more restricted sense – i.e., the means for the physical subsistence of the worker himself.

Oftentimes, the experts who manage the projects related to the marketization of nature do not acknowledge the need for an understanding of the needs and perspective of indigenous peoples and local communities (Sullivan, 2009). CDM afforestation projects have seen the use of large monoculture plantations (Böhm, 2009; Carrere, 2009), where the local people are treated as 'encroachers' (Carrere, 2009). Nijnik and Halder (2013) in their study of effective afforestation based CDM projects have found that community participation with a focus on local livelihoods and biodiversity conservation as being critical to their success. Often the issue is a trade-off between sequestration and farmer incomes and the planting of trees on the farmer's land is a solution to this wherein the carbon payments provide smallholder farmers with the means to pay for initial project investment costs (Palmer and Silber, 2012).

Taking into consideration the needs of indigenous people, who represent the margins will be essential to the success of afforestation projects (St-Laurent, Gélinas, and Potvin, 2013). Indigenous people who represent the subaltern depend for their livelihoods on the services of nature and hence when nature is being commoditized, their way of life is also under attack and the loss of biodiversity includes the loss of the livelihoods of these indigenous people (Bandi, 2015; Das, 2015; Sathe, 2015). In the exchange that is imposed between nature and capitalism, there is an explicit

promise to provide “development and poverty alleviation”, to the people who live on the lands that have been commodified to rationalize the taking away of their rights along with their culture of coexistence, and replacing it with a responsibility to be guardians of “ecosystem service commodities” (Sullivan, 2010). The CDM projects have not provided enough sustainable development for the communities that are a part of the project (Checker, 2009; Dabhi, 2009), but have contributed to the destruction of the environment and little to the livelihoods of local populations (Gilbertson, 2009; Mate and Ghosh, 2009).

The field of accounting for biodiversity has looked at the business case for protecting biodiversity, the corporate reporting of biodiversity, but the crucial link with the people at the margins has been mostly ignored. The valuation of biodiversity leads to the commodification of nature (Ghosh, 2015; Sullivan, 2009). Biodiversity should be approached from the perspective of the coffee farmer in the context of the services that it provides to their agriculture and thus to their achievement of a sustainable livelihood. Biodiversity represents a cost effective means of soil conservation, water conservation, as well as ecological pest and weed control (Shiva, 2000). The long term viability of farming requires the maintenance of a functional diversity in soils, crop species, trees, animals and insects to maintain ecological balance and nutrient cycles (Weis, 2007). It is important to understand that historically the indigenous communities inhabiting the forests have been the protectors of the forest and its biodiversity which makes a bottom-up approach from their perspective critical (Altieri, 1983; Altieri, 2002).

In the following section of the thesis the concept of sustainable livelihood is introduced along with literature from the field of agroecology which provides a means to mitigate the adverse impact of the practices of monoculture agriculture

(Altieri 1983; 1993). Since this thesis is focused on smallholder coffee farmers, a discussion of the positive role that agroecology can play in coffee based agroecosystems is provided (van Rikxoort, Schroth, Läderach and Rodríguez-Sánchez, 2014).

Sustainable livelihoods using agricultural biodiversity through agroecology

In the context of the change in the agricultural system to one that is focused on providing profit to corporations at the expense of the livelihoods of smallholder farmers, it becomes very pertinent to consider the viability and sustenance of the livelihoods of these farmers. This relates to the concept of sustainable livelihood security (Chambers, 1992) especially in terms of preventing distress migration and core exploitation. Core exploitation is the situation where smallholder farmers end up losing their land due to indebtedness and are then forced to migrate (Chambers, 1992).

In order to be socially sustainable, a livelihood must be able to cope with and recover when there are shocks or situations of stress that endanger the continuation of the livelihood ensuring that the livelihood can be passed down to future generations (Chambers and Conway, 1992). "A livelihood comprises people, their capabilities and their means of living, including food, income and assets" (Chambers and Conway, 1992). Based on a broad interdisciplinary analysis, Chambers and Conway (1992) came up with capability, equity and sustainability as the fundamental concepts that are required to have a sustainable livelihood. This is because each of them is both an end and a means to a sustainable livelihood and having one of them improves the likelihood of having another. Having all of these is the best evidence of the possibility of a sustainable livelihood.

The concept of capability was first developed by Amartya Sen (1993) and deals with the ability of a person to do certain activities and functions which they are capable of doing and being. For our understanding of sustainable livelihood, there is a subset of the capabilities as defined by Sen (1993), which are relevant consisting of the ability to cope with stress and shocks while being able to make use of and find livelihood opportunities. The concept of "equity" is concerned with a reduced inequality in the distribution of assets, capabilities and opportunities along with the possibility for the enhancement of these for those who are the most deprived (Chambers and Conway, 1992).

To achieve a sustainable livelihood, the most essential component is a portfolio of tangible and intangible assets. Swift (1989) defined three classes of assets that would be critical in times of famine namely – investments, stores and claims. Chambers and Conway (1992) classified these further as tangible assets consisting of stores and resources and intangible assets consisting of claims and access. It is important to consider that assets can include not only resources that are natural/biological but also social such as community, family, social networks, participation and empowerment (Elasha, Elhassan, Ahmed and Zakieldin, 2005).

It is essential for continued agricultural production, food security, and environmental conservation to ensure preservation of the planet's biodiversity, especially for smallholder farmers who rely on a diversity of crops (Altieri, 1983; Altieri and Trujillo, 1987; Altieri and Toledo, 2005). Food security at the level of farming households is based on their ability to grow enough food for self-sufficiency and/or based on the ability to generate enough household income to buy the food (Krishnaraj, 2006). However, as noted by Patel (2009) there is a prerequisite to

having food security, which is the ability to have food sovereignty. According to the Via Campesina (1996):

> Food is a basic human right. This right can only be realized in a system where food sovereignty is guaranteed. Food sovereignty is the right of each nation to maintain and develop its own capacity to produce its basic foods respecting cultural and productive diversity. We have the right to produce our own food in our own territory. Food sovereignty is a precondition to genuine food security.

An important constraint to ensuring food security is the loss of soil fertility so to ensure food security it becomes important to prioritize the maintenance and regeneration of soil fertility which is linked to promoting the soil organic carbon (SOC) (Bationo et al., 2007). Since the increasing intensification of agriculture along with increase in the usage of pesticides is causing a loss in biodiversity, a way to mitigate this would be through a focus on sustainable agricultural practices (Pretty and Bharucha, 2014; 2015; Tappeser, Reichenbecher and Teichmann, 2014). Agroecology has been linked with food sovereignty as a means to promote alternatives to the dominant corporate food regime by civil society organizations (CSOs) (Levidow, Pimbert and Vanloqueren, 2014). In the words of Rosset and Martínez-Torres (2012, p.17):

> for peasants and family farmers and their movements, agroecology helps build autonomy from unfavourable markets and restore degraded soils, and social processes and movements help bring these alternatives to scale.

Applying the principles of agroecology is a response by smallholder farmers who are exploited by the corporate food regime (Levidow, Pimbert and Vanloqueren, 2014). The dominance of mainstream agriculture imposes on farmers, high cost agricultural inputs (Kalkat, 2010; Sidhu, 2010) along with the requirement to take on high interest rate credit (Reddy, 2010; Sidhu, 2010). The practices of mainstream agriculture also degrade the soil through the use of pesticides and fertilizers which have been shown to destroy the soil biodiversity (Altieri, 1993; Anand and Chang,

2010), in the process of their cultivation and have a negative impact on the yield of the crops as well as increasing the input costs of agriculture (Kalkat, 2010; Sidhu, 2010).

The growth of capitalism is based on the fiction of nature being external to the human despite the reality that the human is a subset of nature therefore making nature an integral part of the human (Moore, 2014). However, once the system of capitalism has been established with the creation of the proletariat, the worker is alienated from his fellow men since (Marx, 1998, p.78):

> An immediate consequence of the fact that man is estranged from the product of his labour, from his life-activity…is the estrangement of man from man.

Further, this estrangement leads to the creation of a class system, since the process of labour within capitalism makes the worker subservient to the capitalist (Marx, 1998). Since the human is a part of nature and derives the means of life from nature, when the capitalist pays for the value produced by the worker in the form of labour, the capitalist is able to accumulate the value provided by nature in the process of production (Marx, 1976). This is because nature is not paid a wage for the service that it provides. The separation of the worker from the labour power that the worker provides is a result of the existence of private property which belongs to the capitalist (Marx, 1976). The process of the establishment of a capitalist system enables the existence and creation of private property which is achieved at the expense of the commons. This creates the condition for the alienation of labour as represented by "the external relation of the worker to nature and to himself" (Marx, 1998, p.81). Thus private property is central to alienation, since (Marx, 1998, p.81):

> it is the product of alienated labour, and … the means by which labour alienates itself, [which is] the realization of this alienation.

In, *Capital Vol. 1*, Marx (1976) refers to this "alienated labour" as "surplus value" that is converted into the "private property" of the capitalist. In the case of the farmers who are producing coffee, its price is not in their hand, and it is not proportionate to the amount of labour power that they invest. This is an issue for any small scale coffee producer in the world.

Mainstream agriculture by requiring the need to take on credit, imposes on the farmers the need to convert their food from a use value for their food security to an exchange value wherein they are able to sell it as a commodity to be able to pay for the external inputs of industrial agriculture. Agroecology on the other hand, calls for the holistic management of the agro-ecosystem (Altieri, 1983; 1993; 2002), minimizing external inputs, such as synthetic fertilisers and pesticides, producing better environmental, economic and social outcomes (Altieri, 2002; 2008; Babin, 2015). Agroecological designs often incorporate both, traditional knowledge (Altieri, 1983; Anuradha, 1998) and practices of modern agroecological science (Altieri, 2002; 2008), promising to deliver livelihoods for local and regional communities (Altieri and Toledo, 2011). They significantly reduce the usage of inputs (Altieri, 2002; 2008; Babin, 2015), such as water and energy, for agricultural production as well as making the distribution of food more equal (Babin, 2015; Hamprecht, Corsten, Noll and Meier, 2005). Thus in the case that agroecological practices reduce the need for external inputs, this reduces the need for the smallholder farmer to convert the food produced into exchange values and instead the focus could be on ensuring food security and sovereignty to their household.

Holt-Giménez and Altieri (2013) present the basis for the argument that there are two types of agroecology. One is a reformist approach, which attempts to co-opt agroecology into the "green revolution" and the other is a radical approach which

sees agroecology as the basis for a politically transformative peasant movement (Holt-Giménez & Altieri, 2013). The perspective of this thesis is consistent with the radical approach based on the belief that it is important not to lose track of agroecology as a social movement response to the “green revolution” based on local knowledge of the unique features of the environment (Gliessman, 2012; 2013). I therefore base this understanding of agroecology as a response to the scientific perspective in order to question the taken for granted assumptions on which conventional agriculture is based (Sevilla Guzmán, and Woodgate, 2013).

Sustainable agriculture production is facilitated by ensuring the existence of soil microorganisms which in turn deliver ecosystem services (Brady et al., 2015). This is dialectically related to conventional agriculture which is related to the use of increasing amounts of pesticides and fertilizers (Matson et al., 1997) which in turn leads to extensive environmental damage including the loss of essential ecosystem services (Tilman et al. 2002; Carvalheiro et al., 2011). Soil biodiversity is the basic building block of agricultural productivity to be retained in the long run due to its close relationship to the provision of ecosystem services such as (i) decomposition of organic material and production of soil organic matter, (ii) nutrient cycling and mineralization (iii) biological control of agricultural pests and diseases and (iv) soil structure formation e.g. water infiltration and holding capacity (Barrios, 2007).

Conventional agriculture makes extensive use of human inputs such as fertilizers, pesticides and extensive use of water, along with an associated decrease in the organic inputs to soil (Sanderman and Baldock, 2010; Meersmans et al., 2011). Further, conventional agriculture involves insufficient crop rotations in a seasonal fashion with damage caused to the soil structure through rampant intensive soil tillage leading to soil compaction which causes a depletion of SOC and soil biodiversity

(Brady et al., 2015; Meersmans et al., 2011). Agriculture that is not sustainable in that it involves clearing of forests and tree covered land for the purpose of cultivation, along with promotion of inappropriate fertilizer use among other unsustainable practices will increase the emission of GHG and worsen the process and extent of climate change (Bationo et al., 2007).

In times of uncertainty for farm incomes due to climate change impacts including droughts and market-based fluctuations, there is an opportunity to utilize the ecosystem services provided by soil biodiversity to mitigate these (Cong, Termansen and Brady, 2015). According to Cong, Termansen and Brady (2015) the range of organism communities, which are part of the biodiversity present in a thriving soil ecosystem facilitate the growth and sustenance of SOC and nutrients, thereby promoting plant growth under even adverse weather conditions. Soil biodiversity promotes and provides a variety of ecosystem services such as fixing nitrogen in the soil, re-cycling nutrients, acquisition of phosphorous, regulation of soil moisture content, controlling pests and disease, improve the structure of the soil enabling its ability to retain water and facilitating the decomposition of organic materials (Altieri, 1999; Barrios, 2007).

The soil plays a critical regulatory role in both natural and managed ecosystems based on the huge amount of biodiversity in soils and the crucial role that it plays in ensuring soil productivity through the ecosystem services provided (Barrios, 2007). Despite this, the available diversity of soil organisms has received minimum attention based on the reality that modern agroecosystems are mostly high input human intervention based systems using the extensive tillage of soils in combination with increasing amounts of fertilizer and pesticide application (Barrios, 2007). Therefore, there is not much incentive to investigate the role played by soil

biota in improving the productivity of soils through “natural and biologically mediated processes like those regulating soil structure, nutrient supply, and pest and disease control” (Barrios, 2007, p.2).

Conventional agriculture has replaced the biological functions provided by traditional agroecosystems using a diverse community of soil organisms with external inputs based on non-renewable energy and agrochemicals (Bommarco, Kleijn and Potts, 2013). Aguilar et al., (2015) studied the impact that falling biodiversity had on the wider environment and climate change. They found that crop diversity is a measure of how many crops in an area could possibly work together to resist, adjust and address to potential widespread crop failures, including natural problems such as pests and diseases, weed pressures, droughts and flood events. Just like in a natural landscape, areas with high diversity tend to be more resilient to external pressures than are areas with low diversity (Sanderson et al., 2013). Agroforestry systems include both traditional and modern land-use systems where trees are managed together with crops and/or animal production systems in agricultural settings (Millard, 2011). Plantations and restored forests can improve ecosystem services and enhance biodiversity conservation, but will not match the composition and structure of the original forest cover (Chazdon, 2008). Ecological intensification is the process of achieving a greater intensity of crop production without a concurrent increasing rate of environmental destruction by replacing anthropogenic inputs with environmental inputs in the form of biodiversity which provides ecosystem services (Bommarco, Kleijn and Potts, 2013; Pretty and Bharucha, 2014).

For the context of the coffee farmer, the stresses that they face represent regular, predictable disturbances that have a cumulative effect and are best represented by their need to have access to credit. Shocks on the other hand are larger

in scale and more infrequent with a level of unpredictability and an impact that is sudden and in the case of the coffee farmer are represented by the coffee price shocks, which are sudden drops in the price of coffee on the international coffee market (Subervie, 2011; Talbot, 2004). Stresses and shocks could also be caused by environmental factors such as droughts, floods and events caused due to the impact of climate change (Scoones, 2009). On the other hand, farmers who practice sustainable farming are in a better position to ensure their sustainable livelihoods (Bengtsson, Ahnström and Weibull, 2005; Butler, Vickery and Norris, 2007). The evidence of the effectiveness of biodiversity as compared to the technologies of the "green revolution" (Martínez-Torres and Rosset, 2014) requires a change in attitude so that traditional subsistence agro-ecosystems are no longer regarded as "primitive" and as the product of ignorance, but rather as the product of ecological rationales (Altieri, 1983; 2008; Vidyarthi and Rai, 1985).

The success of small scale coffee producer organizations is built on their ability to mobilize social assets and natural assets (Martinez-Torres, 2006). Social assets provide farmers with the ability to create a producer organization such as co-operatives using their networking and organization skills which in turn provides them with market access (Martinez-Torres, 2006). Martinez-Torres (2006, p.3) defines natural assets to mean:

> productive resources like soil, water, forests, fisheries, genetic stocks of crops and livestock, and biodiversity; the ecological processes that link them; and the environmental services they provide.

In her ethnographic study of coffee farmers in Chiapas, Mexico, Martinez-Torres (2006) has found evidence of the central role played by effective investments in natural assets made by the farmers in the course of their conversion to becoming

organic farmers which enabled them to both increase their yields and also increase the unitary price they received for their coffee.

In agroecological coffee systems, shade trees are planted alongside cultivated coffee plants, to create a diversity of trees and plants which provide habitats for many other species which in turn limit pests of the coffee (Perfecto and Vandermeer, 2015). Azteca ants benefit coffee plants by simply removing the coffee berry borer (*Hypothenemus hampei*) pest from coffee seeds and in this process also aggravate bees leading to them spreading pollen at larger distances (Perfecto and Vandermeer, 2015). Coffee plants that interacted with Africanized honey bees (*Apis mellifera scutellata*) showed a weight increase of 25 percent as compared to those with no exposure to insects suggesting that "coffee plants would benefit from being grown in habitats that are suitable for sustaining valuable pollinators" (Roubik, 2002, p.708).

In this section, I have evidenced the importance of agricultural biodiversity in terms of its potential to provide sustainable livelihoods. In the following section, I will discuss the dominant ideology of government namely neoliberalism and how it manifests within the field of agriculture as a "food regime".

2.3 Neoliberalism and food regime theory

The period after the 1970s has been categorized as the start of neoliberalism (Harvey, 2005; Ahmed, 2011; Peet, 2011). Harvey (2005, p.2) defines neoliberalism as a:

> theory of political economic practices that proposes that human well-being can best be advanced by liberating individual entrepreneurial freedoms and skills within an institutional framework characterized by strong private property rights, free markets and free trade.

This is part of the privatization and marketization of whole sectors of the economy based on the neoliberal logic of the efficacy of free markets (Harvey, 2005). The state, neoliberals argued, had to be rolled back from the economic sphere because

it was inefficient, misallocated resources and got in the way of self-correcting markets (Sikka, 2015). This falls under the broader process of globalization which is essentially increased standardization and uniformity of thinking and intellectual homogeneity (Gosovic, 2000) and is essentially a vehicle for global capital accumulation and the expansion of corporate interests (Ratuva, 2009).

Capital accumulation is operationalized by the power and ability of national and international class based elites to dominate the political system and dictate the operation of social, economic and ecological systems at national, regional and local levels in subservience to capital accumulation (Marois and Pradella, 2015). The role of the state is primarily confined to facilitating an institutional framework conducive to the above goals (Sikka, 2015). At an ideological level, the success of neoliberalism to become manifested as the dominant government ideology not only in the western world, but also in the emerging markets is based on its ability to contain wages as well as restrain and diminish the working class and progressive social movements (Fine and Milonakis, 2011). These policies of neoliberalism have as their foundation neoclassical economic theory, which both obscures and legitimizes the process of capital accumulation based on the reduction of labour, land and capital to factors of production, while treating the environment as an externality (Marois and Pradella, 2015).

The current era of neoliberalism is consistent with the privatization and commercialization of the functions that used to be under the purview of the government. This has transformed the role of civil society organizations where their role and influence have increased as they have attempted to fill the void left by the welfare state in its new avatar as the neoliberal state. This has at the same time weakened the state apparatus and replaced it with a hybrid apparatus that consists in

some areas of private corporations taking over the role of government using public private partnerships (PPP) as in the case of the Private Finance Initiative (PFI) based on the ideology of value for money (VFM) (Demirag and Khadaroo, 2011). Despite the neoliberal idea of a reduction in the role of the state, contemporary neoliberal capitalism is based on the continuing existence and role for the state as a proponent of globalization especially as it relates to the internationalization of private capital thereby extending the financialization process from the developed world and the recently financialized emerging markets to yet untapped markets ripe for financialization (Fine and Milonakis, 2011).It is important to understand that under neoliberalism, the state is not a passive spectator and its role has not been rolled back, but instead the state has been restructured to advance neoliberalist concerns related to ensuring corporate profits (Sikka, 2015).

This extends to the global food system with corporations trying to sell their products using the strategy of minimizing costs and maximizing profit in what has been termed a “race to the bottom” through the exploitation of lowest cost human and environmental inputs (Murray and Raynolds, 2007), in line with the philosophy of neoliberalism (Guthman, 2009). “The food regime under neoliberalism institutionalizes a hegemonic relation whereby states serve capital” (McMichael, 2016, p.649). The current global agricultural industrial system is the manifestation of the dominant neoliberal ideology, undermining local markets and agro-ecosystems and emphasizing global foodstuff markets, controlled by transnational corporations (TNCs) (Peet, 2011). What this industrial form of food production replaces are local markets and local cultures that have traditionally been places of crop diversity, promoted through the ingenuity of farmers to evolve new breeds through the conservation of seeds and plant varieties (Shiva, 2000).

The concept of the food regime developed by Harriet Friedmann along with the work of Philip McMichael (Friedmann and McMichael, 1989; Friedmann 1993, 1994, 2005; McMichael 2009) has made an attempt to analyse this increasing industrialization and globalization of food production and trade. The U.S. used its excess agricultural production to gain advantage in the cold war by providing 'food aid' and also promoted industrial monoculture agriculture based on the use of its agricultural technologies (McMichael, 2009). At the same time, third world governments were advised to adopt developmental policies to catch up with the West that focused on bolstering foreign exchange earnings in order to pay for the loans provided by the west for development. Central to this strategy was the transition of agriculture from traditional food crops that ensured food security to cash crops that could be exported resulting in malnutrition and conditions similar to famine leading to the marginalization of the smallholder farmers (Matson, Tang and Wynn, 2012). Little did the governments or their experts know that this was a means for the transnational food corporations to get subsidized access to their markets (McMichael and Raynolds, 1994).

According to McMichael (2005; 2009), the current food regime began in the period of the 1980s as the food regime of biotechnology in conjunction with the birth of neoliberalism. In this food regime large corporations dominate the food industry supply chain. So the food regime in the context of my thesis can be defined as the representation of neoliberalism within the food industry. The current corporate food regime which has been in existence from the 1980s to the present is a manifestation in the realm of food of the broader forces of neo-liberal capitalist expansion (Holt Giménez and Shattuck, 2011). Essentially the food regime concept brings the idea of neoliberalism into the context of agriculture and the global food system. Harvey

(2005, p. 3) saw neoliberalism as pervasive since it had "become hegemonic as a mode of discourse. It has pervasive effects on ways of thought to the point where it has become incorporated into the common-sense way many of us interpret, live in, and understand the world."

According to Holt Giménez and Shuttack (2011), a food regime is one way to imagine the global food system based on well-defined rules for both the production and consumption of food. The rules of this corporate food regime enable monopolies within different segments of the food system for companies such as Monsanto, ADM, Cargill and Walmart (Holt Giménez and Shuttack, 2011). The industrial system of agriculture is consistent with the development of technologies since World War II which were premised on increasing profitability for the corporations that developed them under the guise of increased productivity and efficiency (Commoner, 1971). This is achieved at the expense of extensive and increasing amounts of environmental and social degradation.

Table 1: The three principal fertilizers used in Industrial agriculture
Source: (Government of India, 2016)

Fertilizer provides 3 major nutrients which increase agricultural yields:

Nutrient	Main source
Nitrogen (N)	Urea
Phosphorus (P)	DAP
Potassium (K)	MOP

The optimal N:P:K ratio varies across soil types but is generally around 4:2:1

In the context of the development of modern industrial agriculture in the US, the impact of using the system of modern agriculture consisting of an extensive use of fertilizers and pesticides (refer to Table 1) is that there is a resulting loss in soil fertility which requires extended fallow periods for the soil to regenerate itself (Follett, 2001). This is an option in the US and is part of the planning process of the Unites States Department of Agriculture (USDA) and the US Department of the Interior's Bureau of Land Management, where there is land left fallow that is called

"set-aside land" (McGranahan, Brown, Schulte and Tyndall, 2015). However, in most of the rest of the world "it is no longer feasible to use extended fallow periods to restore soil fertility" (Bationo et al., 2007, p.2). The increase in human population that has caused this, has also led to "the cultivation of marginal lands that are prone to erosion hence enhancing environmental degradation through soil erosion and nutrient mining" (Bationo et al., 2007, p.2).

The current corporate food regime is held in place by (Holt Giménez and Shattuck, 2011, p.119):

> Northern-dominated international finance and development institutions (e.g. IMF, WTO, World Bank), as well as the major agri-food monopolies (e.g. Cargill, Monsanto, ADM, Tyson, Carrefour, Tesco, Wal-Mart), agricultural policies of the G-8 (US farm Bill, EU's Common Agricultural Policy), and big capital.

The focus on technology and private sector partnerships has raised opposition and controversy that government is promoting an imported model of industrial agriculture based on the high-tech seeds and chemicals sold by U.S. corporations (Martin-Prével and Moussea, 2016). There is a fear that industrial agriculture is focused on the work of scientists in centralized labs while ignoring the knowledge and biodiversity developed and maintained over generations by smallholder farmers (Martin-Prével and Moussea, 2016).

Using Marx's labour theory of value, this transformation of the system of agriculture from subsistence farming using the services provided by nature to a system of industrial agriculture would be the basis for the creation of surplus value for the agribusiness corporations that own the rights to the high-tech seeds and chemicals. This is a transformation of agriculture from a process of creating value (especially use values in the case of food that is grown by the smallholder farmers for the food security of their families) to valorisation (Marx, 1976). This leads to the

creation of surplus value or profit for the companies that provide the agricultural inputs while the use values are converted to exchange values in the form of commodities leading to the commodification of the labour of the smallholder farmers. An example of the negative impact of industrial agriculture is the situation created by industrial plantations which have had a significant negative impact on local communities (Bergius, 2015). Thus there is a need to account for the "externalities" caused by industrial agriculture and this thesis will focus on its impact on biodiversity. Thus consistent with the notion developed by Marx of the relationship between the human and nature, there is a need to investigate if by utilizing the services of biodiversity smallholder farmers would be able to grow their food and have a better possibility of achieving a sustainable livelihood. In the following section, I will investigate another alternative that is premised on providing sustainable livelihoods to smallholder farmers – the Fairtrade system.

2.4 Fairtrade certification: a response to the food regime

The role of Fairtrade within the coffee value chain

The concept of value chain was developed as a tool for analysing the relationship between the value-creating functions and activities within an organization that ensure that the needs of the customer are met (Porter, 1985). According to Porter (1985), the value chain is a tool to analyse if each step in the supply chain of an organization is generating any value for the end customer based on the actions of the employees of the organization as well as its processes. In this thesis, I focus the analysis on the value derived at the level of the producers that provide the raw materials for achieving a sustainable livelihood. There is a need for the "accountability by a firm for its supply chain activities" which could be seen in terms of its control over its

supply chain especially with regards to information about the various elements of the chain (Nicholls and Opal, 2005, p.59).

This will require a transition in "managerial cost analysis" to using the pro-active approach of "strategic cost analysis" or "strategic management accounting" (Shank and Govindarajan, 1992; Shank, 1989). Shank and Govindarajan, (1992) recommend the use of 'strategic management accounting' to ensure that managers have access to decision useful information relating to each activity and process of their organization. Shank (1989) defined Strategic Cost Management (SCM) as a combination of value chain analysis, strategic positioning analysis and cost driver analysis. Shank (1989, p.50) defines the value chain as:

> the linked set of value creating activities all the way from basic raw material sources for component suppliers through to the ultimate end-user product delivered into the final consumers' hands.

Traditional management accounting according to Shank (1989, p.51), used the concept of value added which limited the analyses to activities within the direct purview of a firm, which is a problem in that it "starts too late and stops too soon". In relation to the coffee commodity chain, the value chain analysis will determine if the coffee should be sold as a commodity (by reducing the cost of production) or differentiated through sales in the speciality coffee market niche (through a focus on high quality). This according to Shank and Govindarajan (1992, p.180), will require using the value chain framework that they have developed:

> for breaking down the chain of activities that runs from basic raw materials to end-use customers into strategically relevant segments in order to understand the behaviour of costs and the sources of differentiation.

Dekker (2003) attempted to perform a value chain analysis of a portion of the supply chain of Sainsbury and a group of its suppliers. As noted by Dekker (2003) the extent of this analysis was very limited and a broader segment of the value chain has

yet to be studied in the management accounting literature. In this thesis my focus is on the segment of the value chain involving the producer co-operative to understand the role of being a part of a Fairtrade driven value chain, and the significant role it plays in the achievement of sustainable livelihoods for its members.

From the point of view of food systems governance, the most dominant value chains are the global supply chains of the large retail and marketing corporations (Schilpzand et al., 2010). The coffee value chain involves the steps in a production system that brings coffee from where it is produced in the tropics to where it is consumed in the countries of the global North (Talbot, 2004). It consists of large transnational corporation (TNC) trading houses that trade in a range of commodities but is especially relevant to explain the working of "traditional" primary commodities, where international traders exercise the "driving" role (Gibbon, 2001). Global production networks (GPNs) are an innovation based on the commodity chain that take into consideration the unique social and political features that together make up the global (Hess and Coe, 2006; Hess and Yeung, 2006). The GPN was developed and applied to the coffee commodity chain by Levy (2008) to account for the friction and pressures faced by TNCs doing business around the world and having to deal with both social and political issues in the process of their international operations. According to Levy (2008, p.943) GPNs are:

> …characterized by contestation as well as collaboration among multiple actors, including firms, state and international agencies, nongovernmental organizations (NGOs), and industry associations, each with their own interests and agendas…they comprise complex political economic systems in which markets— and their associated distribution of resources and authority—are constructed within, as well as actively shape, their socio political context.

The shift of the coffee value chain to a system of free trade under the ideology of neoliberalism began with the end of the international coffee agreement (ICA) in 1989 leading to a dramatic drop in coffee prices, which stayed this way for about five

years as well as a reduction in the amount of coffee income retained in the producing countries (refer to Table 2) (Martinez-Torres, 2006; Talbot 1997; 2004).

Table 2: Percentage of total income retained in coffee producing and consuming countries – Before and after the end of the international coffee agreement (ICA) in 1989
Source: Ponte (2002) adapted from Talbot (1997a, pp. 65-67).

Time period	Percentage of total income retained in the producing countries	Percentage of total income retained in the consuming countries
1970s	20%	53%
1980-81 to 1988-89	20%	55%
1989-90 to 1994-95	13%	78%

The negative impact of the end of the international coffee agreement was further compounded by the imposition of structural adjustment programs by the International Monetary Fund and the World Bank in the 1980s and 1990s on several countries that were producers of coffee leading to the collapse of their national coffee regulatory and support organizations (Johannessen and Wilhite, 2010; Martinez-Torres, 2006; Talbot, 1997). This created a coffee crisis especially for small producers who depended on their national institutes for technical assistance, credit, and assistance with logistics and marketing (Bacon, 2005; Martinez-Torres, 2006). In this context, Fairtrade developed as a response by civil society organizations which began to fill the gap left by the withdrawal of the state under the growth of the ideology of neoliberalism (Bozanic, Dirsmith, and Huddart, 2012; Carothers and Barndt, 1999; Suddaby, Cooper, and Greenwood, 2007).

Since the coffee crisis in the early 2000s, when coffee prices fell to under U.S. $1 per pound, there has been continual volatility in the coffee market in terms of profit at the level of the grower (Bacon, 2005), which has created dire circumstances for many farmers (Ponte, 2002; Bacon, 2005). Many rural coffee growers are barely able to cover their costs and put food on their family's table (Ponte, 2002; Bacon, 2005; Valkila, 2009). This precipitated a fundamental change in policy that was

announced by the FLO in March, 2011 where FLO doubled the community development premium for coffee (from $.10 per pound to $.20 per pound and mandated that $0.05 of this should be used on quality improvement efforts at the level of the cooperative) and also increased the Fairtrade minimum price from $120 per quintal ($1.20 per pound of green beans) to $140 per quintal ($1.40 per pound of green beans) for the highest quality coffee (Fairtrade USA, 2011).

The FLO has focused on the supply side of Fairtrade, since it makes its money from the number of producer organizations that are certified, as well as the number of brands of coffee that carry its label. This has led to there being an oversupply of coffee that is only Fairtrade certified (Muradian and Pelupessy, 2005) and this fact is explained by the coffee industry as a rationale to explain the low price of coffee (Levy, 2008). Further, the solution that is portrayed to such issues of inequality in the marketplace is the ideology of the "free market" that promotes the idea that interfering with it will only make matters worse (Talbot, 2004). This leads to a discussion relating to for whose benefit the Fairtrade system operates.

For whose benefit is the Fairtrade system

The Fairtrade system consists of the Fairtrade Labelling Organizations International (FLO), FLO-CERT and various National Labelling Initiatives (NLIs) (such as the Fairtrade Foundation in the case of the UK). Fairtrade is run by 'Fairtrade International', a non-profit association with multiple stakeholders consisting of 23 Labelling Initiatives (Dine, Granville & Telford, 2013). Fairtrade International certifies, provides and markets the Fairtrade label while FLO-CERT GmbH is in charge of the inspection and certification of the producer organizations (Dine, Granville and Telford, 2013). FLO standards mandate that the members of producer

cooperatives should be small family based growers following ecological farming methods (Murray, Raynolds and Taylor, 2006).

The FLO which is the custodian of the Fairtrade certification mark has as its main function to set the standards and minimum prices for the growing range of Fairtrade certified products including coffee (Fairtrade International, 2014). In addition to this, the FLO is in charge of the overall co-ordination of Fairtrade supporting small farmers and workers who participate in its network while also working with producers and traders to match supply and demand (Dine, Granville and Telford, 2013). FLO-CERT is an independent certification company that manages producer and trader certification and collects certification fees from them (Dine, Granville and Telford, 2013). In addition, FLO-CERT receives a proportion of the license fee income from the NLIs to cover the costs of managing its activities (Fairtrade Foundation, 2014). The NLIs role is to promote the Fairtrade concept in the consuming countries including to consumers generally as well as specifically to companies that would consider putting the Fairtrade label on their products (Dine, Granville and Telford, 2013). NLIs collect license fees as a percentage of the wholesale value and undertake the monitoring and auditing of licensees (Fairtrade International, 2014).

The ability of Fairtrade to legitimize its role as an intermediary in the value chain by convincing both the end consumers as well as the producer cooperatives that Fairtrade adds value by its existence is at the crux of the existence of the Fairtrade system. This push to promote ethical consumerism has seen a phenomenal growth in the sales of Fairtrade products especially in Europe and North America. It has also generated debate if the popularity of Fairtrade has made it susceptible to being “co-opted” by the mainstream food sector (Lockie, 2008). It has also led to the

proliferation of multiple standards agencies that seem to compete against each other for gaining the legitimacy of the consumer, retailer and producer partners (Manning, Boons, Von Hagen and Reinecke, 2012; Reinecke, Manning and Von Hagen, 2012).

Research conducted with regard to what extent Fairtrade actually benefits the coffee farmers (Bacon, Mendez, Flores Gomez, Stuart and Díaz Flores, 2008; Barham, Callenes, Gitter, Lewis and Weber, 2011; Barham and Weber, 2012; Chiputwa, Spielman and Qaim, 2015; Mendez, Bacon, Olson, Petchers, Herrador, Carranza, Trujillo, Guadarrama-Zugasti, Cardon and Mendoza, 2010; Ruben and Fort, 2012; Ruben and Verkaart, 2011; Ruben and Zuniga, 2011; van Rijsbergen, Elbers, Ruben and Njuguna, 2016) has found evidence that Fairtrade is having a positive impact on the coffee growing communities while also bringing up many issues related to the shortage of effective downward accountability as a result of which the producer communities are facing many challenges as well. Van Rijsbergen, Elbers, Ruben and Njuguna (2016), claim that Fairtrade was more effective in promoting coffee processing and that these enabled Fairtrade coffee farmers to increase their coffee specialization. It was found that improved yields for the coffee were more important than price premiums to increase net cash returns for coffee growing households (Barham et al., 2011; Barham & Weber, 2012). Chiputwa, Spielman, and Qaim (2015) found that Fairtrade certification increases household living standards by 30% while reducing the prevalence and depth of poverty. Ruben and Zuniga (2011) found that participation in Fairtrade networks reduced exposure to price variations and mitigated risk aversion. In addition, Fairtrade was found to have a beneficial effect on farmer organization while also providing initial market access (Ruben and Verkaart, 2011; Ruben and Zuniga, 2011). This is based on the fact that Fairtrade offers a guaranteed minimum price and an additional premium for

community level investments, which reinforce the farmers' loyalty to the co-operative (van Rijsbergen, Elbers, Ruben and Njuguna, 2016). Further, the Fairtrade premium is invested at the community level for collective goods that benefit the community as a whole (Ruben and Fort, 2012). Households connected to Fairtrade co-operatives experienced several positive impacts in education, infrastructure investment and monetary savings (Bacon et al., 2008). In comparison to private label coffee brands, while Fairtrade was found to provide better prices, but not higher yields or better quality for the coffee since private labels provided better incentives for upgrading the quality of the coffee (Ruben and Zuniga, 2011).

There have been issues related to Fairtrade as well since it did not provide enough incentives for improving the quality of the coffee (Ruben and Verkaart, 2011; Ruben and Zuniga, 2011). Bacon (2010, pg.113) affirms that:

> Fairtrade is not as good a deal as it used to be…a fairer Fairtrade would require a modification in its governance to make it more participative in terms of a role for Southern Civil Society and coffee producers.

Doherty, Davies and Tranchell (2013) counter Bacon's (2010) argument based on their logic that the Fairtrade minimum price (FTMP) was a better price than the prevailing market price while acknowledging that this price did not in the case of some producers cover their cost of production. Further, Doherty, Davies and Tranchell (2013) acknowledge that although the provision of pre-finance was a founding Fairtrade principle it has not been implemented by the FLO and in fact has been withdrawn as a requirement for Fairtrade buyers as of 2008. This leaves producers and their co-operatives at the mercy of traders since without the pre-finance they are left with no other option but to borrow money from traders and then have a contract with them to sell them their coffee at an agreed price, which might be and often is lower than the FTMP.

Furthermore, despite providing better prices and hence greater coffee revenues, Fairtrade does not help to reach a level of sustainable livelihood due to the limited sales to certified markets (Johannessen and Wilhite, 2010; Mendez et al., 2010). A similar problem was found in Kenya with only about 30% of Fairtrade certified coffee being sold as such in 2012 (van Rijsbergen et al., 2016). Several important livelihood insecurities including low incomes, high rates of emigration and food insecurity persisted among small scale coffee producers who were members of Fairtrade coffee co-operatives (Bacon et al., 2008). To get their coffee sold as Fairtrade, producer organizations have had to take on the additional burden of organic certification since there is a growing market for coffee that is certified organic and Fairtrade (Johannessen and Wilhite, 2010; Valkila, 2009).

There are other challenges that Fairtrade faces including a lack of agreement about what Fairtrade really means, how it should be certified and the main issue of the extent of the potential contribution of Fairtrade to development (Hira and Ferrie, 2006). The ethical and accountability challenges seen in the Fairtrade coffee market with the co-option of the Fairtrade agenda in the context of the coffee industry by TNCs has been well documented (Haight 2011; Jaffe and Bacon 2008; Reed, 2009: Weber, 2011) and used to make the argument that Fairtrade is no longer fair to the producer (Weber, 2007; Valkila, 2009; Wilson, 2010; Haight, 2011). The Coffee TNCs make a profit since they charge the end consumer a Fairtrade premium at the retail level. This is one of the critiques of the higher prices for Fairtrade coffee at the retail level in consuming countries (Ponte, 2002). The issue is that the value that is created is exclusively at the retail or consumer end of the value chain (Daviron and Ponte, 2005).

Bacon (2010) found that between 1988 and 2008, the Fairtrade minimum price has lost about 41% of its real value. For many rural coffee growers, this has meant that they are barely able to cover their costs, and at the same time put food on their family's table (Ponte, 2002; Bacon, 2005; Valkila, 2009). This is based on the fact that little or usually none of the extra paid by consumers for Fairtrade reaches farmers (Griffiths, 2012). Griffiths (2012) argues that this unfair system exists because of the failure of the Fairtrade industry to give the facts on what happens to the money and what it is proved to achieve. This raises a question if Fairtrade is assisting the TNCs in green washing by portraying that the situation is better for the coffee producers than it really is (Davies and Ryals, 2010; Jaffee and Howard, 2010). Smith (2013, p.115) acknowledges that:

> …far from promoting the long-term interests of southern producers, fair trade might be perpetuating economic marginalization in dead end livelihoods.

Thus it becomes relevant to delve into the issues of NGO accountability in relation to the Fairtrade system, which is the focus of the next section.

NGO accountability in the context of Fairtrade

Downward accountability exists "where beneficiaries have [a] say over NGO practices and the latter must justify their actions" (Andrews, 2014, p.99). To develop the concept of downward accountability, the starting point is the framework of hierarchical and holistic accountability developed by O'Dwyer and Unerman (2008) which argues for the need to align an organization with the needs of its beneficiaries who often get side lined in the process of prioritizing upward accountability. The dominance of upward accountability to donors versus a more holistic accountability with due consideration for beneficiaries is based on the use of performance metrics from a business context turning NGOs into business entities for all practical purposes

(Gray, Bebbington and Collison, 2006). O'Dwyer and Unerman (2008) warn of the dangers of this approach which could and often does lead to the tragic situation wherein the accountability process leads to activities which end up compromising the purpose of existence of the NGO. This is partly caused by the fact that mechanisms for downward accountability remain underdeveloped due to the emphasis placed on upward accountability (Ebrahim, 2003).

The focus on upward accountability is due to the fact that "the decision-making processes of the organization are altered or compromised by receiving external funds" (Fowler, 1985, p. 22). What is lost in this type of organizational structure and focus is the implicit focus within traditionally structured organizations towards "downward accountability" (Fowler, 1985, p. 20). The dominance of upward accountability to donors versus a more holistic accountability with some consideration for beneficiaries indicates a business-like approach among NGOs where the metrics that are used within a business context seem to have become imbued into the NGO context thereby turning the NGO into representatives of business interests in all but name (Gray, Bebbington and Collison, 2006). As per Lehman (2007, p.652):

> An NGO is done a disservice on one end of the political spectrum if all activity is accountable in strictly rationalist terms, a disservice by the other if only judged on "social worthiness" instead of achievements…Therefore, a key problem with NGOs is that they are susceptible to capture by the same system that they aim to reform.

This is especially the case in the current neoliberal environment wherein NGOs are in danger of being co-opted by the corporate profit motive (Moog, Spicer and Böhm, 2015).

Civil society organizations are in danger of becoming the conduits of transnational interference in the governance of the nation state (Chatterjee, 1997b),

based on the growth of the nexus between NGOs and corporations. This is represented in the current context by transnational NGOs supported by philanthropic foundations and the governments which defer to their will (McGoey, 2012; 2014). This is based on the growth of a form of capitalism, which is based on the logic of using NGOs as a way to subvert the nation state and open new channels of capitalist accumulation by promoting economic growth as the representation of sustainable development under the guise of promoting equity of a social and environmental nature (Bosworth, 2011; Edwards 2009; 2011; Green, 2015; McGoey 2012; 2014; Maier, Meyer and Steinbereithner, 2016; Thompson, 2014).

Such NGOs which promote and represent the interests of already powerful commercial organizations despite being organizations set up in the public interest working for the underprivileged have been called “Astroturf NGOs” by Gray, Bebbington and Collison (2006, p. 329). Working with these “Astroturf NGOs” aligns with the needs of corporations since they are provided a veneer of credibility which reduces the accountability requirements placed on them (Unerman and O’Dwyer, 2006b). ATOs were a response to the privatization and marketization of whole sectors of the economy based on the neoliberal logic of the efficacy of free markets (Bozanic, Dirsmith and Huddart, 2012; Cooper, 2015; Harvey, 2005; Suddaby, Cooper and Greenwood, 2007). In order to question the downward accountability of ATOs, the contribution of this thesis is the utilization of a framework using the labour theory of value.

2.5 Theoretical framework: The Labour theory of Value

Taking Marx’s theory of value as the starting point will enable a discussion of how the capitalist system is organized including a discussion of its historical and social

elements (Fine and Milonakis, 2011). Within the neoliberal macroeconomic context, Marois and Pradella (2015, pp.4-5):

> recognise that neoliberalism is a class-based political and economic project, defined by the attack of capital and neoliberal state authorities on the collective capacity of organised labour, the peasantry and popular classes to resist the subordination of all social, political, economic and ecological processes to accumulation imperatives. The subsequent consolidation of neoliberalism globally has thus been to the benefit of global capital, and has come at the expense of workers, women and the poor.

According to Marx (1976), the driving force of capitalism, the need to earn more and more profit was a recipe for constant crisis. Marois and Pradella (2015, p.4) explain the basis of neoliberalism as neoclassical economic thinking with the explicit understanding of labour as another factor of production which is exploited under the guise of "market based notions of individual equality and freedom". In Marx's theory of value there is a clear difference "between value creation (exploitation in the labour process) and value capture (appropriation of profit) "(Bowman and Toms, 2010, p.186). In this regard exploitation is defined as the difference between the value generated by workers and what they are paid (Smith, 2015).

In contemporary neoliberal capitalism there is a way to increase the rate of exploitation by pushing the wage of the worker down below the value of their labour power. Specifically, when looking at the ways in which capitalists strive to increase the rate of exploitation of labour, in *Capital Vol.1*, Marx analysed in detail two ways of doing this. They consisted of lengthening the working day, leading to an increase in the "absolute surplus value" and increasing the productivity of workers who were producing goods for consumption whereby the "relative surplus value" is increased by reducing the necessary labour time for an individual product (Marx, 1976). Marx alludes to another way in which the rate of exploitation of labour can be increased and this involves reducing the wages of the worker below the value of their labour

power (Marx, 1976). Marx however clarified that this was not a viable option for the capitalist at the time of Marx's writing based on the "assumption that all commodities, including labour-power, are bought and sold at their full value" (Marx, 1976, p.431).

The argument made by Smith (2015) is that in the current neoliberal context, the population, due to the lack of appropriate jobs is forced into a situation where it must be willing to work at a rate of pay much below its recent value. Thus in effect, the conditions alluded to by Marx (1976) are now the reality (Smith, 2015). This means that the third type of surplus value extraction by capital involving the reduction in the price paid to labour for its work to a level below its value is the reality of neoliberal capitalism.

Marx adopts a "human resource" based theory of value and surplus value wherein the value created by human labour is not fully returned to the provider of the human labour (Bowman and Toms, 2010, p.185). Bowman and Toms (2010) take the notion of value as socially necessary labour time. Beverungen, Böhm, and Land (2015) focus on free labour as being both unpaid and uncoerced and in this regard bring out the distinction between productive and unproductive labour as being central to Marx's labour theory of value.

In *Capital vol. 1*, Marx defines productive labour based on its ability to generate surplus value for the capitalist while being consumed in the process of doing so (Marx, 1976). Hence any labour which does not contribute to the generation of surplus value is defined as being unproductive (Beverungen, Böhm, and Land, 2015). However, in the context of work that is unpaid but still very much required, also known as coerced work, it must be included in the definition of productive work (Beverungen, Böhm, and Land, 2015). According to Braverman (1998), within a

capitalist system of commodity production at a large scale, the requirement is for labour itself to become commoditized and this process of commodification of labour is termed proletarianization and a defining feature of capitalism is the reproduction of this process of proletarianization of labour. However, to be able to achieve this proletarianization, labour needs to be separated from the means of production so that "the surplus value which labour produces is used to sustain and augment capital and so reproduces the monopoly on the means of production" (Cooper, Taylor, Smith, and Catchpowle, 2005, p.959). In this context within the labour market, different capitalist enterprises are under pressure to increase the level of exploitation of labour in order to remain competitive and hence this process of proletarianization and its related exploitation of labour, "where labour-power exists as a commodity on a significant scale" are inherent features built into a capitalist system (Cooper, Taylor, Smith, and Catchpowle, 2005, p.958).

According to Rosa Luxemburg (2003), there are two aspects of capital accumulation, the economic process consisting of the critical phase of the exploitation of wage labour by the capitalist, and the use of imperialism to bring non-capitalist modes of production into the capitalist economic process. The rationale for the need for non-capitalist modes of production to be subsumed by capitalism is due to the fundamental under consumption crisis of capitalism, whereby there is a lack of sufficient demand for the output that capitalism generates (Harvey, 2004). This contradiction is caused by the exploitation of wage labour, wherein workers receive in pay wages that are worth much less than they contribute in the value that is generated in the production process using their labour power (Patnaik and Patnaik, 2015). This has a negative impact on demand and hence on consumption. The demand from the capitalist is limited by their need to reinvest the profit back into

their business (Marx, 1976). The solution to this crisis is trade with non-capitalist social formations such as co-operatives while maintaining them in a non-capitalist state (Luxemburg, 2003).

For Marx, the basis of the theory of value is the social relationship within the context of production between wage-labour and capital (Tinker, Merino and Neimark, 1982). Moyo, Yeros and Jha (2012) understand the primary objective of Marx as being to show the use of "extra economic" force by capitalism to separate peasants from the land and commodify both labour and land. Further, this also shows that Marx (1976) believed that once it has been created, the capitalist system continuous to exploit labour "by the appropriation of labour power beyond the labour time necessary for the social reproduction of the work force" (p.185). The voracious appetite of globalised, neoliberal capitalist accumulation is consuming the small producers and the peasantry (Patnaik, Moyo, and Shivji, 2011). To make the connection between capitalism accumulation and the food regime as a concept, it is important to have an understanding of the viewpoint of the farmers who see their labour power converted to surplus value within corporate value chains (Araghi, 2003).

The state in its relationship with the subaltern is very much a colonial power since its behaviour is consistent with "the three fundamental aspects of colonialism, namely, its origin in an act of force, its exploitation of the primary produce of the land as the very basis of a colonial economy, and its need to give force and exploitation the appearance of legality" (Guha, 1997, p.156). This new phase of capitalist accumulation based on the old form of accumulation – primitive accumulation or accumulation by dispossession – is rooted in the destruction of people and their livelihoods and the pillaging of resources: land, forests, minerals, water and bio

resources (Harvey, 2003; Patnaik, Moyo and Shivji, 2011). In the long run, the trajectory of capitalist accumulation shows that primitive accumulation is not only a phase in, or original form of accumulation, but rather lies at the very heart of the world system of capitalism (Harvey, 2003; Patnaik, Moyo and Shivji, 2011). Dispossessing people from their land and their labour power is at the root of neoliberalism. The last feature of neoliberalism is that the process of marketization excludes more and more people in the world.

This was achieved through the implementation of structural adjustment programs (SAPs), which broke down the state support system in the field of agriculture by breaking (Holt Giménez and Shattuck, 2011, p.111):

> down tariffs, dismantled national marketing boards, eliminated price guarantees and destroyed national agricultural research and extension systems in the global south.

The most significant way in which the goal of income deflation for people can be achieved involves the unleashing of a process of primitive accumulation of capital vis-à-vis the peasantry, where large capital, in the name of "development" and "infrastructure", takes over not just common or government land, but even land that belongs to the peasants at "throwaway" prices (Patnaik and Patnaik, 2015).

Jack (2007) brings attention to the nature of the modern food supply chain wherein farmers are left to take all the risk, while the few large agri-business companies that control the supply chain are able to buy food cheaply based on the subsidies provided to the farmers by government in Europe and the U.S. Jack (2007) found that the implementation of post-world war II subsidies in agriculture has resulted in the over-production of food, based on price support programs, which in turn caused the devastation of agriculture in the developing world as a result of the dumping of this overproduction at lower prices.

As a result, at the producer end of the value chain on the farms of smallholder farmers very little value is created. The lack of value creation on the farm is not for a lack of effort on the part of the farmers. As such, it is because in capitalism, the profit that is generated comes from the production and sale of commodities based on unpaid labour (Bryer, 1999). The unpaid labour is the labour invested by the farmers in growing crops whose value is not paid to them when they sell their produce into the value chain. Instead, the value that is generated for this produce at the retail end of the commodity chain becomes profit for the companies that own the value chain. From the perspective of Marx's labour theory of value, the source of profit is surplus value (Bryer, 1994). The generation of surplus is enabled by "the commodification of labour" and is the defining principle of the capitalist system (Cooper and Puxty, 1996, p.290).

We can define value based on "the view, developed subsequently by Marx, that "value" is ultimately a social relation because it is concerned with the exchange of the life experiences of people whose labor is bound-up in the products" (Tinker, Merino & Neimark, 1982, p.179). In the context of this study, the value is in the labour invested by the coffee farmers and more broadly in the labour invested by smallholder farmers in general. The crops that farmers grow on their farms are commodities whose value in monetary terms is below the value of the labour that the farmers need to invest in order to grow them. Moreover, when farmers practice monoculture agriculture, they must invest additional labour doing jobs outside their farm in order to be able to afford the external inputs. An understanding of value and its explanation of how profit is generated is the basis of accounting (Bryer, 1994).

Moyo, Yeros and Jha (2012) understand the primary objective of Marx as being to show how capitalism is able to separate peasants from the land and

commodify both labour and land. This, according to Marx was enabled by the capitalist's control over the "means of production" that made this possible (Bowman & Toms, 2010). For smallholder farmers practicing monoculture agriculture, the "means of production" are the external inputs that are sold to the farmers by the agribusiness industry. In smallholder agriculture, the farmers create the value on the farm while the value is captured by the companies that own the value chain at the retail stage of the value chain. The fact that farmers have limited avenues to sell their produce directly to the end consumer means that they are compelled to sell to the corporate supply chains, which impose on farmers the need to sell their labour power instead of the produce of their labour (Bowman & Toms, 2010).

Monoculture agriculture mandates that the environmental services provided by agricultural biodiversity be replaced by external inputs which cost money. Despite attempts made by farmers to make ends meet, the farmers "find their calculations and plans nullified as corporations raise the costs of their inputs and depress the prices obtainable for their outputs" (Jack, 2007, p.906). Hence the labour of a farmer that practices monoculture agriculture ends up being used to ensure profit for the companies that produce these inputs at the expense of the livelihood of the farmer. Agroecology may provide a transformation of the food system to ensure the sustainable livelihood of the farmer as detailed in Table 3.

In this thesis, I introduce a theoretical framework that uses the science of agroecology in combination with the labour theory of value to explain the challenges faced within the field of agriculture as well as provide a path to mitigate them (Refer to Table 3, p.71). In Table 3, Level 1 represents the situation faced by farmers who practice industrial agriculture, and hence have high costs for external inputs. As they become aware of the alternatives offered to them by using agroecological principles,

they can gradually reduce their use of expensive inputs. This is however a slow process, since the transition to building up the resources of agricultural biodiversity can take three years or more (Rieple and Singh, 2010).

Table 3: Framework for the implementation of agroecology and impact on the value of labour Adapted from Gliessman (2009)

Level 1: At the basic level the use of the principles of agroecology, could enable the farmer to improve the efficiency of the use of inputs, by reducing the use of costly, scarce or environmentally damaging inputs. This should begin to reduce the amount of value generated by the farmer that needs to be used for the purchase of external inputs. At this stage the value generated on the farm is still converted to surplus value for the companies that provide the inputs of agriculture as well as the companies that own the value chain into which the farmer sells her produce.
Level 2: At this stage agroecology could enable the substitution of conventional inputs and practices with alternatives. At this stage, the farmer is in a position to not have to purchase external inputs and hence retain a portion of the value generated on the farm. The farmer however is still at the mercy of agribusiness supply chains that control the price of the produce of the farm. At this stage the farmer is no longer providing surplus value to the companies that provide the inputs of agriculture. However at this stage the farmer is still providing surplus value to the companies that own the value chain into which the farmer sells her produce.
Level 3: At this stage agroecology could ensure a redesign of the agroecosystem so that it functions on the basis of a new set of ecological processes that provide system resilience. This means that in addition to being able to retain the value generated on the farm equal to the value of the external inputs that no longer need to be purchased, the farmer is also in a position to get through periods of stress and shock such as droughts, since the farm at this stage is more resilient.
Level 4: The agroecological transformation can be considered to be complete when the agroecosystem is able to reconnect the two most important parts of the food system – consumers and producers, through the development of alternative food networks. This is achieved by the development of direct markets between farmers and consumers, by promoting contact between local producers and consumers by promoting a relocalization movement through the development of community food hubs. At this stage the value generated on the farm that would have been converted to surplus value for the companies that provide the inputs of agriculture as well as the companies that own the value chain into which the farmer sells her produce are both retained by the farmer.
Level 5: On the foundation created by the sustainable farm-scale agroecosystems of Level 3 and the sustainable food relationships of level 4, build a new global food system, based on resilience, participation, localness, fairness and justice, that is not only sustainable but also helps restore and protect Earth's life support systems. This will require participation from government by supporting research on agroecology as well as reducing support to agribusiness subsidies which promote the continuation of industrial monoculture agriculture.

At Level 2, as the farmer is able to reduce the use of external inputs, this means that the costs of the farmer reduce. However, at this stage if the farmer is still selling into the same corporate value chains, then the price being offered for the farmer's agricultural produce will not be higher and the dependence of the farmer on the corporate value chain will continue. This is the situation faced by farmers who are in the Fairtrade value chain, since Fairtrade incentivizes the incorporation of agroecological farming practices that improve the quality of the coffee through the use of the Fairtrade premium. However, since there is no change in the FTMP, the income of the Fairtrade certified farmers does not improve.

In Level 3 of the agroecological transformation, the farmer would have built up a resilient agroecosystem, which is in a better position than an industrial system of agriculture to withstand the impacts of stresses and shocks such as droughts. The real transformation happens at Level 4, where the dependence of the farmer on the corporate value chains decreases and the farmer is able to build relationships with consumers directly and thereby is able to acquire a greater percentage of the value generated in this type of producer-consumer direct value chain. At this stage in the case of the coffee farmers, they would be able to sell their coffee directly to either small business owners such as coffee shops, or even retail consumers. In this situation the companies that own the corporate coffee value chain into which the farmers used to sell their produce are circumvented and most of the value generated is retained by the coffee producer.

Level 5 is the most difficult transition to make, since it represents a fundamental change in the system of agriculture at the level of the nation state or even at the level of the international system of trade. This would involve for example countries such as the USA or groups of nations such as the European Union (EU)

reducing or eliminating their agricultural subsidies that support the inputs of industrial agriculture. This would also mean that universities and research institutions in these countries would provide more support to research relating to the use of the principles of agroecology. This would have the potential to really transform the global agricultural system.

2.6 Conclusion

In this Chapter I have introduced the main themes that are the focus of this thesis including an introduction to the concept of neoliberalism and its manifestation in the food industry, the food regime. This food regime is built on the foundation of a model of industrial monoculture agriculture that imposes on the ability of smallholder farmers to achieve a sustainable livelihood while also causing environmental destruction. ATOs such as Fairtrade have been created as a response to the food regime, but the concern is that they have been co-opted by it.

The literature on accounting for biodiversity was considered in order to show the lack of engagement with agricultural biodiversity and the loss of biodiversity as a result of industrial agriculture. Further, the science of agroecology was introduced along with the concepts of sustainable livelihood and agricultural biodiversity to present an alternative to the Fairtrade approach.

The Chapter has ended with a theoretical framework using the labour theory of value which will be utilized to answer these research questions using the empirical data from the thesis. The next Chapter will present the methodology and methods used to gather the data.

Chapter 3: Research methodology and methods

3.1 Introduction

The purpose of this Chapter is to detail the methodology and methods that would be appropriate for a research project with a focus on social and environmental accounting and auditing in the context of agriculture. This research deals specifically with the relationships between 'sustainable livelihoods' and 'biodiversity' in the nexus between NGOs and corporate supply chains dealing with agricultural commodities. The focus of attention is on the coffee supply chain within the framework of Fairtrade certification with the goal of auditing the accountability of Fairtrade at the level of a coffee producer co-operative. This thesis provides a socio-ecological account of the role that agroecology plays in supporting biodiversity and promoting sustainable livelihoods, by presenting a case study of marginalized indigenous smallholder farmers from a coffee co-operative in India. To fulfil the objectives of the thesis the research questions that were introduced in Chapter 1 will be answered using the empirical data that was collected using the methods that will be detailed in this Chapter.

In this thesis, I take an approach to research that focuses on the study of the political economy of agriculture based on a critical ontology. A political economy approach (Tinker, 1980, p.147):

> attributes the division of income (and therefore the rate of profit accruing to capital) to the distribution of power in society and the social-political and institutional structure that mirrors that distribution of power.

A progressive agenda as required within the realm of Social and Environmental Accounting research is possible to implement (Cooper, Taylor, Smith, and Catchpowle, 2005, p.959):

> Only when we know the ideological, economic, social, and political conditions under which human beings find themselves will we be able to estimate what change is possible and by what means it can be effected.

I used this approach since an explicit objective of this thesis is to give voice and visibility to those marginalized farming communities that are often forgotten by the industrialized farming and food system, which is dominated by TNCs, governmental discourses and large-scale NGOs.

The emphasis of this thesis is on an account consistent with Gray et al. (1997), who define accounting broadly as the universe of all possible accountings and acknowledge that there are both social as well as political issues embedded within accounting. When providing an account for an organization such as an NGO, the relationship between the organization whose reason for existence is the betterment of the lives of the beneficiaries and the voice of these beneficiaries should be at the core of that account (Gray et al., 1997). Despite this acknowledgement the voices of both individuals as well as groups representing the key stakeholders, namely the producers have often been excluded from the account (Gray et al., 1997).

This Chapter is organized as follows. The next section details the concept of methodology and details the critical approach that will be used in this thesis – historical/dialectical materialism. Section 3.3 details the role that reflexivity has played in this thesis. Section 3.4 discusses the research methods used in this thesis consisting of participant observation, unstructured interviews and the use of secondary data. Section 3.5 details the geographical and demographic context of the Paderu Integrated Tribal Development Agency (ITDA) region which is the field site of this thesis.

3.2 Methodology: Dialectical/historical materialism

Bryman (1984, p.76) believes that "the choice of a particular epistemological base leads to a preference for a particular method on the grounds of its greater appropriateness". Broadly, the choice of a qualitative or quantitative methodology needs to take into consideration philosophical issues relating to questions of epistemology, while at the same time giving thought to technical issues that relate to the use of appropriate methods of research (Bryman, 1984). The methodological assumptions indicate the research methods which are deemed appropriate for the gathering of valid evidence and these are dependent on "how truth is defined" (Chua, 1986, p.604). The basis for using a qualitative methodology is a commitment (Bryman, 1984, pp.77-78):

> to seeing the social world from the point of view of the actor ...the commitment to see through the eyes of one's subject's close involvement is advocated.

On the other hand, quantitative methodology is the approach to be taken when applying a natural science or positivist approach that is consistent with "a preoccupation with operational definitions, objectivity, replicability, causality, and the like" (Bryman, 1984, p.77)

According to Chua (1986, p.604):

> the production of knowledge is circumscribed by man-made rules or beliefs' which define the domains of knowledge, empirical phenomena, and the relationship between the two. Collectively, these three sets of beliefs delineate a way of seeing and researching the world.

Ontology is the nature of reality while epistemology is the nature of knowledge especially in terms of the various "forms it takes and how it can be obtained and transmitted" (Hopper and Powell, 1985, p.431). It is important to acknowledge and determine one's ontology first since it sets up the epistemological and methodological assumptions that follow after it (Chua, 1986). The focus of this

thesis is on the practice of agriculture by small farmers and engages with the social and environmental costs imposed by monoculture agriculture and the dominance of TNC value chains. Further, using the science of agroecology and the labour theory of value, this thesis developed a theoretical framework (in Chapter 2) which provides an alternative means for smallholder farmers to achieve a sustainable livelihood.

To provide an account of the use of agroecology, in this thesis my ontology is that of a social reality, that is "both subjectively created and objectively real" (Chua, 1986, p.620). This ontological perspective gives rise to a form of accounting, which has as one of its dimensions, an engagement with the "social and environmental consequences of conventional accounting" with the explicit goal of changing accounting to be able to account for these social and environmental impacts (Gray,2002, p.692). This is an alternative approach to that taken by mainstream accounting research, which it could be argued is "part of a much broader process of reality construction, producing partial and rather one-sided views of reality" (Morgan, 1988, p.477).

Chua (1986, p.606) defines mainstream accounting research as being based on the ontology of physical realism which is based on the assumption that:

> there is a world of objective reality that exists independently of human beings and that has a determinate nature or essence that is knowable.

Realism according to Chua (1986, p.606) is based on a belief in the independence between the "subject" (the seeker of knowledge) and "object" (the knowledge that is sought) and hence knowledge is gained "when a subject correctly mirrors and "discovers" this objective reality".

Tinker, Merino and Neimark (1982, p.167) see a problem with this objective view of reality since it tends to obscure "the social allegiances and biases of accounting", which are hidden "by pretentions of objectivity and independence".

Further, the ontology of mainstream accounting assumes that people behave keeping a goal in mind always and that this goal is based on the maximization of utility (Chua, 1986). This eliminates the notion of values and replaces it with facts which are considered to be omnipotent and fixed (Tinker, Merino and Neimark, 1982). It is important to acknowledge the role played by the academic discipline of economics which has removed any discussion of historical or social elements and replaced it with mathematics to develop economic policy leading to economics becoming a purely positivist science unable and unwilling to provide any judgements of value to the real economy (Fine and Milonakis, 2011). Unfortunately, accountants have been influenced by economics especially of the sort that emphasizes "utility based marginalist economics", which leads to the dominance of "particular interest groups in society" (Tinker, Merino and Neimark, 1982, p.167).

This thesis provides an account from the perspective of indigenous coffee farmers in India, which is consistent with the call of Gray and Laughlin (2012) who emphasize the importance of taking account of marginal perspectives. This ontology is counter to that of mainstream accounting which is subservient to capitalism and its scientific method that limits its scope of measurement to facts that help promote its discourse (Chew and Greer, 1997) while ignoring the interconnectedness of systems (Gray, 1992). This idea is called disciplinary reductionism by Chambers and Conway (1992, p.7) and is about "limiting values, concepts and methods to the narrow concerns of a single academic and professional disciple". Further, as a result of an approach based on economic modelling, which ignores the way the economy works in times of crisis including the causes of crisis, there is an exclusion from economics of a discussion of the nature of how the capitalist system is organized (Fine and Milonakis, 2011).

The dominance that industrial agriculture has on the scientific method means that agricultural research is very narrowly focused (Nesheim, Oria and Yih, 2015; O'Brien and Flora, 1992). Industrial agriculture aims to simplify and standardize the phenomenon under investigation using positivist ontology by creating controlled and uniform environments (Chambers, 1992). The recommendations that come out of this type of research lead to rural decline and environmental problems (Bjørkhaug and Richards, 2008). Therefore, there is a need to question the current accounts that are used to determine the efficacy of agricultural policy and practice.

This thesis will explain the rationale for using a historical/dialectical materialist methodology while using multiple methods. The use of dialectical materialism as a methodology is consistent with the use of multiple methods. This is based on the fact that dialectical materialism as an ontology and epistemology allows for both positivist and interpretive perspectives as long as both of these are within a critical perspective. The positivist aspects of historical/dialectic materialism were developed by Marx in, *Capital Volumes 1, 2 and 3* whereas the interpretive aspects of historical/dialectic materialism were developed by Marx starting with especially the *Economic and Philosophic Manuscripts of 1844*. Tinker, Merino and Neimark (1982) propose that versus realism, historical materialism offers a more plausible basis for accounting theorizing. Taking a critical approach to ontology and epistemology using historical materialism, versus either a functional or interpretive approaches provides the means to develop an understanding of the economic and social while critiquing "the status quo" (Hopper and Powell, 1985, p.450). Both the functional and interpretive approaches make no attempt to challenge the current social, economic and political order represented by capitalism and instead tend to legitimize and even enhance it (Hopper and Powell, 1985).

Dialectical/historical materialism is both an ontology and an epistemology. Marx developed the conception of his philosophy starting in 1843 with his criticism of Hegel's philosophy of the state, and this became the starting point for his concept of alienation which he further developed in the *Economic and Philosophic Manuscripts*. Marx detailed a general statement of the contours of historical materialism in the *German Ideology*. Marx's concept of "materialism" accepts a realist standpoint wherein human ideas are born out of their interaction between the human brain and the material world and hence the human experience plays a central role in the conception of this reality. The focus of Marx's thought is the dialectic between the subject (man in society) and object (the material world) wherein the material world is continuously subordinated, subjugated and transformed to meet the ever growing needs of man (Marx,1998). For Marx, history is a process of the continuous creation, satisfaction and re-creation of human needs (Marx, 1985). Labour, which is the creative interchange between man and their natural environment, is the foundation of human society (Marx, 1985). The relation of the individual (subject) to her material environment (object) is mediated by the particular characteristics of the society of which she is a member (Marx, 1985).

Marx's dialectic as a method focused on understanding the relationship between different phenomena at the same point in time as well understanding the same phenomenon over a period of time (Ollman, 1976). The dialectic consists of three principles: totality, change and contradiction (Cooper, Taylor, Smith and Catchpowle, 2005; Rees, 2008). Totality is the idea that everything that the world encompasses are related to each other and Marx believed in making sense of the relation between elements which would transform how they are understood (Rees, 1998). Thus, for Marx change or transformation is another element of the dialectic

(Cooper, Taylor, Smith and Catchpowle, 2005; Rees, 2008). The dialectic approach not only accounts for the change, but also the rationale behind why the change takes place. The dialectic sees the change that is taking place within a system to be an integral part of that system in that the cause of the change is an integral part of the system (Cooper, Taylor, Smith and Catchpowle, 2005; Rees, 2008). The notion of the change in a system being internally generated means that the change is caused by an internal contradiction that is inherent in the system making "contradiction" the third element of the dialectic (Cooper, Taylor, Smith and Catchpowle, 2005; Rees, 1998). Rees (1998, p.7) has summarized the dialectic as "an internally contradictory totality in a constant process of change."

A critical historical materialist ontology argues that phenomenon should not be studied in isolation, since things taken as isolated particulars are always incomplete, and the particular exists only in and through the totality of relations of which it is a part, and hence to get a complete understanding there is a need to acknowledge the totality of relations that surround it (Chua, 1986). The nature and organizing principle of a society as a whole is both reflected in and shaped by every aspect of that society so that "no single part of a capitalist society can be fully understood without comprehending capitalism in its entirety" (Hopper and Powell, 1985, p.450). Further using a historical materialist ontology and epistemology there is a need to acknowledge that "society is shaped by forces which are of a contradictory nature" (Cooper, Taylor, Smith and Catchpowle, 2005, p.958). According to Cooper, Taylor, Smith and Catchpowle (2005, pp.957-958):

> A dialectical approach seeks to find the cause of change within the system. Since change is internally generated, it must be the result of contradiction, of instability and development as inherent properties of the system itself.

Using Marx's dialectical method as a basis for analysing the political economy would begin with a focus on the conditions under which the production and circulation of surplus value takes place in the social, political, and ideological arenas leading to the accumulation and restructuring of capital (Fine and Milonakis, 2011). A dialectical framework enables the analysis of production relations while acknowledging that they are the product of a combination of political, ideological and economic forces (Hopper, Storey and Willmott, 1987). A dialectical approach to labour process analysis is built around the concepts of totality, contradiction, and social construction according to Hopper, Storey and Willmott (1987). The labour process in terms of its control and organization with the understanding of totality is an expression of wider political, ideological and economic disputes and struggles (Hopper, Storey and Willmott, 1987). The contradiction that is inherent with the labour process is that while on one hand the worker is alienated in the experience of their work, they however have no choice but to work, since the income from work is what is needed for their survival. From the perspective of the company that employs the worker, the contradiction is that it aims to pay the worker the lowest wage possible in order to maximize its profit (Cooper, Taylor, Smith and Catchpowle, 2005). This leads to the situation that when the worker becomes its consumer this leads to the worker being unable to buy the company's products due to their lack of purchasing power (Cooper, Taylor, Smith and Catchpowle, 2005).

In this section of the thesis, I have developed the methodology that is used in this thesis and in the following section, I transition to a focus on the methods used to collect the empirical data. In doing so, I begin with a discussion of the importance of reflexivity for a researcher.

3.3 Reflexivity

Unlike the quantitative tradition, the qualitative tradition embraces the researcher's close and often times personal encounters with the research site which makes the awareness of the reflexivity of the researcher very important in terms of explaining their role and level of direct involvement with the research site and actors (Parker, 2012). By reflexivity is meant the critical awareness that the researcher has out of being self-conscious of their presence and its impact on the community or person under observation (McNay, 2000). Having an ongoing conversation about experience, while simultaneously living in the moment is at the core of Reflexivity (Hertz, 1997). Based on the fact that this research has been conducted from the perspective of dialectical materialism, it acknowledges the existence of class and power status among research participants (Reinharz, 2011). This approach also acknowledges that based on the power dynamics which in turn are based on class equality and differential between the researcher and the researched, the identity of the researcher is recognized variously as (Reinharz, 2011, p.8):

> a researcher, a gendered individual, and a person whose race/class/nationality/education connotes a particular power relation with others. All of these aspects of the self can be tools for understanding rather than factors that get in the way of understanding.

Another definition of reflexivity as noted by Banks (2007, pp.50-1) is also relevant to my understanding of reflexivity as it related to this thesis:

> [as a term] …used to indicate the researcher's awareness of her own self, the conduct of her research, and the response to her presence; that is, the researcher recognizes and evaluates her own actions as well as those of others… By the author examining herself, and taking notice of how others respond to her not only as an individual person but within the context of race, class, gender, and forth, and by communicating those understandings to the reader, the reader would have a greater opportunity to position the text, to understand the viewpoint or perspective of the ethnographer.

It is also important to acknowledge and appreciate that the process of spending time with the research field site and the community of people with whom the researcher was able to interact with is (Reinharz, 2011, pp.6-8):

> rooted in evolving time, the unfolding of events…One consequence of time spent in the field is that there is an opportunity for things to transform and for the researcher to witness and undergo these alterations…It is important to recognize that the self is both brought to the field and created in the field.

With regards to this field site and this field work, I was provided access by the Naandi Foundation, an organization which had goodwill within the field and hence could provide me entry. Access was provided based on the perception within the Naandi Foundation that I was an expert on the coffee business especially with regards to the challenges faced by coffee co-operatives. This was based on the four years of experience that I had accumulated working with coffee co-operatives in Central America in partnership and collaboration with the Community Agroecology Network (CAN). This enabled me entry into the field site, but also defined the dynamics of interaction with the managers of the Naandi Foundation as well as the leaders of the co-operative at the field site. This is consistent with how I was perceived after my initial interaction with the chief manager of Naandi Foundation, who was himself an expert on Coffee. Although, I did not acknowledge knowledge of coffee cultivation, based on his questions and my responses, I was able to come across as a person with a good understanding of the issues involved in the coffee commodity chain especially from a business perspective. This established my credibility with the remaining managers from the Naandi Foundation as well as the leadership of the Coffee co-operative.

The next step in the process involved my visiting two villages which eventually became the focus of my research with regards to getting the perspective of the coffee farmer. My identity in these villages changed from that of a person

knowledgeable about the coffee business to a person of Indian origin who had travelled abroad and hence had knowledge of faraway places and cultures. In my initial interactions with the villagers, their questions to me were mostly about the places that I had been to and my educational qualifications. In their understanding of the world, it was education that had provided me the opportunity to travel and my letting them know that I had been teaching at the university level for some time made them respect me even more. In this regard, I must acknowledge that, as a researcher, I did not know how I would be perceived by the community and which of my attributes would be of interest to the community that I planned to work with. As noted by Reinharz (2011, p.9):

> Many of the attributes of the researcher may actually be irrelevant in a particular setting. But what is meaningful will become the basis of how she/he is perceived. How she/he is perceived will affect how the researcher understands herself/himself. And this understanding will affect the way the study proceeds...understanding the role of the self in fieldwork will get us out of the epistemological tension between unreflexive positivism on the one hand and unproductive navel-gazing on the other.

Being reflexive in the context of field research requires the ability to understand a combination of experiences in the field and interpret those (Hertz, 1997). As the researcher, I made an effort to be aware of my reflexivity while ensuring that it was ever present in every aspect of the research process. Further, the researcher needs to be aware of the need to come to terms with the ideology, culture, and politics of the researcher and the other participants of the thesis (Hertz, 1997). This requires the researcher to have high standards of personal accountability defined as the having an awareness of (Harding 1986; 1987, cited in Hertz, 1997, p. viii):

> their own positions and interests [as they] are imposed at all stages of the research process – from the questions they ask to those they ignore, from who they study to who they ignore, from problem formation to analysis, representation and writing- in order to produce less distorted accounts of the social world.

An essential aspect of reflexivity is the role of voice as in that of the author of the research project and the presentation of the voice of the participants within the text in the final outcome of the final product (Hertz, 1997). In traditional ethnographic research, the authors of a study take the decision to privilege some accounts over others while developing theories out of the data collected. An ethnographic approach is based on the epistemological assumption that understanding derives from close observation of everyday interactions and actor's explanations (Efferin and Hopper, 2007). Ahrens and Chapman (2006) highlight the critical role that theory plays in determining the appropriateness of the research findings in its ability to connect the researcher with the analysis of their data in a meaningful way. As they shift between data and theory, scholars make decisions about the voices and placement of respondents within the text (Hertz, 1997, p. xii). According to Ahrens and Chapman (2006, p.820):

> Data are not untainted slices of objective reality but aspects of recorded activity that a study finds significant for theoretical reasons.

Thus, theory plays a central role in qualitative research since the information obtained from the subjective accounts enable either the validation of existing theories or provide the basis to make modifications to them in order to explain the phenomenon under study (Ahrens and Chapman, 2006).

The participation and central role given to the participants at every stage of the process ensures that this happens. The danger is that the researcher would be tempted to take short cuts and possibly disconnect the participants from the process of research. To prevent this from happening it is essential to have a longitudinal study with enough time factored in to ensure that the problems identified by the participants are discussed, the possible solutions are considered and implemented and the effectiveness of this on solving the initial problems is confirmed by the participants.

In this approach, the voice is very much that of the participants as co-researchers. This requires that the process of communication between the researchers in the research project should be interactive. An appropriate method would be “interactive interviewing” which is a process of research where the identities of the researcher and the “subject” of research become blurred based on the collaborative nature of the communication process leading to the sharing of stories and experiences that lead to an understanding of the perspectives of each other (Ellis, Kiesinger and Tillman-Healy, 1997, p.121).In the data collection that I have performed for this thesis, this has been the basis of my approach. In the following section, I will provide further details of the research methods utilized.

3.4 Research methods

This thesis as explained in the previous section takes the critical approach within accounting. In terms of methods employed in this study, I have utilized ethnographic methods of field research which require the most intense involvement with one’s subjects (Kornblum, 1996). I utilized the notion of the “ethnographer’s presentation of self” (Kornblum,1996, p.3) which ensured that every moment of my time spent at the field site in terms of the various experiences that I had were an integral part of the research experience and helped to improve the quality of my research experience. This thesis, uses a case study (Bowyer and Davis, 2012; Loo and Lowe, 2012; Lukka and Kasanen, 1995; Scapens, 1990) design of a coffee producing co-operative in India, using qualitative data collected from participant observation and interviews with indigenous farmers to illustrate how smallholder coffee farmers are working to achieve a sustainable livelihood and mitigate the impact of stresses and shocks. It combines participant observation (DeWalt and DeWalt, 2010; Gans, 1999) using journaling (Cruz and Higginbottom, 2013), with un-structured interviews (Corbin and

Morse, 2003) with the individual coffee farmers and employees of a coffee producer co-operative in India. Past research in coffee communities has used semi-structured interviews (Bacon, 2005; Valkila, 2009) with farmers with a combination of the use of focus groups (for example, Bacon, 2005; Kitzinger, 1994; 1995) for data collection. Hopper et al. (2009) note that there have been very few accounting studies using such methods. This approach is based on the acknowledgement of being an active participant in the research community and this participation is also acknowledged by the coffee farmer community. The community where the research was conducted were the drivers of the research process and their perspective and opinions were instrumental at every step of the research process.

Bowyer and Davis (2012) define a case study as being based on the focus on a single entity through the gathering of more in depth information. Based on this, case study research has been criticized for a lack of objectivity (Bowyer and David, 2012) and generalizability (Bowyer and David, 2012; Loo and Lowe, 2012; Lukka and Kasanen, 1995). Lukka and Kasanen (1995) argue that case studies of high quality can produce generalizable research results based on the argument that the results can be applied to other situations that have a structural similarity. Loo and Lowe (2012) emphasize that, instead of focusing on the non-generalizability, case studies should focus on telling convincing stories that enable a better understanding of organizational complexities. Further, Loo and Lowe (2012, p.5) argue that expanding the debate to look for alternative ways in which the conclusions of a case study can be reached could "lead to more persuasive, trustworthy and credible accounts."

The case study provides a voice to the indigenous (Gallhofer and Chew, 2000; Gallhofer et al., 2000) farmers and their coffee co-operative about the role that nature and its biodiversity plays in their lives. Jayasinghe and Thomas (2009) have looked at

the mobilization of indigenous accounting practices in the life of a subaltern- fishing community in Sri Lanka while Alawattage and Wickramasinghe (2009) have looked at the role played by "hidden transcripts" in the resistance of subaltern Tamils against the governance structures and accounting practices of a tea plantation in Sri Lanka.

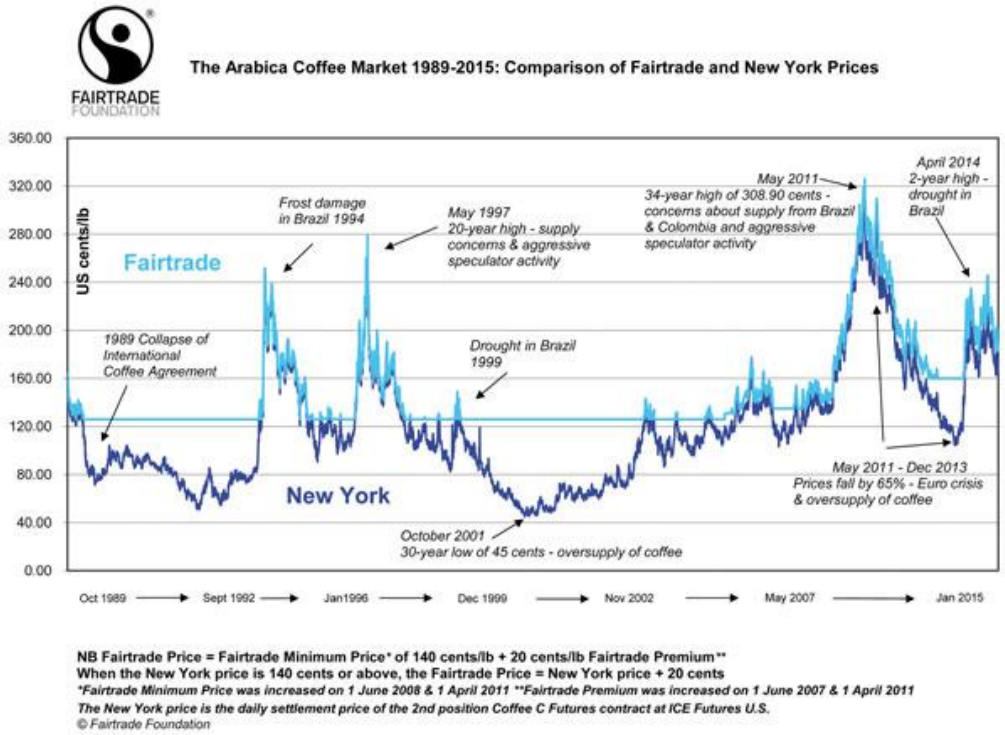
This thesis provides an account of the workings of the coffee value chain from the perspective of smallholder farmers. Gray and Laughlin (2012, p. 231-32) emphasize the importance of taking account of marginal perspectives:

> Accounts themselves determine what is accounted for and that which deserves accountability may have no prior influence on that which is accounted for. What is accounted for then becomes, by default and construction, that which deserves the accountability…all accountings in making things "visible" may well make others "invisible" …

Data collected from a coffee producing cooperative and farmers in India has been used to substantiate this argument. It is appropriate to investigate this question in the Indian context as it has the third largest number of Fairtrade certified producers in the world (Fairtrade International, 2014). The rationale for choosing this case organization was based on the fact that it had both Fairtrade and Organic certification which is the reality for a number of producer organizations around the world since there is a growing market for coffee that is certified Organic and Fairtrade (Johannessen &Wilhite, 2010; Valkila, 2009). I spent periods of time at the field site between July 2012 and December 2013. The visits during the months of June-July were focused on spending time understanding the normal life situation of the coffee farmers and Coffee co-op. The visits during November and December were focused on understanding the issues surrounding the coffee harvest, which takes place during this time each year. The time period of 2012- 2013 is relevant since this was a period when coffee prices were falling after having reached a 34 year high in May, 2011. In

fact, between May, 2011 and December 2013 coffee prices fell by 65% (Refer to Figure 1) on the New York Mercantile Exchange.

Figure 1: Impact of the Fairtrade minimum price on the Arabica coffee market[3]



The purpose of integrating the situation in a coffee co-operative at the micro level with the situation at the macro level within the Fairtrade organization is to be able to link my research not only at the micro level, but also at the macro level (Mills, 1959). If the research is only focused at the micro level, then we miss the broader picture which is the information at the macro level. A good researcher should look beyond the immediate local environment, and personalities to wider social influences (Mills, 1959). While at the micro level, I was able to get a good understanding of the immediate local environment and personalities, by including the information at the macro level, I was able to connect this with the broader picture of the Fairtrade

[3] This is the price of Arabica coffee between 1989 (the end of the ICA) and the start of 2015. The key point to focus on is the fact that the period between May 2007 –May 2011, has been a period of an increase in the price of coffee to its highest level in 34 years in May 2011 as well a period of reduction in the price of coffee between May 2011- Dec 2013 by about 65% (Source: Fairtrade Foundation, 2015).

system as well as the issues facing the political economy of agriculture which enabled me to incorporate these wider social influences.

Data was collected, using direct observation, review of documentation, focus groups and un-structured interviews with the coffee farmers and members of the producer co-operative organization at different levels (Refer to table 4). The participant observation provided a rich amount of information due to the impromptu nature (Johnson, 1990) of the interaction that took place with different people within the co-operative structure. This was recorded using journaling (Cruz and Higginbottom, 2013).

Table 4: Details of the collection of primary data

Type of interaction	Number of interactions	Participant	Duration	Details
Personal observation	6	Farmers/community co-ordinators (CC's) / managers	3-4 hours each	Activities on the farm, co-operative office and coffee processing facility
Unstructured interview	10	Farmers[4]	30 minutes - 1hour each	Farmers talked about issues that they are facing
Focus group	5	Farmers	1 hour each	Challenges at the level of the village development committee
Unstructured interview	10	CC's	30 - 45 minutes each	Issues faced by the CC's in their work with the farmers
Focus group	1	CC's	2 hours	Challenges with the coffee harvest
Unstructured interview	16	Managers of the Coffee Co-operative/ Naandi Foundation	30 minutes -1 hour each	Operational issues including with the coffee and the agroforestry project
Unstructured interview	1	Director of European mutual fund	1 hour 45 minutes	Purpose of the agroforestry project and what is hoped to be achieved and long term plans

The un-structured interviews were designed to get the personal experiences of the coffee farmers and employees of the co-operative in the course of a one-to-one conversation. This was the method employed by Herbohn (2005), which seemed a logical approach. Another benefit of the unstructured approach was that the conversation was led by the interviewee and issues that were a priority to them

[4] The farmers who were interviewed as well as those that were part of the focus group were the members of the Coffee Co-op in the two villages A and B that were the focus of the study.

remained the focus of the conversation and discussion. The interviews were conducted on the farms of the individual farmers or in their village which made them feel at ease. Interviews were conducted in both Telugu and English of Indian farmers, employees of their coffee co-operative and key decision makers from their partner organizations undertaking the Haryali project in 2013. Language fluency in both Telugu and English allowed for the interviews in Telugu to be translated to English.

Extensive field notes and journals were kept during several visits to the field. The primary qualitative data consisted of six personal observations, ten one-to-one interviews and five focus groups with individual farmers who were members of the co-operative; ten one-to-one interviews and one focus group with community coordinators, sixteen interviews with managers of the Naandi Foundation's Livelihoods and Horticulture teams, five interviews with the top management of the Naandi Foundation, and a single interview with a Director of the Livelihoods Carbon Fund led by Danone. This secondary data consists primarily of reports from the organizations under study namely the Fairtrade Foundation and the Naandi Foundation.

According to Dey (2007b) shadow and silent accounts of an organization could shed some light on its social and environmental impacts based on contradictions between what they choose to reveal and what they fail to disclose. In this thesis "shadow", social accounts (Dey, 2007b) of the Naandi Foundation's activities based on articles published in newspapers have been used in conjunction with its own annual reports. These are supplemented by macroeconomic data and statistics using reports from the government of India. This is consistent with the approach taken by Cooper, Taylor, Smith and Catchpowle (2005) who evaluated the way that social accounts are put together. The use of the information from the reports

of the government of India is the approach used by Collison, Dey, Hannah, and Stevenson (2010), who utilized macro level social indicators as a form of accounting as well as a societal accountability mechanism to hold capitalism to account.

Participant Observation using Journals

Participant observation is a combination of many practices at the centre of which is the attempt by the researcher to "get close to his subjects and so see the world from their perspective" (Bryman, 1984, p.78). Participant observation also includes interviews that are conducted in an unstructured manner, in that rather than asking pre- defined questions; an attempt is made to engage with the current situation of the participant. In addition, participant observation also includes, "the perusal of documents, and the interviewing of key informants" (Bryman, 1984, p.78). In the context of this thesis, my goal was to acquire an understanding of the issues facing the Coffee Co-op with regards to its coffee business in the context of being part of the Fairtrade system. Further, as I became aware of the Haryali project, my field work also included understanding the perspective of the community members regarding the impact it was having on their livelihood.

To be an effective researcher would require, as its first step, participant observation in a community for extended periods of time so that the researcher is able imbibe a sense of the context of the situation in which the research project needs to take place (Reinharz, 2011). This will also educate the researcher on the issues being faced by the community that is the focus of research. In this case, it requires the researcher to take on the role of a 'fieldworker' as defined by (Reinharz, 2011, p.1):

> A fieldworker … is a person who goes into a social setting…in order to study certain phenomena that occur there and then report what she/he has found, connecting the findings to the work of other researchers and to theory. Field research of this type [is] – also called 'ethnography' and 'participant observation research'…Frequently fieldworkers utilize interviews and analysis of existing materials as additional sources of information.

In some cases, when the participant observation involves being embedded in the community for extended periods of time, there is the possibility for the researchers to become deeply involved in the community at an emotional level (Smith and Kornblum, 1996). In the case of ethnographic research, the goal of the researcher is not only to acquire an understanding of the issues being faced from the perspective of the community being studied, but also to understand how the community makes sense of the events that happen around them (Kornblum, 1996). My journaling in the field through field notes enabled me to document this.

In my case, even though I spent a sufficient amount of time with the community for the purpose of gathering the data for my research, each of my field trips was for a period of less than a week and I did not have the opportunity to live in the community 24/7. This provided me with the ability to distance myself from the community at regular intervals of time and be able to introspect on the situation that I had observed from a distance without getting emotionally involved. This did not mean that I did not retain a level of interest and empathy, but rather that I was able to combine these with reflexivity. This period away from the field site everyday also provided me with the time and ability to prepare my journals about what I had experienced each day out in the field. This was in keeping with Anderson's (2006) point about the importance of finding time for journaling the experiences of the field through the use of field notes, since there is a danger of being drawn into the field experience and losing a focus on documenting it promptly.

Unstructured interviews

Some of the interviews that related to discussion of the costs of the co-operative were not recorded and this information was written down in journal form during the conversation with the members of the Coffee co-op. Some of the interviews were

digitally recorded and subsequently transcribed. The interviews conducted in the native language that were recorded were transcribed directly to English using a process of listening to the interview multiple times. No formal coding programme was used for the purpose of data analysis. The focus in terms of the analysis of the data was keeping in mind the NGO accountability framework and looking for issues related to – the working of the co-operative, Fairtrade impacts on the co-operative as well as any issues related to an understanding of the working of the coffee supply chain at the level of a producer co-operative.

This research project consisted of recording the oral histories of the farmers wherein the community members reflected on their experiences and defined the factors that are important to their communities to help them make sense of their needs (Trondsen and Sandaunet, 2009). The underlying impact on the small farmer was looked at through the farmers' perspective and point of view as seen in their stories. This is also the reason, that I used unstructured interviews, since the coffee farmers are very sensitive to direct questions about themselves (Morales, 1996). Socializing with people at every level was my basic method of research (Morales, 1996). This approach worked for me since I was spending extended periods of time in the field and hence had plenty of time on my hands during the field visits in addition to having "a deep knowledge of native language and culture" (Morales, 1996, p.124) which is essential to take up this type of approach.

The days in the field were spent talking to coffee farmers in the fields or taking notes. I conducted the interviews in Telugu in order to make the people feel comfortable and to facilitate a better and more precise expression of their feelings, opinions, attitudes, and ideas (Morales, 1996). Field notes were made immediately following interviews and conversations during the day. The study, besides being an

intellectual and an academic endeavour, was an opportunity for photographic expression. The visual side of the research in and of itself represents a whole new dimension of social research. During the day my camera was the research associate always hanging on my shoulder, ready to freeze segments and instants of what was happening in the community in addition to the voice recorder when I was having conversations with the farmers. I was aware that photographing and taping subjects raises the ethical question of whether or not the participants in the research should be made aware of the use of audio-visual devices during research contact (Morales, 1996) and hence before taking pictures or recording the conversations, I made it a point to always get the permission of the participants.

Focus groups

In order to get an understanding of the perspective of the members of the village development committee (VDC)s of the two villages that were the focus of the study, focus groups were conducted of VDCs in each village (Morgan and Spanish, 1984; Kitzinger, 1994; Zepeda , Chang and Leviten-Reid, 2006). In addition, I also conducted a focus group of the twenty-five community co-ordinators (CCs) whose responsibility it was to work with the coffee farmers with regards to the coffee as well as the Haryali project. These were focus groups of people known to each other who could be considered an epistemic community (Haas, 1992; Cinquegrani, 2002; Hansen, 2008). An epistemic community can be defined as a group of people who have the experience of having shared similar experiences and backgrounds along with a “recognized expertise and competence in a particular domain and an authoritative claim to policy-relevant knowledge within that domain or issue area” (Haas, 1992, p.3). In the case of the members of the VDC, they were all members of the same community, shared an understanding of the knowledge being smallholder coffee

farmers and members of the Coffee Co-op. The CCs were among a select group of people within the community with a college degree who could read and write and had the respect of the coffee growers.

Further, these were villages that I had visited a few times and had been able to build a rapport with the members of both of their VDCs so that we were able to overcome a principal challenge of the focus group interview format which relates to lack of trust (Marshall and Rossman, 2011). The focus group interviews enabled very natural interaction about the experiences of the members of the VDC as well as provided me some in depth information about the attitudes and experiences of the members of the VDC with regards to their experience with the coffee co-operative, the Haryali project and other issues that were of importance to them (Morgan and Spanish, 1984; Kitzinger, 1994; Zepeda , Chang and Leviten-Reid, 2006). As the members of the VDC began to hear each other speak about their experiences, it triggered their own experiences and improved the conversation (Lindlof and Taylor, 2002). A similar experience was the case with the CCs, since the period of time when I conducted the focus group was a time when the coffee harvest was not going well and the CCs were under a lot of stress. However, as they shared their experiences and realized that everyone was facing the same issues the situation improved in that from a state of panic, it became a nuanced discussion of the challenges being faced and how best to resolve them. This provided the members of the VDC as well as the CCs validation for some of their ideas and also gave me the confidence that the opinions that I was documenting were not that of an individual but at the level of a community within a village and the co-operative organization respectively.

Use of secondary data

Table 5: Details of secondary data utilized

Category of data	Details of the secondary data	Type of information provided
Peer reviewed articles	(Ninan and Sathyapalan, 2005), (Bacon, 2010), (Reinecke, 2010) and (Jena and Grote, 2016)	Details of the working of the Fairtrade coffee value chain, cost of cultivation of coffee in the Indian context and details of the impact of Fairtrade at the level of the household with the coffee co-operative
Newspaper and magazine articles	Wall street Journal, New York times, Guardian, The Hindu, Frontline, Business Standard, Hindu business line,	Articles that provide details of the impact of industrial agriculture, TNC dominance within food supply chains including the coffee value chain, document the utilization of the methods of industrial agriculture, especially the use of fertilizer, detail the subsidies in agriculture, detail the agrarian crisis in India,
Annual reports of partner organizations to the SAMTFMACS co-operative	Danone, Dr.Reddy's Laboratories, Naandi Foundation and the Livelihoods group	Provides their perspective regarding their involvement in the creation of the SAMTFMACS, development of its coffee business and the development and implementation of the Haryali project
Reports from organizations related to the Fairtrade movement	Annual reports and Financial statements of the Fairtrade Foundation and the FLO and reports from the Fairtrade Foundation, Fairtrade USA and the FLO	Obtain details of the sources of income and expenses for the Fairtrade Foundation and get an understanding of the issues impacting Fairtrade certified farmers from its perspective
Reports from the government of India	Annual Budget of the Government of India, reports from the CAG of India, Economic Survey of the Government of India, Government of India planning commission, national commission on farmers,	Reports detailing the implementation of government policy with regards to agriculture, promoting rural livelihoods and the allocation of government subsidies for fertilizer.
Reports from the FAO	The state of food insecurity, hunger maps, food wastage footprint, the role of agroecology in reversing soil degradation, HLPE on sustainable forestry for food security and nutrition	Reports detailing the challenges to food security, increase of hunger and food wastage, as well as the opportunities available through sustainable agroforestry

In addition to the primary data, extensive use of secondary data sources was made use of (refer to Table 5). The Fairtrade minimum price (FTMP) setting process, in the work done by Bacon (2010) and Reinecke (2010) provided valuable secondary data to understand the accountability of the Fairtrade system. The information gained from these two papers was supplemented by other studies on Fairtrade co-operatives

within the broader social sciences literature. Especially relevant were two studies in coffee growing regions of India, one of which provided detailed cost information at the farmer level within the same co-operative that is the focus of this thesis (Jena and Grote, 2016) and the other provided details of the per acre costs associated with coffee cultivation in the Indian context (Ninan and Sathyapalan, 2005).

This enabled the detailing of the narrative history of the Fairtrade coffee supply chain with an emphasis on the FTMP process. Media sources such as newspaper and magazine articles related to the coffee business, the co-operative, the Indian partner NGO and Fairtrade were reviewed consisting of: The Hindu, Wall Street Journal, Guardian, Frontline and the Business Standard. Reports from the Fairtrade Foundation, Fairtrade International and Fairtrade USA along with the annual reports of these organizations were analysed.

The use of secondary qualitative data from other case studies will enable the use of triangulation (Modell 2005; 2009; Vaivio and Siren, 2010). Triangulation can be seen "as the mixing of multiple theories, methods, data sources and/or researchers with the aim of enhancing the validity of research findings" (Modell, 2009, p.209). The use of method triangulation in this thesis implies that the information collected by using the various methods provide "complementary insights into the same empirical phenomenon with the aim of enhancing the validity of representations" (Modell, 2009, p.209). This thesis builds on the analysis of two previous studies (Bacon, 2010; Reinecke, 2010) which have looked at the process of determining the Fairtrade minimum price (FTMP) as well as the issues surrounding this process. Beacon, (2010, p.113) concluded that there is 'a need for additional research concerning Fairtrade impacts, costs of sustainable production and governance.'

Research design limitations

The researcher is forthcoming in accepting the fact that by being involved in this process on a day to day basis, the researcher is not an observer but a participant. In this regard it is important to realize that in any case the notion of being an observer is rhetorical since the so called "researcher-as-observer faces problems of influencing the system being observed and of correctly interpreting what is observed" (Huber and Van De Ven, 1995, p.xi).

A related issue is to consider the impact of the researcher on the community where the research is being conducted. It goes without saying that this researcher has accepted that the time spent with the community will affect the people who are studied to some extent (Barley, 1995), and this is not against the goals of the research. The challenge is to ensure that the presence of the researcher should not have a negative outcome. This could possibly be from a political perspective, since the interaction of the researcher is taking place with different groups of people at different organization roles and levels in the organization and the danger is that 'when settings contain multiple groups with potentially conflicting interests, one is inevitably perceived as being more aligned with one group than another' (Barley, 1995, p.30). It is important to be seen as impartial or even better to be interested in the wellbeing of all concerned. However, this is easier said than done and essential to achieving this is the need to gain the trust of the community and involves the ability to show the utility of the researcher to the community where the research is being conducted (Barley, 1995). In the case of this thesis, I have made an attempt to do this starting with an acknowledgement of my reflexivity and this has enabled me to not take sides.

A shortcoming of this research is that in my interaction with the members of the co-operative as well as the managers of the Naandi Foundation and the members of the VDCs in the two villages that have been the focus of research, I was unable to get the perspective of any female members of any of these groups. Thus, largely the perspective that has been presented in this research is the point of view from a male perspective including my own perspective as the researcher. In the future, when I undertake new research projects, it will be important to have co-researchers who are women, so that this problem can be resolved.

Due to the comfort level of the villagers and the communities, I was able to engage with them to get their perspectives. However, I was unable to live as a member of their communities for extended periods of time, which would have made my research a true ethnography. This was because, this was not comfortable for the community and they preferred that I lived in a hotel nearby during the time of my research. This meant that I was not able to engage informally with the community and see in-depth the issues that they were facing as a member of their household. In addition, the research conducted for this thesis was limited to a single co-operative within India. This was in keeping with the goal of completing the research in a timely fashion with the limited budget at my disposal within the scope of a PhD thesis. However, in order to be able to provide evidence for policy makers both within the government as well as within the Fairtrade system, it would make my arguments stronger if I were able to extend the research that I have conducted at a much larger scale in terms of being able to cover different co-operatives within India as well as within coffee growing communities around the world. It is my hope that, I will be able to receive support and co-operation from other researchers to be able to engage in a broader research project that would make this goal a reality.

3.5 The geographical and demographic context of the Paderu Integrated Tribal Development Agency (ITDA) region

In India there are three types of coffee growing regions and the area of focus of this thesis is considered a non-traditional area and has a share of only 1.8% of the total production of coffee in India. Coffee was introduced in the Paderu Integrated Tribal Development Agency (ITDA) region by the forest department of the state of AP as a means to diversify the sources of income as well as reduce the practice of shifting cultivation to ensure the preservation of the existing forest. The Small and Marginal Tribal Farmers Mutually Aided Cooperative Society (SAMTFMACS which will be referred to as the Coffee Co-op), is a Fairtrade and Organic certified cooperative based in the Araku valley in the Paderu ITDA in the state of AP, India on the border with the state of Orissa. There are around 12,000 members in this cooperative which was started in 2007 and some of them they have been growing coffee since the 1970s when it was introduced in this area. The members of the Coffee Co-op have also started the process of diversification of their income since 2011 taking up the Haryali project which is a Carbon Development Mechanism (CDM) project in partnership with the Naandi Foundation and the Livelihoods Carbon Fund started by the Danone group of companies from France. The Coffee Co-op is headquartered in Araku valley and covers an area over seven mandals of the Paderu ITDA. The seven mandals where it operates are – Ananthagiri, Dumbriguda, Araku Valley, Hukumpeta, Paderu, Pedabayalu and Munchingputtu.

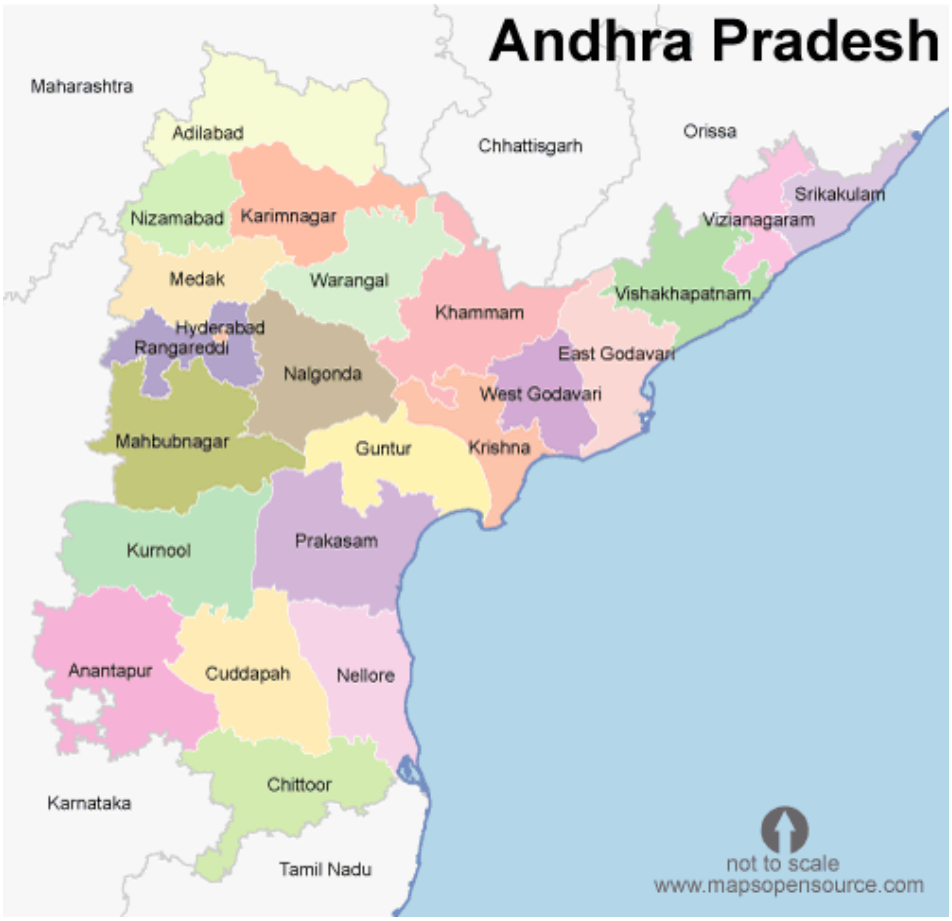
Figure 2: A map of India showing the location of the state of Andhra Pradesh[5]

The Integrated Tribal Development Agencies (ITDAs) were established by the government of AP under the Tribal Welfare Department in the year 1975 with the primary objective of ensuring an integrated approach towards implementation of developmental programmes as single line administrative agencies to cater to the holistic development of the tribal people. The Paderu Agency area is located in the Eastern Ghats forming part of the Visakhapatnam District. This region extends over an area of 6,293 sq.km., which is approximately 54% of the district. The Agency

[5] The state in India where the Small and Marginal Tribal Farmers Mutually Aided Cooperative Society is located (source: **http://www.mapsopensource.com/india-political-map.html**)

Area is home to many tribal people and 90% of the population in this area belong to the various tribal communities including particularly vulnerable tribal groups.

Figure 3: A map of the state of Andhra Pradesh[6]



The Principal Hill tribes living in the Agency are Bhagatha, Kondadora, Khond, Kondakapu, Valmiki, Kammara, Gadaba, Kotias, Porja and Nookadora. The dominant demographic group in this area are the Konda Dora who belong to the Scheduled Tribes (STs). In the state of Andhra Pradesh there are 35 tribal communities which are qualified as STs in accordance with Article 342 of the Indian constitution (Kancharla, 2014). As per the 2001 census, the literacy rate among the

[6] The Small and Marginal Tribal Farmers Mutually Aided Cooperative Society is located in the district of Vishakhapatnam (source: **http://mapsopensource.com/andhra-pradesh-map.html**)

Konda Doras is 35.09 percent with a male literacy rate of 44.68 percent and a female literacy rate of 25.39 percent (Kancharla, 2014).

Table 6:Mandal Wise Population in Visakhapatnam District
Source: 2011 census

Mandal	No.of Villages	Total Population	ST * Population	% of ST Population
Munchingi Puttu	303	47418	44538	94
Peda Bayalu	268	51890	49937	96
Dumbriguda	87	49029	46479	95
Araku Valley	164	56674	51876	92
Ananthagiri	278	49019	44190	90
Hukumpeta	168	51697	49594	96
Paderu	200	58983	48694	83
G.Madugula	292	53884	49970	93
Chintapalle	245	71640	64703	90
Gudem Kotha Veedhi	171	63174	56757	90
Koyyuru	136	50639	41213	81
Total	**2312**	**604047**	**547951**	91

ST – Scheduled Tribe

The average height of the hills in the district ranges from 3000 to 3500 feet. There are several peaks having 4000 feet in height. The highest peak in the District is “Sankaram” which is about 5300 feet in height. The climate in the Hill Region is cool on account of elevation and of the green vegetation. The monsoon sets in early and is long drawn in the Agency area recording an average rainfall of 8412.30 MM. as against 80 MM for the District.

The Visakhapatnam District comprises of Three Revenue Divisions divided into 43 Mandals (Mandal is an administrative region of a District, which is in turn a sub division of a state). As seen in Table 6 above, there is a significant percentage of the population in Visakhapatnam district who belong to the ST classification. The District consists of two natural divisions viz., the Agency and Plain areas. The Agency mainly consists of hilly regions covered by the Eastern Ghats which run

parallel along the coast and stretches over a length of about 161 Km., in the District from North-East to South-West lying in the interior parts of the District.

The ITDA had set up coffee plantations here in the 1970s along with large scale planting of Silver Oak in the 1980s. In the last few decades, coffee planters in India started shading coffee with silver oak (*Grevillea robusta*), an exotic timber-producing tree from Australia (Bali, Kumar and Krishnaswamy, 2007). Silver oak is a fast growing species which provides a sparse shade but is able to provide a means to diversify the dependence on income only from coffee since it fetches about US$700 per m3, (Damodaran, 2002). However, when coffee is grown with just silver oak, this has led to a loss of biodiversity on the coffee farm (Bali, Kumar and Krishnaswamy, 2007). There is also large scale planting of Bamboo in this area and it is one of the products of the forest along with the coffee. Since the members of the Coffee Co-op are all tribal, they are able to buy land. The land on which the Coffee Co-op head office is located has been purchased by the Coffee Co-op. At present along with the offices of the society, this location has a processing unit for the coffee which was set up in 2007. A new warehouse has been built in December 2012 for the storage of the coffee as an extension to the small warehouse that they had for the storage of the coffee.

The villages which are the focus of the thesis

Village A

The village A is located in the Pedalabudu panchayat which is within the Araku valley mandal. It is located 8km from the mandal headquarters. There are 62 households in village A consisting of 127 men and 144 women of which 95 men and 72 women are literate. All the residents of the village belong to the Konda Dora tribe which is classified as a scheduled tribe (ST) by the Indian government.

The village consists of small scale farmers, with all the individual plots being family owned and there is no large plantation in this area. The total land area under the village is 182.78 acres, of which 70.37 acres is cultivated land, 60.54 acres is forest land and 51.87 acres is *Banjaru* (waste land). Each of the individual plots of land is between half an acre and one acre. Due to the small size of the land, the members of the family have to work the land without additional help from the outside. This is because at their small scale, they are unable to pay for additional labour. The food that they are able to grow on their land is able to provide them food security, but nothing more than that.

The annual crops of the village are – Turmeric, Pimpri, Coffee and Sugarcane. The half yearly crops of the village are – Marigold, Groundnut, Paddy and Corn. The quarterly crops of the village are – Millets and Beans. They are not dependent on commercial seed for their cultivation and have been using native seed varieties that they save each year from their harvest. The village is 100% organic and all the farmers are certified organic and practicing organic farming techniques based on traditional farming practices. Farmers in the global South have traditionally used organic farming techniques which have been termed as natural farming since they do not have the sanctity of organic certification provided by the global North (Raynolds, 2004).

The only source of water for the village for agriculture is through rainfall. Since they are dependent on rainfall for their crops, they are significantly impacted by climate change and they have been facing cycles of years with heavy rainfall and years with drought. In the past decade, they have had a drought in 2002, 2004, 2006 and 2010. During 2013, they had heavy rains which destroyed most of their crops and also impacted the yield of the coffee crop.

There are 39 coffee growing families in village A with an area under cultivation of 48 acres. All of these growers are members of the Coffee Co-op. Village A had a production of 18 tons of coffee fruit during 2011-12 coffee season. At present the village has food sovereignty since they are able to produce enough food in their village to meet their consumption needs. Further, they are growing additional crops which they are able to sell in the market. They are selling – Coffee, Cereals, Valiselu, and Ginger to buy cattle and provide money to be able to buy the inputs needed for cultivation.

However, they indicate that they are not getting a good price for their crops. There is a Girijan Cooperative Corporation (GCC) ration depot about 5km from the village where they can sell their produce, but they are not satisfied with the prices offered there. So they are selling their crops at the weekly community market that meets every Thursday at Uppa village in Hukumpeta mandal and is located about 5km from the village. The going rates that they are able to get for their crops are - Turmeric – ₹55/kg, Pimpri – ₹450/kg, Groundnut – ₹800/- per 50 Kgs, and Beans – ₹ 20/kg. They are not able to store their crops to sell them when they can get a better price since they do not have any storage facility for their crops in village A.

Village B

The village is located in the Guda panchayat which is within the Hukumpeta mandal. It is located 11km from the mandal headquarters. There are 93 households in the village consisting of 176 men and 198 women of which 131 men and 82 women are literate. The residents of this village consist of four sub-castes, with 73 households of Bhagatha, 4 households of Nookadora, 15 households of Kondadora and one household which is Valmiki all of which are classified as scheduled tribe (ST) by the Indian government.

The village consists of small scale farmers, with all the individual plots being family owned and there is no large plantation in this area. The total land area under the village is 1146.08 acres, of which 503.80 acres is cultivated land, 617.50 acres is forest land and 24.78 acres is barren land. This village is a part of the Haryali project with an area of 28.4 acres under the project consisting of 13 horticulture plots benefitting 28 people.

The annual crops of the village are – Turmeric, Pimpri, Banana, Coffee and Broomsticks. The half yearly crops of the village are – Marigold, Groundnut, Paddy and Corn. The quarterly crops of the village are – Millets and Beans. They are not dependent on commercial seed for their cultivation and have been using native seed varieties that they save each year from their harvest. The village is 96% organic with 4% of the village applying chemical fertilizers and pesticides to their food crops.

The source of water for the village for agriculture is through rainfall and streams. Since they are dependent on rainfall for their crops, they are significantly impacted by climate change and they have been facing cycles of years with heavy rainfall and years with drought. In the past decade, they have had a drought in 2002, 2004, 2006 and 2010. During 2013, they had heavy rains which destroyed most of their crops and also impacted the yield of the coffee crop.

There are 30 coffee growing families in this village with an area under cultivation of 42 acres. All of these growers are members of the Coffee Co-op and all the member farmers are certified organic and practicing organic farming techniques based on traditional farming practices. They had a production of 2.5 tons of coffee fruit during 2011-12 coffee season. At present the village has food sovereignty since they are able to produce enough food in their village to meet their consumption needs. Further, they are growing additional crops which they are able to sell in the market.

However, they indicate that they are not getting a good price for their crops. There is a Girijan Cooperative Corporation (GCC) ration depot about 3.5km from the village where they can sell their produce, but they are not satisfied with the prices offered there. So they are selling their crops at the weekly community market that meets every Thursday at Guttulaput village of Paderu mandal and is located about 6km from the village. The going rates that they are able to get for their crops are - Turmeric – ₹55/kg, Pimpri – ₹450/kg, Groundnut – ₹800/- per 50 Kgs, and Beans – ₹ 20/kg. They are not able to store their crops to sell them when they can get a better price since they do not have any storage facility for their crops in their village.

3.6 Conclusion

This Chapter covered the methodology and methods that were utilized in this thesis to collect the empirical data, explained the research methods used and provided geographical context to the field site. The following context setting Chapter will provide both macro and micro context to the issues facing agriculture in India as well as the coffee co-operative which is the focus of this research.

Chapter 4: The Micro and Macro factors impacting on a co-operative of coffee farmers in India

> It is not generally realised that, with the replacement of the bullock by the tractor, farm-yard manure will become scarce and increasing use will have to be made of chemical fertilizers…use of inorganic fertilizers tends to reduce soil fertility, even though the immediate results may be striking. Organic manure, on the other hand, maintains fertility and makes the soil an inexhaustible source of food supply…
>
> – Singh,C. 1964, p. viii

4.1 Introduction

In this context setting Chapter of the thesis, the focus will be to bring together the relevant literature that will enable an understanding of the issues facing agriculture and will be used to explain the workings of the agricultural economy at the level of a coffee cooperative in the Indian context. To enable this, the micro and macro factors impacting the Small and Marginal Tribal Farmers Mutually Aided Cooperative Society (SAMTFMACS, which will be referred to as the Coffee Co-op), will be looked at. There are significant macro-economic factors impacting all farmers in India which need to be made clear to have an effective understanding of the context in which the Coffee Co-op operates. Principal among the factors is the broad based agrarian crisis that has been a part of the life of the Indian farmer (Deshpande and Arora, 2010; Hebbar, 2010; Krishnaraj, 2006; Revathi and Galab, 2010; Sainath, 2011c; 2013; Sidhu, 2010). This Chapter is structured as follows: The first section 4.2 deals with the agrarian crisis starting with the period of the green revolution in Independent India. This section also documents the change in emphasis of the planning process of the government of India after the implementation of the neoliberal reforms. Section 4.3 details the factors impacting the agrarian structure in India. Section 4.4 details the information provided by the "Economic Survey of the Government of India 2015-16", which provides the latest macroeconomic information provided by the Government of India with an emphasis on the issues impacting

agriculture. Section 4.5 provides the background information and sets the context with regards to The Small and Marginal Tribal Farmers Mutually Aided Cooperative Society (Coffee Co-op) which is the coffee co-operative based in India which is the focus of this thesis.

4.2 The Agrarian crisis in India

The green revolution in the Indian Context

In the context of this thesis which is based in India, there is a need to understand how the "green revolution" developed there. The ascendency of the "green revolution" is based on the propagation of a historiography of India that is colonial and the premise that India was a poor country before colonization and it was the credit of the colonizer that brought civilization and technology to India (Amin, 1991; Bagchi, 1998; 2004). The famines that took place in India starting with 1780's and ending with the great famine during World War II have been characterized as famines caused by the "primitive" nature of Indian agriculture (Sen, 1983). Thus the technologies of the "green revolution" were proposed as a way to feed the hungry of India (Anand and Chang, 2010; Griffin, 1979; Patel, 2013).

The structure of the Indian economy with a dominance of the population dependent on an agricultural economy has persisted despite the extensive urbanization with about 52% of the country's workforce still being dependent on the agricultural sector (Vaidyanathan, 2010).[7] In the 1970's 70% of the Indian population depended on farming which means that with the growing size of the population, and limited availability of land, a greater share of the rural population has been urbanized

[7] The definition of a farmer in the Indian context has been provided by the report of the National Commission on Farmers (NCF), (Sengupta et al., 2007, p.6) –"For the purpose of this Policy, the term "farmers" will refer to both men and women, and include landless agricultural labourers, sharecroppers, tenants, small, marginal and sub-marginal cultivators, farmers with larger holdings, fishers, livestock and poultry rearers, pastoralists, small plantation farmers, as well as rural and tribal families engaged in a wide variety of farming related occupations such as apiculture, sericulture and vermiculture. The term will include tribal families sometimes engaged in shifting cultivation and in the collection and use of non-timber forest products…The gender-specific needs of women in each category will also be recognized."

(Sainath, 2010b; 2011c; 2012b; Vaidyanathan, 2010). However, this does not mean the competition among the remaining farmers in rural India has decreased since overall the absolute number of the farmers has increased (Sainath, 2011c; Vaidyanathan, 2010).[8] In India today about 85 per cent of the farmers are marginal or small, defined as those operating less than two acres of which about 66 per cent operate less than one acre each (Sainath, 2011c; Katakam, 2013b).

Post-independence, the government of India followed Keynesian economic practices that involved investment in the public sector (Ahmed, 2011) and this was used as the means to institutionalize the use of chemical inputs by making it a part of government policy. In the case of India, the "green revolution" and its practices became the governing ideology in the field of farming as noted by Vaidyanathan (2010, p.85):

> The past 50 years have seen unprecedented and far reaching changes in Indian Agriculture…per ha yields have shown a sustained and accelerated growth. A major contributory factor for this transformation is the rapid spread and increased usage of fertilizers. Total fertilizer consumption (in terms of nutrients) rose from a mere 60,000 tonnes in 1951-52, to 2.1 million tonnes in 1970-71. In the mid-1990s, it was around 16.5 million tonnes.

The Indian government's use of the technology of the "green revolution" gave no consideration to the efficacy of an industrial agricultural model developed in the U.S. that was conducive for its region with a temperate climate and variables of population, availability of land and water (Weis, 2007). For example, based on the usage of the model of industrial agriculture, India uses a little over 90% of its renewable fresh water resources for agriculture (Government of India, 2016). It is imperative for India to focus its efforts on improving the efficiency of water use in

[8] The total number of agricultural workers in India has been estimated at 259 million as of 2004-05. They form 57 per cent of the workers in the total workforce. About 249 million of them are in rural areas and that works out to 73 per cent of the total rural workforce of 343 million. Their share in total rural unorganised sector employment is 96 per cent while in unorganized agricultural sector it is 98 per cent. Nearly two thirds of the agricultural workers (64 per cent) are self-employed, or farmers as we call them, and the remaining, a little over one-third (36 percent), wage workers. Almost all these wage workers (98 per cent) are casual labourers.

agriculture since despite fresh water being one of India's scarcest natural resources, India uses 2 to 4 times more water to produce a unit of major food crop as compared to Brazil and China (Chapagain and Hoekstra, 2008). While the introduction of the "green revolution" has increased yields through the extensive use of inputs, it has also led to an increase in income inequalities among the rural sector and hence a further stratification among the social classes (McMichael and Raynolds, 1994).

According to Hans Rudolf Herren, co-chair of the International Assessment of Agricultural Knowledge, Science and Technology for Development (IAASTD) (Jishnu, 2012):

> The "green revolution" as a paradigm of neoliberalism makes farmers dependent on external inputs that are non-sustainable and costly. Further these are becoming more and more expensive because they are petroleum-based, which is a finite resource. The main issue here is that the "green revolution" sees agriculture as simply the production of food, however it is much more than that. It produces a number of essential ecosystem and social services.

The "green revolution" has led farmers to be trained in so called "modern farming" – using pesticides, herbicides and genetically modified (GM) seeds that increase the input costs (Shiva, 1991). This was enabled by converting the top agricultural scientists from the third world countries to the logic of modern American agriculture with its emphasis on mechanization, monoculture and the extensive use of petroleum based pesticides (Shiva, 1991). Under the same program, the International Agricultural Research Centres (IARCs) began collecting specific strains of wheat and rice from India and corn or maize from Mexico and began developing 'high yielding varieties' (HYV's) (Conway and Barbier, 1990; Griffin, 1979) which were strains of wheat, rice and corn that could grow under the influence of chemical fertilizer and pesticides. The indigenous strains of these corps could not handle these since the chemical inputs are essentially toxic to the natural plant (Shiva, 1991).

In the context of this case study, the Indian government which had subsidized the use of fertilizers for over thirty years under its "green revolution" policy, began dismantling the subsidy in 2010 under its neoliberal reform process and removed the regulation placed on the price of fertilizer (Anand and Chang, 2010). This was at a time when due to the ineffectiveness of fertilizers (Revati and Galab, 2010; Reddy, 2010) over 15 million Indian farmers had already lost their lands due to indebtedness through the purchase of expensive inputs during the period 1991-2001 (Sengupta et al., 2007). Further, a majority of Indian farmers are faced with a situation wherein their costs of doing agriculture are greater than their income leading to the large scale displacement of people from rural India to the cities (Sainath, 2009; 2010b; Sengupta et al., 2007).

Neoliberal policy implementation in India

In the Indian context, post-independence a mixed economy approach was followed with an impetus to change the basic structure of the economy to one that met the needs of its people instead of meeting the needs of the colonial power (Patnaik, 2015). India followed a system of democratic socialism with an emphasis on central planning using the five-year plan as the means to planning under the aegis of the planning commission (Patnaik, 2015). The planning commission was set up by a resolution of the government of India in 1950 in pursuance of the goal of the government of India of promoting a rapid rise in the standard of living of the people by the efficient exploitation of the resources of the country (Manne et al., 1965). In India, the Keynesian variant of mixed-economy, gave way to neoliberal economic policies, due to a balance of payment crisis in 1990-91 which was resolved using the structural adjustment approach mandated by the IMF and the World Bank (Rammanohar Reddy, 2000; Ahmed, 2011).

This was an embrace of neoliberalism after a pro-business shift with a focus on a growth first model of development was made a decade earlier in the early 1980's (Kohli, 2004; 2012). In relation to these structural adjustment programs and neoliberal economic development policies implemented, the views of the person on the street in India is that they have not benefitted from the reforms (Ganguly-Scrase and Scrase, 2009), but neoliberalism has the support of the Indian elite, represented in class as well as caste power (Ahmed, 2011).[9] In this regard the alliance between the elites represented by big business and the government has become the cornerstone of modern India with a commitment to economic growth and indigenous capitalism (Kohli, 2012).[10]

This fundamental change in governmental policy towards neoliberalism with the initiation of structural adjustment policies meant that 1990-91 and 1991-92 were treated as annual plans and the eighth five-year plan was launched in 1992. There is a divide in the driving ideology of the first eight plans which focused on growing the public sector with investments in basic and heavy industries and the post neoliberal reform period (Ahmed, 2011). Once the neoliberal policy took root as the governing ideology, starting with the 9th five-year plan in 1997, the emphasis on the public sector took a back seat (Ahmed, 2011). This is consistent with Marois and Pradella (2015) who believe that the state has a central role to play in sustaining capitalist development, and in turn the subordination of workers to the needs of accumulation. The implantation of neoliberalism in India is consistent as well with the impact of the policies of neoliberalism elsewhere in the world which has been higher

[9] "The contemporary state — with its apparatuses of police, judiciary, armed forces — is essentially a coercive machine that seeks to conserve the monopoly of the dominating class. In the Indian context, the large majority of Dalits comprise the most exploited class and bear the brunt of the neo-liberal character of the state" (Teltumbde, 2010, p.151).

[10] The power and influence of Indian business has grown since the period when Indira Gandhi began her focus on promoting business in the early 1980s which was followed by period of liberalization in the 1990s which formalized the neoliberal ideology of government and confirmed its role as the active supporter of Indian business groups (Kohli, 2012).

unemployment, worsening social inequalities, widespread impoverishment, peasant land dispossessions, unsustainable urbanization and increased worker exploitation (Ahmed, Kundu and Peet, 2011; Marois and Pradella, 2015). Further, financial and trade deregulation have enhanced the power of finance capital and multinational corporations to pursue the outsourcing and offshoring of many industrial and service activities leading to intensified ecological destruction (Marois and Pradella, 2015).

Post the implementation of neoliberal reforms in 1991, the Indian government began a slow process of moving away from this system of central planning through the incorporation of technocrats with a neoliberal mind set at the helm of the planning commission (Patnaik, 2015). The Modi administration has moved forward the neoliberal reform process by eliminating the planning commission which has no place in a market economy and replacing it with the National Institute for Transforming India (NITI) Aayog (Rao, 2015). The NITI Aayog is conceptualized to be a think tank and does not have the power to disburse funds making the finance ministry the principal agency for dispersal of funds for central government programs as well as disbursements to the state governments (Patnaik, 2015; Rao, 2015). Although seen as a good development being in line with the recommendations of the Rangarajan committee (Rao, 2015), it does indicate a reduction in the power of the states to the central government based on the elimination of the National Development Council (NDC) (Patnaik, 2015). The period after the liberalization of 1991 has seen a decrease in the growth rate of agriculture due to a decrease in government investment in this sector (Kohli, 2012) (refer to table 7). This is indicative of the rural and urban divide in modern India and will be a good starting point for a discussion of the impact of the neoliberal reforms on the agrarian structure of India.

4.3 Factors impacting the agrarian structure in India

Table 7: Government spending on Agriculture in Millions of Rupees in India 1997- 2007[11]

GOVERNMENT SPENDING ON AGRICULTURE (in Millions of Rupees)				
Five Year Plan	Agricultural Plan Outlays	Actual Expenditure	Total Plan Outlays	Share of Agriculture in Plan Outlays (%)
Ninth Plan (1997-2002)	375,460	372,390	8,592,000	4.4
Tenth Plan (2002-07)	589,330	607,020	15,256,390	3.9
Eleventh Plan (2007-12)	1,363,810	1,631,050	36,447,180	3.7
Annual plans				
1997-98	69,740	59,290	1,559,050	4.5
1998-99	86,870	76,980	1,859,070	4.7
1999-00	87,960	73,650	1,922,630	4.6
2000-01	82,810	75,770	2,033,590	4.1
2001-02	9,097	8,248	2,288,930	4.0
2002-03	99,770	76,550	2,478,970	4.0
2003-04	99,400	87,760	2,560,420	3.9
2004-05	111,090	109,630	2,878,430	3.9
2005-06	138,400	125,540	3,612,390	3.8
2006-07	161,630	165,730	4,412,850	3.7
2007-08	179,710	200,140	5,587,650	3.2
2008-09	272,700	270,870	6,842,880	4.0
2009-10	287,720	294,980	7,946,160	3.6
2010-11	369,830	403,690	9,297,250	4.0

The agrarian structure of the Indian economy is still dominated by three indicators according to Deshpande and Arora (2010) namely the high percentage of agriculture in India that is dependent on rain, a high density of agricultural workers consisting of marginal farmers as well as agricultural labourers facing the issue of migration on a large scale to urban areas, and the structure of the land market which is not set up in the interest of the farmer. The Indian agrarian crisis has been caused by - unfinished agenda in land reform, lack of water, technology fatigue; access, adequacy and timeliness of institutional credit, and opportunities for assured and remunerative marketing (NCF, 2006). India's connection to the world market for imports especially those related to wheat and edible oil along with the increase in speculation through futures trading is driving food prices up (Shiva, 2008). This is leading to a high rate

[11] During the 9th to the 11th five-year plan periods as well as during the annual plans between 1997-98 and 2010-11. Source: (Chakrapani, 2016)

of inflation in the overall economy and impacting the real value of the subsidy provided by the Indian government for food security as noted by Chandrasekhar (2013):

> Thus while the central food subsidy bill rose in nominal terms from ₹ 23,280 crores to ₹ 60,573 crores between 2004-05 and 2011-12, the figure in 2011-12 after adjusting for inflation in the wholesale prices of food articles between those dates was ₹ 30,239 crores.

The Indian state has made an attempt to implement regulations that are pro poor as in the case of the Right to Food (RtF) legislation which is evidence of the state playing a positive role (Pritchard, Dixon, Hull and Choithani, 2016). Pritchard, Dixon, Hull and Choithani (2016) provide further evidence of this based on the Indian government standing up for the food subsidy program in India during the Doha round of the WTO negotiations in Bali.

The central role of lack of access to credit can be seen (in not by) in the case of AP, a state of India where about 82 per cent of farmers are in debt which is taken on to buy the inputs needed for cash crop cultivation under the urging of the government (Patel, 2008). While the government seems to promote cash crop cultivation, post-reform it no longer provides for a minimum support price and is slowly dismantling its support for the rural poor under its policy of liberalization (Patel, 2008). Traditional farming techniques in India for millennium were based on the concept of intercropping where a combination of different crops were grown together in such a way that some of them provided the essential sustenance for the soil (Innis, 1997).

A related issue is that governments are providing subsidies to corporations to facilitate their capital accumulation (Bavadam, 2013). At the time of its independence, the use of chemical fertilizers in India was less than one kilogram per ha and organic and farmyard manures were the principal source of soil amendment

(Vaidyanathan, 2010).[12] The government of India gives subsidies to fertilizer companies that provide Nitrogen (Urea), Phosphorous (di-ammonium phosphate) and Potassium (muriate of potash) (Mehdudia, 2013) (refer to Tables 9 and 10).[13] This subsidy to fertilizer companies is presented as if it is actually helping farmers. In reality the money is not going to the farmers but to the companies that are giving the farmers the fertilizer. The farmers have to still pay for the fertilizer and they end up paying less money than they would have if they did not have the subsidy. The extent of the subsidy still available to the fertilizer industry is seen by the fact that fertilizer that costs between Rupees 55,000 to 60,000 per ton to import is sold to farmers at a subsidized price of Rupees 9,350 per ton with the balance of Rupees 45,000 paid by the government (Shiva, 2008). So in reality this is an incentive to ensure that farmers continue to use chemical based fertilizers.

The annual consumption of fertilizers, in nutrient terms (N, P & K), has increased from 0.07 million MT in 1951-52 to more than 28 million MT in 2010-11 and per hectare consumption, has increased from less than 1 Kg in 1951-52 to the level of 135 Kg (Planning Commission, 2012). This puts a tremendous burden on the Indian state, while at the same time providing a false incentive for farmers to keep using fertilizer. This also increases the dependence of the Indian economy on imports since at present the demand in India for one of the principal fertilizers Di-ammonium phosphate (DAP) is about 4 to 4.8 million tons per year while only about 2 million of this is produced in India (Shiva, 2008).

[12] The use of fertilizer in India has increased significantly –

"as of the early 1970's, the usage of fertilizers was not only low, but also limited to a small proportion of total cropped area and largely limited to irrigated land and large farms…[by the next available data which is from 1988] less than one third of rain-fed farms reported using chemical fertilizers as compared to nearly 80 per cent of fully irrigated farms with most of the usage being related to HYV's…[and] the usage was largely unbalanced in that 30 per cent of fertilizer users used only nitrogen and only 40 per cent used all three nutrients" (Vaidyanathan, 2010, p.86).

[13] As noted by Mehdudia (2013) "Fertilizer subsidy has also been pegged slightly lower at Rs. 65,971.50 crore in the next fiscal, as against the RE of Rs. 65,974 crore in 2012-13 fiscal. The government would provide Rs. 15,544.44 crore for imported urea, Rs. 21,000 crore for indigenous urea fertilizers and Rs. 29,426.86 crore for the sale of decontrolled fertilizers (DAP, MoP and complexes) at a subsidised rate to farmers."

Table 8: Indebtedness among rural farming households in the key states of India[14]

State	Rural households (in millions)	Agricultural households(in millions)	Agricultural households as percentage of Rural households	Agricultural households in debt (in millions)	Percentage of Agricultural households in debt
All India	156.1442	90.2011	57.8	46.8481	51.9
AP	8.676	3.597	41.5	3.342	92.9
Telangana	4.931	2.539	51.5	2.263	89.1
Tamil Nadu	9.361	3.244	34.7	2.678	82.5
Kerala	5.138	1.404	27.3	1.091	77.7
Karnataka	7.743	4.242	54.8	3.278	77.3
Rajasthan	8.272	6.484	78.4	4.006	61.8
Odisha	7.812	4.494	57.5	2.583	57.5
Maharashtra	12.518	7.097	56.7	4.067	57.3
Punjab	2.755	1.408	51.1	0.7499	53.2
West Bengal	14.136	6.362	45.0	3.279	51.5
Madhya Pradesh	8.467	5.995	70.8	2.741	45.7
Uttar Pradesh	24.133	18.049	74.8	7.908	43.8
Gujarat	5.872	3.931	66.9	1.674	42.6
Bihar	14.061	7.094	50.5	3.016	42.5
Haryana	2.585	1.569	60.7	0.666	42.3
Assam	5.249	3.423	65.2	0.599	17.5

India has faced repeated droughts, which due to their repeated assault on the viability of small holder farmers have pushed millions of farmers in India into poverty due to indebtedness (Chandrasekhar, 2013; 2015a; 2015d; Sainath, 2010b; 2011c; 2012a) (refer to table 8). There is a need to delve into the issues surrounding this failure of livelihoods. In doing so, this thesis audits the accountability of programs and policies aimed implicitly at mitigating the loss of livelihoods and in doing so provides possible public policy alternatives that require further scrutiny, but have largely been ignored or stymied by the mainstream neoliberal political apparatus that dominates the political economy of India (Chandrasekhar, 2013; 2015b).

In large parts of rural India, two consecutive droughts, and three back-to-back crop failures have deepened everyday depravation (Mahaprashasta and Ramakrishnan, 2016; Rajalakshmi, 2016; Ramakumar, 2016; Sainath, 2009; 2010b; 2011c). Significant rainfall deficits during the past two years as a result of climatic

[14] This details the number of rural households in millions, the number of agricultural households in millions, the agricultural households as a percentage of the total rural households, number of agricultural households in debt and the percentage of the agricultural households that are in debt. Source: (Chakrapani, 2016)

unpredictability have led to rural societies coming to the brink of disintegration(Mahaprashasta, 2016a; Mahaprashasta and Ramakrishnan, 2016; Rajalakshmi, 2016; Shankar, 2015). Negligible government support has further worsened the situation facing rural India compounding the agrarian crisis (Chandrasekhar, 2015b; Ghosh, 2016; Katakam, 2013a; Sainath, 2009; 2010b; 2012a; 2012b; 2013). In Bundelkhand, Telangana, Marathwada, and Eastern Uttar Pradesh, once fertile fields lie fallow at the peak of the agriculture cycle indicating a retreat by the farmers in the face of not just the vagaries of climate change but also the unviability of agriculture as a livelihood (Mahaprashasta, 2016a; Mahaprashasta and Ramakrishnan, 2016; Rajalakshmi, 2016).

Table 9: Basic fertilizer price facts in India (2014-15)[15]

	Domestic Subsidised Price	International Price	Subsidy	Import Restriction	% of volume that is under movement control
	(₹/ 50Kg.)	(₹/ 50Kg.)	(₹/ 50Kg.)		
DAP	1200	1810	618	None	20%
MOP	800	1300	465	None	20%
Urea	270	970	807	Only 3 firms are allowed to import	50%

Table 10: Basic Fertilizer quantity facts in India (2014-15)[16]

	Production		Consumption		Imports	
	Volume (‘000MT)	Value (₹. Million)	Volume (‘000MT)	Value (₹. Million)	Volume (‘000MT)	Value (₹. Million)
DAP	3445	124,710	7626	276,060	3853	139,480
MOP	-	-	2853	74,180	4197	109,120
Urea	22593	438,300	30610	593,830	8749	169,730

MGNREGA: the state’s response to the agrarian crisis

Large swathes of agricultural land remain unsown this Rabi season and ten states have declared a drought following a failed monsoon that destroyed the Kharif crop (Mahaprashasta, 2016a; Mahaprashasta and Ramakrishnan, 2016; Rajalakshmi,

[15] Source: (Government of India, 2016)

[16] Volume of production, consumption and imports in 000’s of metric tons (MT) of DAP, MOP and Urea along with its value in Millions of rupees (₹). Source: (Government of India, 2016).

2016).[17] Despite 40% of India's land mass being declared as being drought affected, and a huge toll on rural livelihoods and economy, there is a shortage of political will to address the issues facing farmers as evidenced by bureaucratic and political delay in providing any effective relief (Chandrasekhar, 2015d; Mahaprashasta, 2016a; Mahaprashasta and Ramakrishnan, 2016; Rajalakshmi, 2016; Sayeed, 2013). This is only the third time that India has experienced consecutive droughts and the dire situation in India is characterized by the combination of the failure of the Rabi crop in 2015, caused by a 14 percent rainfall deficit on top of a 12 percent rainfall deficit in 2014 (Chandrasekhar, 2015c; Mahaprashasta and Ramakrishnan, 2016) .

A drought is assessed on five parameters – the availability of drinking water, irrigation water, fodder and food grains, and the energy sector requirement – according to the drought management manual brought out in 2009 by the Congress party led government of India (Rajalakshmi, 2016). A revised manual has been brought out in 2015 by the newly formed BJP led government. Both of these manuals are well written, with detailed plans that require the government administrations participation starting from the block level going up to the level of the Union government (Rajalakshmi, 2016). Despite these manuals calling for active co-operation between the various state governments and the central government, both farmers and landless farmworkers have acknowledged their concerns that despite the severity of the agrarian crisis, none of the policies in these manuals have actually been implemented at the time of repeated droughts (Mahaprashasta, 2016a; Mahaprashasta and Ramakrishnan, 2016; Rajalakshmi, 2016). A case in point is that the manuals call for the utilization of the Mahatma Gandhi National Rural

[17] Kharif and Rabi refer to the two farming seasons in India. While Kharif runs from July to October in line with the south-west monsoon, Rabi is from October to March which is the Winter planting season. Source: http://www.arthapedia.in/index.php?title=Cropping_seasons_of_India-_Kharif_%26_Rabi

Employment Guarantee Scheme (MGNREGS) to provide immediate employment to the drought affected people (Mahaprashasta, 2016b). Secondly, they call for the strengthening of the pubic distribution system (PDS) as a means to ensure the provision of both food and fodder to ensure the survival of the rural economy through the provision of food security (Mahaprashasta and Ramakrishnan, 2016). There are steps that it mandates with regards to recharging the ground water table through the construction of check dams, providing pipeline water and providing other irrigation facilities (Rajalakshmi, 2016). Finally, the government is mandated to either defer or waive farms loans while simultaneously providing for crop loss compensation (Rajalakshmi, 2016).

The current Indian government which took office in 2014 has claimed that it has taken up pro-farmer initiatives consisting of: institutionalising a better crop insurance plan, hiking the crop loss compensation by 50 percent and relaxing the norms for compensation eligibility (farmers who have suffered damage to at least 33% of their crops are now eligible for compensation against the earlier cut off of 50% damage to crops in order to be eligible) and the government has revised the minimum number of workdays under the MGNREGS from 100 to 150 (Mahaprashasta, 2016a). Despite these policy recommendations and decisions that are pro-farmer and pro-poor on paper, evidence suggests that none of these measures have been fully implemented in any of the drought affected states (Mahaprashasta, 2016a; Mahaprashasta and Ramakrishnan, 2016; Rajalakshmi, 2016).

For example, the Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS) in the case of at least Madhya Pradesh and Telangana suffers from huge pay delays, as a result of which people are unwilling to take up further work under it (Ghosh, 2016). NGOs whose work is focused on the proper

implementation of the MGNREGS in rural areas believe that most intended beneficiaries do not have access to the scheme. Vinita from Parmarth, an NGO working on water issues in Bundelkhand said that (Mahaprashasta, 2016a):

> At present the people are not getting MGNREGS work for more than 15-20 days. The majority of people in villages do not have job cards. Increasing the number to 150 days will hardly reflect on the ground when the scheme's implementation is so poor.

In the words of Yogendra Yadav, who is a member of a political collective called "Swaraj Abhiyan" and recently conducted a tour of the drought affected districts in India (Mahaprashasta, 2016b):

> The MGNREGA, which is one of the principal instruments available in a drought situation, has not been used for this purpose. We know that the overall employment generated by the MGNREGS this drought year is less than it was in the non-drought years.

Further, despite the increase in the cap of MGNREGA in terms of the number of days it is available from 100 to 150 days in a year, the reality on the ground is that the percentage of job-card holding families is not more than 4-5% (Ghosh, 2016). In reality people are not getting more than 10-15 days of work in a year under the MGNREGA, so the real challenge is how to ensure that people are able to work more than 10-15 days under the scheme and not the 100 days – 150 days' figure that is the discourse of the Indian government (Chandrasekhar, 2015b; 2015c).

The reason for this mismatch between the government of India's discourse and the reality on the ground is that the government of India has not followed the law with regards to the MGNREGA (Chandrasekhar, 2015b; 2015c; Ghosh, 2016). The 2005 Act, which introduced the programme, defined it as need based and as meant to be structured in such a way so as to include 60% of the allocation of funds to the states so as to enable them to implement the programme (Ghosh, 2016; Sainath, 2010a). However, the evidence from the budget of the Indian government indicates

that this is not the case in reality. The reality of the MGNREGA is that during the past year the program has provided on average no more than 40 days of employment across India. This also brings to the fore the situation at the other extreme in the 13 states in India that have drought like conditions and none of the 13 states have been able to provide more than 10-15 days of work to their people. In most cases no more than 10 percent of the population has been provided job cards under the MGNREGA which means that a significant percentage of the funding is being misallocated and misused for other categories of expenses. The audit of MGNREGA conducted by the Comptroller and Auditor General of India (CAGR), has also provided evidence that even among the group of people who have been provided work under the program, about 40% of the funds are not being paid to the workers, but being siphoned off by middlemen.

Another issue, that has come up in the CAGR audit is the fact that many of the job card holders who are on record at various job sites are not real citizens of the villages where the work has been conducted, but represent a fraud committed by the lower levels of the state bureaucracy in cahoots with employees from the banks. The modus operandi is to set up bank accounts for these beneficiaries, based on work done and instead of actual citizens getting the payment in bank accounts, fake names have been used to siphon off the funding in the program. In many cases the actual workers have either been paid a portion of the funding or as in most cases have not been paid in over a year (Ghosh, 2015b). This means that in many rural areas citizens have lost their confidence in the program after not being paid for so long and hence there is no demand for further work to be undertaken under the program. At the national level, this unpaid portion of MGNREGA work amounted to ₹ 5000Cr, which

relates to the amount spent in 2014-15 but for which the central government has not yet provided funding.

4.4 Economic Survey of the Government of India for 2015-16

The Indian government makes a note of climate change and emerging scarcities in its latest Economic Survey (2015-16) and calls for redressing the current system of incentives and subsidies, which encourages using more inputs such as fertilizer, water and power, to the detriment of soil quality, health and the environment (Government of India, 2016). There is an acceptance as well, that these subsidies also disproportionately benefit rich and large farmers. There is an attempt made to place a portion of the blame for the dire situation in agriculture on the bad back to back years of monsoon, which has resulted in a severe drought for two years running (Government of India, 2016). The government's Chief Economic Advisor recommends that the government should declare minimum support prices well before Kharif sowing operations, thereby incentivizing farmers to grow crops that are most prone to domestic supply pressures (such as pulses) and to contract in a timely manner the import of sensitive commodities (Vyas, 2016).

There is an acknowledgement of the bad policy choices and decisions taken by the government during the Uruguay round of WTO trade negotiations. During this time, as a net importer of food, India focused its efforts on "border protection" from imports through the ability to use tariffs in particular (Government of India, 2016). Further, it failed to make policy decisions to provide support to its domestic agricultural industry especially farmers through such means as producer subsidies, minimum support prices (Ghosh, 2016). There is an acceptance by the government that despite its lack of concern for agriculture since the period of the neoliberal reforms in the early 1990s, it cannot ignore agriculture since 42% of Indian

households derive the bulk of their income from farming (Government of India, 2016).

Indian agriculture is a victim of its own success especially the “green revolution”. The technologies of the “green revolution” consisting of the intensive use of water, use of fertilizers and the use of hybrid seeds have over the long run lead to the current crisis in Indian agriculture. The intensive use of water has meant that since the introduction of “green revolution” based monoculture farming the water table in most parts of India has been lowered to the point where it is no longer available for cultivation (Chandrasekhar, 2015b). Further, this has meant the shortage of drinking water for India’s booming population.

In the case of fertilizers, the government of India has provided a significant subsidy to promote the use of fertilizer, which is at ₹ 93,000 crores (₹ 930 billion) in the 2015-16 budget (Government of India, 2016). The retail prices of fertilizers are significantly lower than the cost of production/ imports. The difference between the cost of production/ imports and the retail price is paid as subsidy to the farmers. The amount of subsidy increased from ₹13.8 thousand crores in 2000-01 to ₹ 99.5 thousand crores in 2008-09 and ₹ 65.8 thousand crores in 2010-11. The rising amount of subsidy is due to increasing cost of production/ imports against the lower MRP (Government of India, 2013). A report prepared by the working group on fertilizer industry, of the government of India has acknowledged that the advantage of subsidy is more to the large and medium farmers (21.6 million holdings with 94.2 million hectares of land) who consume more fertilizers as compared to smallholder farmers (107.6 million holdings with 65.1 million hectares of land) (Government of India, 2013).

Further, as a result of the dominance of industrial agriculture the imports of total finished fertilizers have gone up to 21.7 million tonnes (MT) in 2010-11 from 3.6 MT only in 2000-01 (Mehdudia, 2013). Out of the 21.7 MT of fertilizers imported in 2010-11, the import of urea was 6.6 MT, DAP 7.4 MT, and MOP 6.4 MT. Currently about 38 per cent of the total fertilizer consumption is fulfilled through imports (Government of India, 2013).

Of the subsidy, almost 80% is aimed at the use of Urea, while the remaining 20% is aimed at Phosphorus and Potassium. This fertilizer subsidy is significant in that it amounts to 0.8% of the GDP of India. The result of this skewed subsidy is that farmers in India use a disproportionately large amount of Urea against the prescribed amount leading to destruction in soil quality over a period of time (Government of India, 2013).

Since the time of the launch of the "green revolution" to the current time, this has meant that the soil quality has been lost across India as a result of which the yield of the soil has been lost along with its ability to be resilient to the impacts of climate change. To make matters worse, over 50% of the Urea that is meant for agriculture and hence subsidized is being diverted for other uses and being siphoned off causing a loss of over 21,000Cr to the Indian exchequer. The report prepared by the working group on fertilizer industry, of the government of India has warned that:

"To maintain reasonable health of the Indian soils, each and every field is to be manured with at least 7 to 10.0 tons of organic fertilizers. With this assumption there is a need for about 850 to 1200 million tons of organic fertilizers. Keeping in view of the overall availability of cattle dung, agro-waste, city waste and crop residue etc. vis-á-vis their other uses and actual quantity available for manuring purpose, it may not be possible to harvest the potential from these sources. Therefore, to meet the

challenge, the requirement for organic carbon needs to be met from following resources: Organic fertilizers, Green leaf manuring from fertilizer trees grown on bunds, pulses integration in cropping systems and bio-fertilizers and on-farm dung-urine based liquid manures" (Government of India, 2013, p.22).

The hybrid seeds introduced by the "green revolution" have been updated by genetically modified transgenic seeds, especially in the case of cotton cultivation and the adoption of these seeds has significantly increased the cost of cultivation for the farmer and to make matters worse, these seeds no longer fulfil their purpose of being resistant to pests, which have developed a resistance to them (Parsai, 2014; Prabu,2012). Further, the use of these seeds has come at the expense of indigenous varieties, which had been developed over millennia with an ability to withstand various climatic conditions and hence were more resilient to the impact of climate change, but which have been mostly lost (Parsai, 2014; Prabu,2012). Another impact of the "green revolution" has been a shift away from the cultivation of pulses, which provide a valuable protein source to a large percent of the Indian population (Singh, Shahi, and Singh, 2016). Since these pulses are no longer cultivated in India in a quantity that meets their demand in India, this has also imposed an import burden (Bureau, 2016; Vyas, 2016).

Impact of government policy

The budget of 2016-17 has failed to provide any money for the welfare measures that it promised, despite the claim of the Finance Minister that his budget provided 'additional resources for vulnerable sections, rural areas and social and physical infrastructure'. In 2016-17, the Finance Minister has allocated ₹35,984 Cr for Agriculture, Co-operation and farmer's welfare (ACFW). This is being presented by both the Prime Minister and the Finance Minister as a huge increase compared to the

revised estimate for 2015-16 of ₹15,809.54Cr (Ghosh, 2016). However, the figure of 2016-17 includes ₹15,000 Cr. under the heading “interest subsidy for short-term relief for farmers”, which earlier was not included in the ACFW and appeared as part of the demand for grants of the Finance Ministry (Chandrasekhar, 2016). Thus effectively the increase in the budget allocation for farming is much smaller, an increase from ₹15,809.54 Cr. to ₹ 20,984Cr.as compared to the 128 percent increase claimed by the rhetoric of the Finance Minister (Ghosh, 2016). There is further evidence of a dichotomy between the rhetoric and the actual evidence of intent of the Indian government with regards to the MGNREGS, which the government was starving of funds even before the budget allocation of 2016-17(Ghosh, 2016).

The MGNREGS is defined legally as a demand-driven programme with the implication that the government would provide funds to provide employment if there were claimants who fit its description. In the 2015-16 year of the programme, it had reached a spending amount of ₹43,000 Cr. Despite this level of funding the government itself has acknowledged, the average number of man days of work provided under the programme is 40 days of work in a year as opposed to the target of 100 days (Ghosh, 2016). Based on the agrarian crisis becoming more severe, the government for 2016-17 has indicated that it will increase the allocation of workdays per person to 150. However, the budget allocation for MGNREGS for 2016-17 is only ₹38,500 and has been portrayed by the government as being substantial. Thus the allocation proposed in the budget for MGNREGS despite the rhetoric is a huge decline even in nominal terms and is much lower if the rate of inflation is taken into account (Ghosh, 2016). Overall the evidence is clear that the government of India, based on the budget presented by the Finance Minister has used the argument of

being pro poor and pro farmer, while not allocating the resources to be able to deliver on this promise.

Chand, Saxena, and Rana (2015) studied the farm incomes in India over a thirty-year period and come to the assumption that the agriculture sector in India has done well overall during this period. Although it mentions the farmer distress and even documents the number of farmer suicides per year using statistics from the government of India, it does not relate this to the decrease in the number of farmers between 2004-05 to 2011-12 from 166 million to 146 million. It would seem that the reason over 20 million farmers have left agriculture is because they are unable to make a living in agriculture. Chand, Saxena, and Rana (2015) use the argument that all farm households are at the same scale of input costs and income without any consideration to the variables of the land under cultivation, type of inputs used and access to credit as well as the cost of credit. They also do not take into consideration the seminal report of Sengupta et al., (2007) that looked at income and costs at different farm sizes.

The response of the Indian government to the agrarian crisis has been to include a policy proposal to double the income of farmers in India by the year 2022 in the union budget for 2016-17 (Chandrasekhar and Mehrotra, 2016). Chandrasekhar and Mehrotra, (2016) consider the likelihood of this being possible by investigating the incomes of agricultural households using data from National Sample Survey Office's (NSSO) Situation Assessment Survey of Farmers conducted in 2003 and the Situation Assessment Survey of Agricultural Households 2013. When giving consideration to the data used by Chandrasekhar and Mehrotra, (2016) with regards to its relevance for this thesis, it is important to keep in mind that the reference period for the data on income in the 2003 survey that they used was July 2002–June 2003,

while their 2013 survey data it was July 2012–June 2013. The later period of July 2012- June 2013 overlaps the period of focus of this thesis as well. “The average monthly total income of agricultural households in the full sample increased in nominal terms by over three times from ₹ 2,115 in 2003 to ₹ 6,426 in 2013” (Chandrasekhar and Mehrotra, 2016, p.11). In this section, I have looked at the engagement of the Government of India with the agrarian crisis by providing evidence of the contradiction inherent in its policy rhetoric and action in terms of the budget allocation within the Federal budget as well as in terms of the implementation of farmer livelihood support programs such as the MGNREGS. This leads me to the following section, which presents the alternative approach of the government i.e. to privatize and outsource its welfare role to corporate funded NGOs.

4.5 The Small and Marginal Tribal Farmers Mutually Aided Cooperative Society

The rationale for a co-operative organization and its basis in India

It can be argued that an alternative form of business organization with a democratic system of governance is more socially responsible and in a better position to impact the people as well as the environment in a positive way while also giving due consideration to the economic bottom line. This is the rationale for focusing this thesis on the co-operative form of organization constituted as a democratic organization, and managed based on the principle of one member, one vote (Toms, 2002; Núñez-Nickel and Moyano-Fuentes, 2004) with an emphasis on democracy, equality, equity, and solidarity (Núñez-Nickel and Moyano-Fuentes, 2004).

The role of a cooperative in the context of the Organic Fair Trade coffee supply chain is to provide their members with training on proper farming techniques, access to credit, as well as helping them to sell their coffee (Bacon, 2005; Valkila,

2009). In the Indian context, co-operative organisations were originally mooted as instruments of socio-economic transformation, including the uplift of the weakest sections in society, they have not reached these sections in any major way(Dadhich, 1977) and can best protect and promote their interests when they are truly democratic (Bhowmik, 1982).

However, the autonomy of co-operatives is often undermined by state governments using co-operative legislation which then enables the state bureaucracy to interfere in the running of the co-operative as happened to a co-operative tea factory in the Nilgiris district of Tamil Nadu state (Bhowmik, 1997). There are also positive examples in the tea industry such as the Saongaon workers co-operative in West Bengal state and the Tachai workers co-operative in Tripura state, where a democratic method of functioning has encouraged workers' participation in the decision-making process due to changes made to organisational structures and the evolution of formal and informal methods to prevent the concentration of power in a new bureaucracy (Bhowmik, 1988). Despite individually having a small area of production, small farmers have in the past provided evidence of their ability to increase their productivity despite limitations in their financial resources by forming into co-operatives (Reddy and Bhowmik, 1989).

The Small and Marginal Tribal Farmers Mutually Aided Cooperative Society (SAMTFMACS which will be referred to as the Coffee Co-op) is a coffee cooperative consisting of over 11,000 smallholder farmers. The Coffee Co-op is a democratic organization that is owned by its members and managed by them using grassroots democratic principles that incorporate democratic engagement and stakeholder participation. The structure of the Coffee Co-op is such that each mandal has a branch and on top is a board which has 22 to 27 members from the 7 mandals.

The villages had a panchayat (a form of village level grass roots government which is elected by the village) and formed a cluster with them.

The foundation for the Coffee Co-op was laid in 2002 under the livelihoods project of the Naandi Foundation which was started with a cohort of 1000 farmers (Naandi Foundation, 2007). The Naandi Foundation did not get into marketing at this time, but started providing marketing support in 2004 (Naandi Foundation, 2006). They began a pilot of the marketing after the 2003 season by buying the processed coffee from the 1000 pilot farmers and bought 6000 kilograms (kg) of clean coffee from these pilot farmers which had been processed by the farmers themselves (Naandi Foundation, 2007). At this time, they started by giving the farmers ₹6/kg of coffee fruit and then also gave a bonus to the farmers after selling the coffee. Then gradually the numbers of farmers who wanted to be a part of this program increased as other villages which were not a part of the pilot program also joined in as a part of the expansion initiated by Naandi in 2007(Naandi Foundation, 2009). Further, villages from mandals which were not part of the pilot also showed an interest in taking part in the program and so the program expanded beyond the initial two mandals. Including the bonus for the final clean coffee the farmers were getting a price of ₹50/kg of clean coffee. So this was more than 6 times the price of the fruit.

In 2007 a farmers' cooperative was registered as a society under the SR (Society Registration) Act with the 4000 tribals who cultivated coffee as a part of the Naandi initiative (Naandi Foundation, 2015). This registration was similar to the registration of a NGO. In 2007 the Coffee Co-op was set up as a mutually aided cooperative society (MACS) (Naandi Foundation, 2009). In the area of cooperatives, there are two acts in India. One is the 1964 central government act – central cooperative act. Under the aegis of this act, there is a mandatory monitoring and

auditing by the government. This means that the cooperative is not independent and needs to be under the control of the government. Cooperatives that were formed under the earlier central cooperative act of 1964 were required to have government representatives on the board and there was a lot of criticism of political interference from the political establishment. So a mutually aided cooperative society is formed mutually between the farmers and they mutually share all of the profits from their organization. Based on this understanding the Coffee Co-op was registered under the 1995 Act making it independent of government control.

Keeping in mind the criticism of this Act, in 1995 a new act was passed in the state of AP called the AP MACS Act in which the farmers are independent of the government and they do their own auditing and their decisions are final without any interference from the government. The difference between the cooperative formed under the 1995 act is that the MACS type of cooperative is under the control of the elected board of the members of the cooperative and there is no room for interference from the government and also no room for political interference from political organizations.

As the number of farmers joining the Coffee Co-op began to increase, there was a need to establish a structure for the co-operative that would ensure that it would be well organized and democratic in its functioning. Hence to ensure an effective organization, the Coffee Co-op was structured so that within each branch there are about 150 to 200 members and they have an election and they elect one representative to represent them. This is about 2-3 villages getting together to elect a branch member. Overall there are about 75 branch members per mandal. Of these 75 branch members from each mandal and with four mandals, you get about 300 branch members who in turn elect 25 of them to the board of the co-operative. The co-

operative board consists of these 25 members. The president is elected by this board of twenty-five people and the current president was elected twice unopposed and won the election for the third time after having to fight an election against another candidate. It is the same process to elect a vice-president of the board. In the case of the secretary of the board, it can be person from outside the board as well. The key criteria for the selection and election of the secretary is that it should be a person with a very good understanding of the coffee business and hence it is expected that it will be a person who is themselves a coffee farmer with lots of experience in coffee farming and thereby a good understanding of the coffee business.

Each branch of the Coffee Co-op also elects a president and vice-president to perform duties at the branch level. The board has a meeting every month and the branches also meet every month. The issues raised at each of the branches each month are brought up to the board meeting each month. The Coffee Co-op since its founding has grown by leaps and bounds and since its founding, it has achieved Fairtrade and organic certification for its products. The Fairtrade certification was achieved in 2008.The positive impact of the creation of the Coffee Co-op on the confidence of the individual farmers and their co-operative to engage with the local government authorities was shared by a C level Officer of the Partner NGO:

"I have seen in the last…well…since 2004, I have been here and the change in the mind set in the community is amazing…in the sense of the cooperative and in the sense of the aggregation in the sense that they have got the strength and the power to negotiate. I mean last year, they just went in there and …the government authorities was saying like…they were questioning the price of coffee and the price that the Coffee Co-op was offering to the farmers…so they all just came together and turned up at the meeting and these guys were just taken aback since there were 11,000

people talking to them. All the heads of the cooperative went over there and told them to mind your own business. All these years all that you wanted to do was farm it out to the traders and collect the corrupt money that they paid you to do their business. So these are the kinds of things that I have seen where I have seen the aggregation give some power and it is really important to nurture that and take it along and get it to a position of strength." (Journal, June 26, 2013)

NGO Intervention –Naandi Foundation, Dr. Reddy's Laboratories and Mahindra and Mahindra

The role of corporate NGOs according to Edwards (2008) is characterized by three distinguishing features: The commitment of very large sums of money by very financially successful people, a belief in the application of business methods to solving social problems along with their superiority over other methods currently in use by civil society organizations and that this business-like approach will be able to transform society for the better instead of providing the basic needs such as food, shelter and access to education that are in short supply. This approach to development aims "to address social problems through business and the market via corporate social responsibility, triple bottom line accounting, and "bottom of the pyramid" interventions" (Edwards, 2009, p.36). Edwards (2009) sees this approach to be based on two assumptions, firstly that corporations can come up with enough financial resources to replace the aid provided by governments and NGOs supported by civil society. Secondly, corporations believe that they can solve the problems of the world using market based approaches which are assumed to be a way to make the world a better place both socially as well as economically. Where this approach does not deliver is because it does not seem to engage with and address "fundamental deficits of power, representation, and accountability" (Edwards, 2009, p.39). In its failure to

“transform the social, political, and institutional landscapes that ultimately determine poverty and inequality” (Edwards, 2009, p.40), it seems to focus on the short term provision of goods and services at the expense of contributing to changing the social and political dynamics of places that would enable them to provide the benefits of innovation and change to the whole community. The danger with this approach of corporations is that their actions are being assumed to be successful without sufficient research into the effectiveness of their approach (Edwards, 2011).

Naandi (meaning a *new beginning*) was born on November 1, 1998 through the co-ordination between the government of AP and four corporations principal among which was Dr.Reddy's laboratories (Naandi Foundation, 2001).The founder chairman of Naandi Dr. Kallam Anji Reddy, was a scientist and entrepreneur who had set up Dr.Reddy's Laboratories in 1984 (Dr.Reddy's, 2016). The genesis of Naandi was the brainchild of the Chief Minister of AP Mr.Chandrababu Naidu and was put into action by the largest corporations in the state of AP at that time - Dr.Reddy's Laboratories Ltd., Global Trust bank, Satyam Computer Services Ltd. and Nagarjuna Group of Companies through an initial commitment of ₹ 5 million each (Naandi Foundation, 2001).

Scaling up has been religion at Naandi, one of the fastest growing non-governmental organisations of the past decade. Its founder-chairman K Anji Reddy of Dr Reddy's Labs passed away in 2013. Anand Mahindra, Chairman & MD of the $16.7 billion Mahindra Group, an ardent Naandi supporter, immediately took on responsibilities as its chair. This association is slowly showing the world how capital can fire social enterprises. "I am making a pitch for a new avatar of philanthropy," says Mahindra (Karunakaran, 2015). It manifests in the form of a new genre of for-profit social businesses he is catalysing. For now, they betray shades of the 'no-loss,

no- dividend' social businesses propagated by Nobel laureate Muhammad Yunus, but are actually set in a slightly different mould. Mahindra has even attracted some of Yunus' partners in social business like the 21 billion French foods giant Groupe Danone. Franck Riboud of Danone and Mahindra share a deep passion for recalibrating businesses in the social context. Riboud has always maintained that poverty cannot be solved by charity; it's not sustainable. Shared value is what fascinates Mahindra. It was therefore only a matter of time for the shared value and sustainability thinking to permeate into his philanthropic work.

Mahindra has extended personal philanthropic monies to three social enterprises — incorporated as private limited companies — as equity capital. Three of the social businesses revolve around the charging of user fees. Those at the bottom of the pyramid, the underprivileged, are its customers barring Araku Originals, the marketing arm of the Coffee Co-op, which is selling premium coffee to several boutique roasters in the West. It's largely about spinning various activities of Naandi into for-profit verticals; Naandi Community Water Services (NCWS), Naandi Education Support and Training (NEST) and Araku Originals (AOL). The one aspect that separates the Naandi-Mahindra model of social business from proliferating for-profit social enterprises, backed by impact investors, is the very active involvement of Mahindra himself. Mahindra brings credibility, heft, expertise and networks. "A company that is large can make a better, lasting change by aligning entrepreneurship with philanthropy," explains Mahindra (Karunakaran, 2015).

Mahindra is aware that eventually commercial monies will have to come in as scale and other challenges heighten, and therefore, is open to mainstream impact investors channelling capital in these entities. Here it differs from the Yunus model. "For those who bring in capital, we should be willing to service the capital the way

they want it serviced," Mahindra says (Karunakaran, 2015). Mahindra is certain that with time, more and more entrepreneurs and also intrapreneurs within companies will see merit in solving community issues as a business opportunity. Large companies or business leaders as anchors can only accelerate the process.

Danone and the Livelihoods Carbon Fund

The Danone connection has provided farmers in Araku over ₹ 14 crores for a massive tree plantation drive from the Paris-based Livelihoods Fund. The Fund extends carbon credits to corporations through projects in developing countries. Over six million trees have been planted over 14,000 tribal acres already, including 1.5 million mango trees which are beginning to bear fruits. In 2008, Danone, the Ramsar Convention on Wetlands and the International Union for the Conservation of Nature (IUCN) created the Danone Fund for Nature with the objective to restore degraded ecosystems, redevelop local economies and combat climate change (Danone, 2011). This was based on Danone's belief in a hands-on approach to sustainability (Danone, 2011). In addition to the purchase of carbon credits to offset their emissions, the hope was for an approach that would deliver strong social and economic impact (Danone, 2015). A successful mangrove restoration pilot project in Senegal motivated Danone to open up the fund to outside investors (Livelihoods, 2015). The Danone Fund for Nature thus evolved into an independent entity in 2011 and was rebranded as the Livelihoods Carbon Fund with €40 million in capital and has 10 investors: Danone, Schneider Electric, Crédit Agricole S.A., Michelin, Hermès, SAP, CDC Climat, La Poste, Firmenich, Voyageurs du Monde (Livelihoods, 2015).

Since its creation, the Livelihoods Carbon Fund has enabled the plantation of 130 million trees, with the goal of improving the livelihoods of one million people and sequestering nearly 10 million tons of CO2 (Danone, 2015). The Livelihoods

Carbon Fund mobilizes companies, financial institutions, large foundations which invest their money in a mutual fund and uses this money to finance the programs in the field (Centre for International Forestry Research, 2015). In return, the investors will get carbon credits to offset their own C02 emissions or sell the credits if they are not interested in carbon offsets (Danone, 2011). All Livelihoods programs are registered under existing CDM (Clean Development Mechanism) or VCS (Verified Carbon Standard) carbon methodologies (Livelihoods, 2015).

Following the success of the first fund, a second investment fund was launched in 2015 by Danone in combination with Mars Inc. called the Livelihoods Fund for Family Farming (Livelihoods 3F) with an initial capital of €120 million (Livelihoods, 2015). Its focus includes the restoration of ecosystems in order to sustainably improve the incomes and livelihoods of rural communities and instead of a focus only on carbon credits, this fund's aim is to help companies sustainably transform their supply chains with smallholder farmers (Centre for International Forestry Research, 2015).This fund is aimed at investors who include companies seeking to transform their supply chains, private impact investors and public development institutions seeking to maximize their social and environmental impact. The fund claims to provide financial return using a coalition of companies, institutions, and governments that will pay a fee for the raw materials, public goods and environmental services generated from the fund's projects. This evergreen fund is currently open to new investors.

4.6 Conclusion

In this Chapter I have introduced the broader macro context of the situation facing agriculture in India as well as the micro context of the situation being faced by the community of coffee farmers in the Paderu ITDA region of the Vishakhapatnam

district of the state of AP. At the national level the challenges being faced by the Indian farmer has been called an agrarian crisis due to the lack of access to agricultural credit, the dependence on external inputs whose cost has increased as the agricultural subsidies have been reduced, the challenges of climate change induced droughts which have destroyed the crops over large areas of India and the ineffective manner in which the MGNREGS, a government programme set up to ensure livelihoods, has been run. These issues also percolate to the local level and the coffee farmers in the Araku valley are also faced with these issues and the Naandi Foundation supported by large Indian TNC's namely Dr.Reddy's Laboratories and Mahindra and Mahindra and the Livelihoods fund led by the French TNC Danone have implemented projects related to livelihoods and agroforestry engaging these coffee farmers. In the following Chapter, I will look at the impact on the livelihoods of these coffee farmers by the implementation of a coffee based livelihood project implemented by the Naandi Foundation. This project consisted of forming clusters of villages and then combining these clusters into a co-operative which was then supported and motivated to get both Fairtrade and Organic certification.

Chapter 5 – Fairtrade's promise of providing a sustainable livelihood to coffee farmers

5.1 Introduction

The focus of this Chapter is to engage with the downward NGO accountability of the Fairtrade system using the Fairtrade coffee value chain from the standpoint of the challenges faced by a coffee producer co-operative in India. According to Bebbington and Larrinaga (2014) within the field of accounting there is a need for studies that address issues related to certification schemes in the context of global supply chains.

The Fairtrade movement began with a focus on the buying and selling of ethical or sustainable coffees (Bacon, 2005; Raynolds & Long, 2007; Sick, 2008) as a social contract between caring social organizations of the global North and producer organizations in the global South (Raynolds, Murray and Wilkinson, 2007). The Fairtrade movement promises its producers sufficient returns, safe working conditions, and environmentally sustainable production (Hira and Ferrie, 2006). Based on its rhetoric Fairtrade is an attempt to establish a form of interim global market justice based on a vision to provide farmers with sustainable livelihoods (Walton, 2010). Studies about Fairtrade in the field of Accounting have been few (Gray, Dey, Owen, Evans and Zadek, 1997; Dey, 2007) and fall within the area of social accounting (Gray, 1992; 2002; 2010).

Towards achieving this goal of providing a sustainable livelihood, the Fairtrade system has established a Fairtrade minimum price (FTMP) along with a Fairtrade premium for the coffee value chain. In doing so, Fairtrade claims that it covers the average costs of production for the farmer, thereby ensuring a sustainable livelihood for the farmers and their families (Smith, 2013). It hopes to provide a

degree of financial stability to the farmers through long-term trading relationships that provide access to pre-finance (access to credit), enabling the farmers to plan their production and invest in the necessary agricultural inputs (Bacon, 2005).

This Chapter is organized as follows. Section 5.2 details the impact of Fairtrade certification at the level of the Coffee Co-op. Section 5.3 will focus on presenting secondary data that will detail the FTMP setting process as described by Reinecke (2010) and Bacon (2010) to understand the accountability of Fairtrade at the organizational level. In doing so, it engages with the roles played by different actors in the negotiation process of the FTMP. Section 5.4 details the engagement of the Naandi Foundation with the coffee farmers as a part of its livelihoods project which led to the establishment of the Coffee Co-op, which is the coffee co-operative that is the focus of this thesis. Section 5.5 details the impact on the livelihood of the coffee farmers as a result of the formation of the Coffee Co-op using secondary data collected in 2010 by Jena and Grote (2016).

5.2 The promise and reality of Fairtrade: Winners and losers

To get an understanding of the promise and reality of Fairtrade, there is a need to account for Fairtrade from the perspective of the smallholder farmer co-operative. In this section my focus is to answer the research question:

- What does a sustainable livelihood in the coffee supply chain entail at the level of a co-operative?

An important issue to consider is that there is a lot of processing that goes into making the coffee bean into a form that is ready for export (refer to figure 4 on page 147). There is a process from the coffee fruit to the roasting stage when it is sold to the final consumer. The process that starts with 1lb. of coffee fruit, after the first stage in the process, which is pulping, should provide about .445 lb of wet parchment. This wet parchment is then fermented and dried and in this process it is expected to lose

about 10.5 to 11 percent of moisture content giving dry parchment with a weight of about .245 lb. The next step in the process is called peeling and polishing at which stage about 10-20 percent of the weight is lost. At this stage, the coffee is referred to as a ‘green bean’ and it is this stage at which the coffee is usually exported to the consuming market.

The buyer of this green bean is the roasting company which blends different varieties of green beans to make their custom roast. In the roasting process another 20 percent of the weight is lost relating to moisture content. Thus, in this process there is significant cost and there is a need for a level of output without which neither the farmers nor the cooperative will be able to make ends meet. In the words of the general manager of the Coffee Co-op (Journal, July 29, 2013):

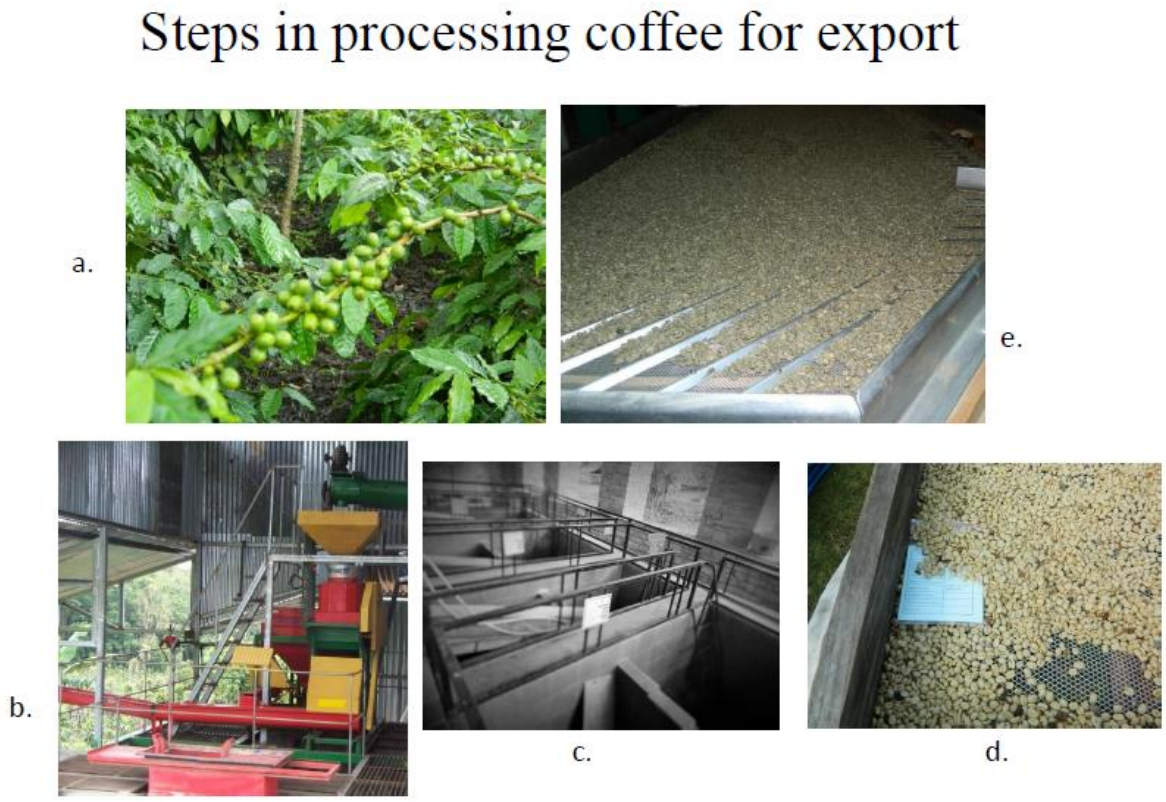
> As per my calculation, out of 1 pound of fruit, if you can get 0.160-0.165 lb. of ready product, powder or roasted bean, it is a good output. If anything comes below 0.140-0.130 lb. from 1 pound of fruit, you will not get any [financial] benefit.

This was collaborated in a later discussion with the Manager of the cooperative who said that the expectation with good quality coffee fruit is that 1 lb. of fruit should provide about 0.230 lb. of dry parchment.

This brings up an issue that is often mentioned in the discourse of Fairtrade that it helps to improve the quality of the coffee. However, as noted in the earlier section of the thesis (Chapter 2), the evidence is that Fairtrade does not provide assistance or motivation to improve coffee quality (Ruben and Verkaart, 2011; Ruben and Zuniga, 2011). The argument that is presented is that the social premium in Fairtrade is invested in improving the quality of the coffee. But in reality only about US$0.11/kg of the Fairtrade premium needs to be spent on improving the quality of

the coffee and the rest is spent on things like education and infrastructure (Bacon et al., 2008).

Figure 4: The multiple steps involved in a coffee value chain in the coffee producing country



(a) the coffee plant is grown and cultivated and the coffee berries are harvested on a farm
(b) the berries are brought to a central processing facility for pulping of the coffee berry which provides a wet parchment
(c) then the wet parchment is fermented
(d) and dried
(e) at this stage they have a parchment around them when they are sent to a milling facility where peeling and polishing takes place. At this point in time the coffee is a green bean and is ready for export to the consuming country.

Source: images taken by the author.

A concern shared by the Coffee Co-op was that Fairtrade was mandating specific things to be done which are not available in the Indian environment and would be considered extremely rare and the local people have no experience or exposure to the way of doing things that Fairtrade is asking them to do. It seems that they are trying to impose practices which are not common in the cultural context of India. There is also a significant cost on the producer Coffee Co-op and thereby the

producer for certification costs each year. Gelsomini (2014) found these to be around US$ 2500 in the first year with an additional cost of $1500 after that in the context of a Fairtrade certified co-operative which did not include the costs of compliance and bookkeeping for the co-operative.

FLO is charging the Coffee Co-op US $2,000 per year (approximate based on a conversion rate of ₹50 to 1US$ at the time of the interview) to maintain their Fairtrade certification. This, along with the costs of Organic certification is taking a monetary toll on the Coffee Co-op which angers the head of the community co-ordinators (CC's) who said (Journal, July 29, 2012):

> In this Fairtrade supply chain, who is really benefitting, is it the coffee farmers or the Fairtrade organizations? We are spending US $2,000 on Organic certification and another US $2,000 on Fairtrade certification. Overall we are spending about US $8,000 to US $10,000 each year on certification. In terms of the Fairtrade and Organic premium, we have gotten about US $18,000. What do we do with the US $18,000? Do we spend it on the Coffee Co-op or do we give it to the farmers? After spending all of this money, we are not seeing any benefit from it…the impression that was given in the beginning was that the benefit [from Fairtrade] would be in terms of an additional income of 5-10 percent, which has never materialized.

In the above given costs the additional cost of US. $4,000 - 6,000 that was provided over and above the cost of certification relates to the percentage of the salaries of the CCs for a year allocated by the cooperative towards effort and time invested towards Fairtrade and Organic certification compliance and training as well as the cost related to outside compliance consultancy to meet these requirements. Pavlovskaia (2014) details the complex standards of a social and environmental nature that a producer co-operative must comply with in order to be eligible to be certified Fairtrade which puts a huge burden of knowledge as well as cost for outside consultants to assist in meeting these requirements. In an interview with the manager of the Coffee Co-op, he brought the challenge that the co-operative faced due to the increase in the cost of processing the coffee for export (Interview November 26, 2012):

> The cost of processing the coffee is going up. To be frank, the price that we are getting including the Fairtrade premium is not keeping up with our increasing costs of processing which is becoming a burden for the co-operative. So while the processing cost is going up each year, unfortunately the price of the coffee is not keeping up with it. If we look at the comparison with the cost of processing versus the price that we are getting for the coffee, it is a per unit loss of about ₹50.

López Rosse Antequera (2008) identified significant constraints faced by the producer co-operatives such as a lack of sufficient incentive for differentiated coffee production and processing since the cost of ensuring this differentiation in terms of the costs of certification and compliance did not ensure a sufficient price premium to cover these costs. In this regard, another factor that needs to be considered is if the Coffee Co-op is valuing the amount of labour invested to be compliant with the requirements of Fairtrade. So this question was posed to the head of the Community Co-ordinators who replied (Journal, July 29, 2012):

> Yes, if we value the labour provided by the society, then we have a loss. To create a Fairtrade document, sometimes ten of us spent over a week at times. In that sense, if we calculate the amount of labour that is invested in that effort, it is at least US $ 60 to 80. If we take that into consideration, Fairtrade is a loss…It is about a loss of US $ 6000 to the Coffee Co-op by being certified.

In a meeting with some of the C-level officers of the partner NGO, they all agreed that this could be looked at as an opportunity cost. In an interview with a C-level officer of the partner NGO, the Naandi Foundation he said that (Journal, June 30, 2013):

> the [C-level officer] has been educating all of us on the fact that this whole certification regime is so expensive on one level, so that it is almost prohibitive for our farmers to get into that.

Fairtrade prices versus the costs of production and Use of the Fairtrade premium

In a follow up interview with the President of the Coffee Co-op, he said that based on the market price locally in India for conventional coffee of about US$ 1.0/lb to US$

1.082/lb, selling to this market was not really an option. At the time of the interview [end of June, 2013] the price of Arabica in New York was US$ 1.318/lb plus, the organic and Fairtrade premium which added up to US$ 0.473/lb The cost of production for the Coffee Co-op in 2013 was US$3.341/kg of green coffee which does not include the overhead of the Coffee Co-op which is another US. $ 1.668/lb. The costs included in the overhead consist of: electricity, security for the facility, and cost of labour for drying and moving the coffee, transport from the farmer to the cooperative's warehouse, transport from the Coffee Co-op to the further processing facility and grading cost at this location which is US$0.273/lb of green beans.

There is also a misunderstanding that the Fairtrade premium, which at the level of the cooperative can be a large sum of money, is paid to the farmers. Based on discussion with the various stakeholders in the Coffee Co-op, a significant amount of the Fairtrade premium has been used to build a new warehouse in December 2012 for the storage of the coffee as an extension to the small warehouse that they had for the storage of the coffee. This smaller warehouse had been built based on the earlier production of the Coffee Co-op, which was about 50-60 tonnes of coffee. But as of 2011-12, the production of the cooperative went up significantly and the cooperative had to start leasing another warehouse, which was not very clean or hygienic. Hence using some of the funds that they had received from the Fairtrade premium, they built a bigger warehouse.

The rest of the Fairtrade premium is used for other activities that help the farmers at the community level and hence this additional money is not translated into income at the level of the farmer. As noted earlier per Fairtrade regulations about 25% of the Fairtrade premium is earmarked for productivity and quality improvements at the producer level. These were the comments of the President of the

Coffee Co-op regarding the challenges being faced with regards to being a part of the Fairtrade system including the utilization of the Fairtrade premium (Interview July 27, 2013):

> When we have a co-operative, it is not dependent on any single person, but is rather a group effort of all of us. What we are doing is that for the coffee we are able to give an advance payment to the coffee farmers. What can we do with the Fairtrade premium to improve on this is the question that we have tried to ask ourselves, since giving more money to the farmers for the coffee that they grow will motivate them to improve their coffee. In effect paying more for the coffee is a development activity as well. So based on this logic in our meetings we have discussed the fact that the ₹1,000,000 that we have earned as a Fairtrade premium can be distributed among the coffee farmers. If we do this the production of coffee will increase and doing this will benefit the co-operative as a whole. So as a co-operative we thought why we cannot use the money that we get from the Fairtrade premium in this way, but the response is that the rules of Fairtrade do not allow this. The money has to be spent in improving the infrastructure in a village for example. But if you spend it at the level of the village, it might work one year and not have an impact into the future. However, if the same money is spent by the farmers to educate their children or improve opportunities for them, then this is a more sustainable use of the Fairtrade premium.

The Vice-President of the Coffee Co-op responded to this with his own comments (Interview July 27, 2013):

> If Fairtrade puts so many restrictions how the money has to be spent, then how will we develop? So instead of telling the co-operative that you cannot do this or do that, it would make more sense for us if the co-operative and its members are given the opportunity and the freedom to use the Fairtrade premium in the best way that we feel based on the ideas that we have. If we are confident and we all agree that doing a particular activity will promote development, then we should have the freedom to do so. As you have said, we need to invest a percentage of the Fairtrade premium at the co-operative level, but we need to see how the rest of the Fairtrade premium can be spent to invest in our families and especially in improving the opportunities for our children through education.

The Secretary of the Coffee Co-op had this to say (Interview July 27, 2013):

> For the 20 cents per pound of Fairtrade premium the co-operative has to spend about 13 cents a pound for the cost of certification. This does not include the labour costs association with bookkeeping and compliance for retaining the Fairtrade certification. If the amount of coffee that the co-operative produces increases by about 20-30% then it is more or less the same. But if the co-operative is able to double its production, then it will be able to overcome the

> fixed costs related to both Fairtrade and Organic certification and become profitable.

In a meeting with the GM of the Naandi Foundation who was in charge of the overall operations of the Coffee Co-op from an operational side, he detailed the relationship between the production scale of the co-operative and the related costs of compliance with Fairtrade standards including the cost of Fairtrade certification (Interview June 23, 2013):

> From about 400039 kilos of coffee beans, the co-operative was able to produce about 90000 kilos of clean coffee in the year 2011-12. In this 90000 kilos of clean coffee the co-operative had to pay about 400,000 rupees for the Fairtrade certification and they got a Fairtrade premium of about 900,000 Rupees. So, do we have a profit or do we have a loss. We have already paid the 400,000 rupees as the certification fee for the year. If we take into consideration the other costs, it comes up to about ₹500,000. If we also take the staff into consideration the total cost is about ₹650,000 to ₹700,000.

As noted in the earlier discussion, due to an oversupply of coffee that is certified Fairtrade, farmers have had to take on the additional certification of Organic in order to differentiate their Fairtrade certified coffee. This leads to a whole new certification regime and related costs that must be borne by the cooperative and its farmers. In this regard, there is an additional amount of labour and time that the cooperative and its farmers need to invest to continue the Organic certification. In the words of a C-level Officer of the Naandi Foundation, this plethora of certifications is making things more complicated and adding to the cost of doing business for the cooperative (Journal, November 30, 2013):

> […] Usually, they [Organic and Fairtrade] are clubbed together, but actually they are separating them. Actually Fairtrade has really screwed up the organic market by saying that it's okay if it's Fairtrade, who cares about the Organic side. My claim for many years was that if it's not organic, and then it's not obviously fair. So…and that was the issue. So the problem is that you have a proliferation of certifications…Rainforest alliance…bird friendly…there is a whole plethora of them. What we need to do is to come together with some sort of amalgamation of safe practices for safe food.

Another issue related to the coffee is that the assumption of receiving the Fairtrade and Organic premium is being made. However, these only come into effect if the coffee is sold as such. Johannessen and Wilhite (2010) looked at the Fairtrade value chain in Nicaragua and Guatemala and found that the first level co-operative in Nicaragua was able to sell only 20% of its coffee to Fairtrade while the second level co-operative in Guatemala was able to sell 30-40% of its coffee to Fairtrade. Keeping in mind that in general a cooperative that is Fairtrade certified is only able to sell about 20% - 30% of its coffee as Fairtrade, provides an explanation for the oversupply in the overall coffee market which leads to a further drop in prices (Gibbon and Sliwa, 2012).

I have engaged with a co-operative of coffee farmers in India to incorporate an understanding of the issues at the coffee producer level with regards to the impact of FTMP and the Fairtrade premium on the viability of the Coffee Co-op. I have argued through this thesis that to ensure the viability of the farmers, Fairtrade should attempt to cover not only the costs of production of the individual farmers, but also the cost of operation of the Fairtrade cooperative. In the context of coffee this relates to the processing of coffee beans to enable their export to Fairtrade markets in the Global North. This is what a sustainable livelihood would entail in the coffee value chain at the level of a co-operative.

5.3 Accountability at the level of the FLO and the Fairtrade Foundation

There is a need to consider if the Fairtrade minimum price is enough to cover the costs of coffee cultivation and if this is a factor in the inability found by Fairtrade certified farmers to achieve a sustainable livelihood. When the Fairtrade movement was first started, there was no formal price determination process with price discovery happening through a negotiation process involving fair trading

organizations and producers which led to the establishment of long-term personal relationships based on mutual understanding and trust (Reinecke, 2010). Despite the effectiveness of this approach, due to the fact that this did not enable the Fairtrade brand to be extended to the mainstream consumer, a strategic decision was taken to introduce a Fairtrade minimum price (FTMP) scheme (Reinecke, 2010). A cost of sustainable production (CoSP) methodology was used to calculate the FTMP under the assumption that it would provide information to determine prices that would cover the costs of production using objective reliable facts (Reinecke, 2010).

The FTMP price determination process of 2006-07, which led to the eventual increase in the FTMP by a nominal amount, is detailed by Reinecke (2010, p.572):

> The opposition to increasing the FTMP came from the National Labelling Initiatives, who had invested tremendous energy…[to] convince significant brands and supermarkets to adopt Fairtrade. Afraid to alienate…their new corporate supporters, they justified their reluctance to increase the coffee price by appealing to the risk that a significant fall in coffee prices would be harmful to producers'. This led to the standards committee, which is a technical committee of the FLO with the role of making the FTMP price determination recommendations to the board of the FLO, to not increase the FTMP initially citing the 'unavoidable reality of market dynamics.

Another argument that was presented by the standards committee according to Reinecke (2010, p.573):

> [E]mphasized that the minimum price was a floor price that should not subsidize production inefficiencies. Suspending the self-regulating forces of the free market would mean that Fairtrade locked small producers into inefficient paths of production and into dependency on Fairtrade.

It is worth noting that this argument was presented without any discussion of the costs of production or of the acknowledgement of the reality of inflation, information which should have been easily available to the committee.

Bacon (2010) found that the FTMP lost 41% of its value between 1988 and 2008. As a result of this there was an attempt made within the FLO framework to update the FTMP, which led to its being increased by a nominal amount in 2008. The

report prepared by Bacon (2010) not only included an analysis of the impact of inflation on the cost of production for the coffee farmers, his analysis also differentiated cost of sustainable production (CoSP) from a cost of production. In this regard, the proposal to consider the price to be sustainable would mean that additional expenditures incurred by the farmer households to ensure that their livelihoods were sustainable would need to be included in determining the FTMP (Bacon, 2010).[18] However, despite having this information provided to them, there was a lack of clarity among the members of the standards committee of the FLO with regards to the calculation of the CoSP (Reinecke, 2010).

The issue was the definition of the CoSP, since from the perspective of a producer representative in the standards committee (Reinecke, 2010, p.574):

> The wage rate used to calculate labour costs in FLO's CoSP study was below a decent level. They were a bad parameter for a family's real living costs.

In effect, on one hand in the FTMP determination process, the producer representatives had provided evidence that the minimum prices being used did not cover the cost of production of the coffee farmers (Reinecke, 2010). In response to this, the Labelling initiatives best argument against increasing the FTMP was the possible negative impact that it would have on the sales of their product (Reinecke, 2010). As (Reinecke, 2010, p.574) put it:

> But if CoSP studies could provide conclusive factual evidence that the FTMP was no longer cost covering, then the argument of negative market impact could no longer stand against the principle of Fairtrade.

Based on this, the argument against the increase of the FTMP seems to go against the principle of Fairtrade itself. It is relevant at this point to review the goals put down in Fairtrade's mission statement. The purpose of existence of the Fairtrade

[18] According to Bacon (2010, p.131), "an accounting of the costs of sustainable production (CoSP) should include the costs of education, healthcare, food, and housing as well as those [costs] related to producing high quality coffee in harmony with the ecosystem."

movement, which was noted in the 2012, 2013, and 2014 Annual Reports of the Fairtrade Foundation, says that (The Fairtrade Foundation, 2012; 2013; 2014):

> The Fairtrade Foundation's mission is to work with business community groups and individuals to improve the trading position of producer organisations in developing countries and to deliver sustainable livelihoods for farmers, workers and their communities.

If this mission statement is taken seriously, then the argument in favour of Fairtrade is that it provides a better alternative compared to the free market. However, the negotiation process for setting up the FTMP by the FLO has "demonstrated that the balance of power in FLO leant towards Labelling Initiatives and their market interests" (Reinecke, 2010, p.577).

The emphasis within the Fairtrade system of prioritizing the needs of the corporate value chain partners became evident in 2011. The two years of 2009 and 2010 had been an important period for the coffee industry since this was a time when the coffee price rose to four times what it was in 2001 (Haight, 2011). As the coffee prices began to rise, many small scale coffee co-operatives had a difficult time fulfilling their previously made contracts under Fairtrade since their members began to sell their coffee directly to intermediaries at a higher price compared to what they would have received in the Fairtrade market under contract (Fairtrade USA, 2011a; Haight, 2011). This precipitated a fundamental change in policy that was announced by FLO in March, 2011 where FLO doubled the community development premium for coffee (from $.10 per pound to $.20 per pound and mandated that $0.05 of this should be used on quality improvement efforts at the level of the cooperative) and also increased the Fairtrade minimum price from $120 per quintal ($1.20 per pound of green beans) to $140 per quintal ($1.40 per pound of green beans) for the highest quality coffee (Fairtrade USA, 2011a; 2011b).

Studies such as Reinecke (2010) and Bacon (2010) which went into the negotiation and decision making process at the level of the FLO are not available to tell the story behind the process related to the increase in the FTMP in 2011. However, the evidence of how quickly the FLO increased the FTMP in 2011 can be seen in figure 1 (on page 91) and based on this I will consider the possible rationale for the increase in FTMP. Unlike the earlier request for an increase in FTMP in 2006, when the market price was low, in 2011 the market price was at the highest it had been in 34 years. This meant that the market forces were telling the FLO that if it wanted to stay relevant it needed to adjust the FTMP upwards which it did. In this round of changing the FTMP, there was no need for a CLAC report, since without the increase the national labelling organizations and their market based retail partners would have been unable to deliver Fairtrade certified product. This is a clear indication of what seems to drive the Fairtrade system. It indicates that the Fairtrade value chain is focused on big store retailers and in the end the power seems to be in the hands of the NLIs and their big corporate buyers. The process of setting up the FTMP and the broader Fairtrade value chain seems to be working within the context of neoliberalism (Bacon, 2010).

Table 11: Fairtrade license fees as a % of total revenues of the Fairtrade Foundation 2007-2014[19]

Year	Total Revenue	Increase from past year	License fees	License fees as % of total Revenue
2007	£6,500,000	81%	£4,600,000	70.77%
2008	£7,200,000	12%	£6,200,000	86.11%
2009	£8,700,000	21%	£6,600,000	75.86%
2010	£10,900,000	25%	£8,400,000	77.06%
2011	£10,800,000	Decrease of 0.91%	£8,200,000	75.93%
2012	£11,700,000	8%	£9,400,000	80.34%
2013	£11,800,000	0.85%	£10,100,000	85.59%
2014	£11,600,000	Decrease of 1.69%	£10,100,000	87.07%

[19] Source: Fairtrade Foundation annual report and financial statements (2012; 2013; 2014)

An analysis that I conducted of the annual reports of the Fairtrade Foundation between 2007 and 2014 provides evidence of the dependence of NLIs such as the Fairtrade Foundation on income from license fees from companies marketing products carrying the Foundations Fairtrade mark (refer to Table 11 above). These fees that NLIs such as the Fairtrade Foundation collect are meant to cover the costs of monitoring and audit to ensure compliance with Fairtrade standards. In addition, they are used to cover costs of marketing the Fairtrade brand (refer to Table 12 below) under the idea that it is being spent for market development, public education and awareness raising (Fairtrade Foundation, 2012; 2013; 2014). The license fees are calculated as a percentage of the Fairtrade certified products wholesale value. The role of monitoring and auditing the licensees is undertaken directly by the Fairtrade Foundation itself, which seems to be a clear issue of conflict of interest.

Table 12: Total marketing related expenses for the Fairtrade Foundation 2011-2014[20]

Year	2014	2013	2012	2011
market development	£2,568,000	£2,331,000	£2,401,000	£2,154,000
public education and awareness	£4,415,000	£4,240,000	£3,347,000	£3,468,000
Fundraising	£339,000	£354,000	£326,000	£227,000
Total marketing expenses	£7,322,000	£6,925,000	£6,074,000	£5,849,000
Total License fees	£10,100,000	£10,100,000	£9,400,000	£8,200,000
Marketing expenses as a % of License fees	72.50	68.56	64.62	71.33

Another issue with the Fairtrade system is that there is a greater quantity of coffee that is certified Fairtrade as compared to the demand for it. This is an issue that has caused controversy and Fairtrade has acknowledged it and responded to it with a report in 2012 titled: *Is Fairtrade a subsidy that encourages farmers to grow more coffee and therefore contribute to global oversupply and low prices?* (located in Appendix 1). In this report Fairtrade brings attention to the large quantity of small coffee producers that make their coffee market viable (Fairtrade Foundation, 2012):

[20] Source: Fairtrade Foundation annual report and financial statements for 2012, 2013 and 2014

> The reality is that the high-volume, low-cost producers can only supply 30% of the quantity needed by the industry. The market therefore relies on around 15 million smallholders who supply 70% of the total market, including a wide range of different qualities, origins and speciality coffees. Inevitably, their production costs are considerably higher than Vietnam's low-wage industry, boosted by government policies to expand agricultural exports, and the large-scale, low cost Brazilian plantations that have invested in mechanisation and innovative and intensive production techniques.

The Fairtrade Foundation makes the argument that the large commercial coffee companies do not pay good prices for the coffee and hence its role is to work with the small coffee producers who have higher costs of production to assist them in moving their coffee up the value chain by helping them to improve the quality of their coffee as well as assist them through the Fairtrade premium to invest in equipment and facilities that would enable the coffee producer cooperatives to create a more value added product. The Fairtrade Foundation (2012) claims that:

> Fairtrade aims to address this situation with particular regard to the most marginalised and disadvantaged producers. Fairtrade works in partnership with traditional coffee growing communities - not recent entrants to the market - and is about promoting production that is both commercially and environmentally sustainable. With the resources to finance cupping laboratories, for example, growers can improve the quality of their coffee which will help them penetrate new markets.

Table 13: Comparison of Fairtrade Foundation spending – consumer marketing vs. producers
Source: Fairtrade Foundation annual report and financial statements for 2012,2013 and 2014

Year	Total Revenue	Membership contribution	Certification fees	Producer network contributions	Producer certification fund	Marketing expenses for the Fairtrade brand
2011	£10.8 million	£1,427,000	£245,000	-	£206,000	£5,849,000
2012	£11.7 million	£1,466,000	£260,000	£225,000	£187,000	£6,074,000
2013	£11.8 million	£1,565,000	£280,000	£332,000	£172,000	£6,925,000
2014	£11.6 million	£1,829,000	£273,000	£332,000	-	£7,322,000

Despite their commitment to working to improve the condition of the producers, the evidence of how the Fairtrade Foundation utilizes its resources by comparing its spending on producers to its spending on marketing (refer to Table 13 above) is a clear indication of the focus on marketing. The "producer network contributions" relate to the "Fairtrade premium" that is paid to the Fairtrade producer co-operatives on top of the FTMP and are distributed to producer networks through Fairtrade International (Fairtrade Foundation, 2014). The "producer certification fund" is a fund that was created in 2011 to help smallholder farmer's organizations pay for the cost of their Fairtrade certification. This is an acknowledgement by the Fairtrade system of the significant cost burden of Fairtrade certification at the level of the smallholder producer co-operatives. This is an important issue that I will come back to in the discussion in section 7.3 where I discuss the impact of the Fairtrade system at the level of the producer co-operative. I will provide the perspective at the level of the producer co-operative in section 5.5.

The category "membership contribution" in the words of the Fairtrade Foundation (2012; 2013; 2014):

> Support[s] Fairtrade International's functions in setting the international framework and co-ordination of fairtrade including the setting and development of Fairtrade standards, supporting producers and traders to match supply and demand, and supporting smallholders and workers participating in Fairtrade.

From 2014 the membership contribution includes "producer certification fund" contributions. Fairtrade does acknowledge that there is only so much that can be done with regards to assisting the small scale producers to sell more coffee at better prices. It suggests that instead of a focus on producing more coffee, the small scale coffee producers should focus on trying to sell more of their coffee in the Fairtrade market. Further, they are advised by Fairtrade to invest some of the

Fairtrade premium to diversify their sources of income beyond just a dependence on coffee (Fairtrade Foundation, 2012):

> Most Fairtrade certified coffee cooperatives currently sell only a small part of their crop to the Fairtrade market; therefore, their main incentive is to increase sales to the Fairtrade market rather than expand overall production. Like any grower, many may understandably want to increase production to try to recapture from conventional sales some of the income lost as a result of the all-time low prices of the past five or six years. But the reality for most farmers is that they simply don't have the finances to increase planting or purchase additional land to up their production. Working with Fairtrade can provide opportunities for diversification: in Guatemala, Fairtrade coffee farmers are intercropping with citrus fruits and bananas to increase their incomes and reduce dependency on coffee.

This issue of the need to diversify incomes away from coffee as the solution to the achievement of sustainable livelihoods will be discussed in further detail in Chapter 6. In this section, I have discussed the influence of neoliberalism within the FTMP price setting process whereby the needs of TNC retailers seems to have been prioritized over the goals of the Fairtrade system to provide a FTMP that covers the CoSP for the smallholder farmers. In the following section, I will detail the engagement of the Indian NGO Naandi Foundation with the coffee growers in the Paderu ITDA region which led to the formation of the Coffee Co-op.

5.4 Naandi Foundation's livelihood project

The involvement of the Naandi Foundation with the Paderu ITDA region began in 2002 under its livelihoods project. Before the founding of the Coffee Co-op, the coffee farmers in the area were at the mercy of the traders, who would buy the coffee from them at a low price and sell it off in the port city of Visakhapatnam at a much higher price (Naandi Foundation, 2003). To this day this is a problem in the region, where the cooperative is not present or among the farmers who are not members of the cooperative. Naandi's approach to working on improving the livelihoods of farmers was based on an extended period of immersion in the Paderu ITDA region

(Naandi Foundation, 2007). The Naandi Foundation started work in Araku with a pilot project on coffee including two mandals of Araku and Dumriguda with 72 villages and 1000 farmers (Naandi Foundation, 2003). In the beginning the Naandi Foundation started with input support and stone fencing.

In partnership with the Integrated Tribal Development Agency (ITDA) an acre of semi-wasteland was given to these 1000 tribal families in the region and then converting these lands into organic coffee plantations became the focus of Naandi's initiative (Naandi Foundation, 2004). When the farmers began to cultivate coffee they did not know where to sell it, as there were no central agencies that would procure it and the farmers had to carry the sacks of coffee beans on their backs and get them onto the one truck that plied to the market in nearby Paderu (Naandi Foundation, 2015). At the market in Paderu they could sell the coffee to middlemen and contractors who paid them no more than ₹5 per kg. and these middlemen would also short change them by paying them only for about 80 per cent of the beans they brought (Naandi Foundation, 2015). During this time (2003-04), the farmers would be able to sell their clean coffee for about ₹25-30/kg.

To initiate this process as a part of their activities in engaging with the coffee farmers from their pilot group, the Naandi Foundation provided the coffee farmers bio-fertilizer and manure (Naandi Foundation, 2003). As a part of its livelihoods initiative the Naandi foundation organized exposure visits to organic plantations in other parts of South India. In addition, spider populations were encouraged to grow and provide natural pest control webs to promote chemical-free farming (Naandi Foundation, 2004). The coffee farmers were initially grouped into clusters and over a period of five years, Naandi began getting an in-depth understanding of the issues faced by these small tribal farmers and based on acquiring their trust, was able to

convince them to partner with the Naandi Foundation (Naandi Foundation, 2007). These were the comments from a focus group with a VDC of the co-operative regarding their motivation to take up coffee farming (Journal dated July 29, 2013):

> Since the formation of the co-operative, we have been motivated to get into coffee farming. Everyone should have at least one acre to half an acre in coffee. This will ensure that along with the usual crops that we grow; it will provide additional income and thereby be useful towards ensuring that we have a livelihood. We do not have job opportunities in our village so we have a lot of interest in agriculture since it is our only source of revenue. We are keen to learn new ways to improve our income from agriculture, since we are fully dependent on agriculture.

The Naandi Foundation did not get into marketing at the initial stage, but started providing marketing support in 2004. They began a pilot project to provide marketing support after the 2003 season by buying processed coffee from the 1000 pilot farmers. They bought 13200 pounds (lb) of clean coffee (this is how processed coffee ready for sales is referred to) from these pilot farmers which had been processed by the farmers themselves. At this point in time (2003-04), the farmers had been able to sell their clean coffee (processed) for about US$ (0.245- 0.295) per lb. This was the price that they received from traders who had a monopoly at this time on purchasing the coffee from the coffee farmers in the Paderu ITDA region. The general manager (GM) of the Naandi Foundation explained how the traders operate (Interview dated November 30, 2012):

> The traders come to the villages at the start of the planting season and they give a ₹100 [US$1.67] or ₹500 [US$ 8.33] or a maximum of ₹1000 [US$16.67] as an advance to the farmer to be used by them during the time of cultivation so that they can meet their immediate needs at planting time. Essentially the traders force them [the farmers] to take the money and then at the end of the coffee season when it is harvest time the traders come back. So the trader has given the money ahead of time, because he is keeping his eyes on the Coffee. So at the time of the coffee harvest the trader returns and says, I helped you with money when you needed it, so you need to sell me your coffee. The traders will fix the rate, then they will cheat on the weighing [the weight of the coffee], and they will cheat on the price [of the coffee] as well.

Table 14: Prices offered for clean coffee in 2004 within the Paderu ITDA

Who offered the price	Price offered per lb of clean coffee
Traders	US$ (0.245- 0.295) per lb
Naandi Foundation	US$ 0.30 per lb + bonus

With the realization that the farmers were not getting a good remuneration for their coffee, a pulping unit was started in 2004 by the Naandi Foundation (Naandi Foundation, 2006). At this time, they started by giving the farmers US $0.059/lb for their coffee fruit (which equates to a clean coffee price of US$ 0.30 per lb) and then gave a bonus to the farmers after selling the coffee (refer to Table 14). This led to an increase in the number of farmers who wanted to be a part of this program. Part of the reason for this increase in the number of farmers was that other villages which were not a part of the pilot program also joined in. During 2004-05, the groups of tribal coffee farmers had been provided access to the Price Stabilisation Fund provided by the Indian Coffee Board, which secured them against wild price fluctuations (Naandi Foundation, 2006).

SKAL International, a Dutch organic accreditation agency was brought in to monitor and certify the coffee plantations as Organic for international consumption and all the plantations that were set up are following the SKAL standards of cultivation (Naandi Foundation, 2004). In this endeavour, the Coffee Board of India was brought in as a partner and provided various forms of infrastructural support from drying and storing sheds to pulping machines to the farmers (Naandi Foundation, 2004). Both the coffee board and the ITDA provided coffee saplings to the farmers free of cost (Naandi Foundation, 2007).

SKAL International, Netherlands certified the coffee grown in the pilot project of the Naandi Foundation as organic making it possible for Naandi to begin

exploring export options for the coffee crop starting in 2006 (Naandi Foundation, 2006). The organic certification that was achieved also provided evidence of the replicability of this initiative and Naandi expanded the project by taking on board another 2000 new tribal farmers, and an additional 2000 acres of semi wasteland starting in 2006 which was provided by the ITDA (Naandi Foundation, 2006).

During the first five years of working with the Coffee Co-op, the Naandi Foundation did not look at the export markets and focused its marketing efforts on the Indian domestic market. Liberalization of the marketing and exports of coffee in India took place in 1996 as a result of which the Coffee Board of India was no longer responsible for the pooling and marketing of coffee with the result that the onus of seeking access to international markets has fallen on the coffee-farming units and private traders (Damodaran, 2002). A focus on the international market started with the involvement of Ms. Menon and other quality experts, which was around 2007. By 2010, the Coffee Co-op in partnership with the Naandi Foundation had reached a scale of having an annual production of 545 metric tonnes of coffee fruit cultivated by 9,799 members on 11,371 acres of land (Naandi Foundation, 2010).

During the interim period, the Coffee Co-op did the processing and then sold the green coffee in the domestic market. Whatever was left from the income generated from selling the coffee after covering the costs of processing the coffee was given to the farmers as a bonus. This income to the farmer which was ₹50/kg in 2003-04 has grown to ₹162/kg of clean coffee as of the 2012-13 harvest. In addition to this, the Coffee Co-op receives a Fairtrade premium a portion of which is spent on village development activities such as repairing the drinking water facilities or improving the local schools (based on an interview with the Naandi manager in charge of coffee). However, in a follow-up interview with the village development committee (VDC) of

village A, they informed me that they have not gotten any money from the Fairtrade premium to spend on education (Interview with the VDC, June, 2013). To this day, the Coffee Co-op works closely with the staff from Naandi Foundation. Within Araku valley, the Naandi Foundation has an office from where they co-ordinate their activities in this region.

In addition, due to its democratic nature, the Coffee Co-op has been transparent with its members with regards to how the prices of coffee are determined (Manager of the livelihoods group of Naandi Foundation, November 27, 2012):

> So first when they are fixing the price, they will check the national and the international market. Then they will have an overview and then they will also have the feedback and perspective from the international buyers in mind. Based on taking into consideration all of this information the price is determined.

As a result of this, there is more confidence at the village level as well (Interview dated July 27, 2013 with the community co-ordinator from village A):

> Now the farmers are confident that the co-op is in charge of the coffee, that they are taking care of everything in a fair and transparent manner. So more than the co-operative the farmers are more comfortable now since the co-operative has been formed since for them it is less of a headache. The farmers are getting their money on time and they do not need to carry the coffee to the market since it gets picked up from their village by the co-operative. They also do not need to negotiate or fight with the traders. They get a fixed price and from the beginning of the season itself they know the price.

5.5 Impact on the livelihood of the coffee farmers by forming a co-operative

The Jena and Grote (2016) study was done in 2010 to determine if Fairtrade certification improved farmers' livelihoods? Jena and Grote (2016) conducted their study at the level of the farmer household and concluded that Fairtrade certification has a positive impact on farmers' income. This was based on the evidence that despite being in a community with a high poverty rate of 84% there was some evidence found regarding an improvement in the livelihoods of the farmers who were Fairtrade

certified (Jena and Grote, 2016). This was based on the evidence that they received higher and assured farm gate prices, that there was regular collection of coffee from the villages that reduced the travel costs for the farmers and from the Fairtrade social premium that was received in these communities (Jena and Grote, 2016).

Jena and Grote (2016) acknowledge that the benefits that the farmers received as a result of being Fairtrade certified were modest along with the fact that the process of improvement is slow and challenges remain in terms of improving the effectiveness and management of the co-operative system. This is based on the fact that at the high poverty rate that these farmers are facing, the time and energy that they need to invest in Fairtrade could be invested in diversifying their sources of income. This is because the farmers that I engaged with have noted the challenges with coffee cultivation. The VDC in village A has ten members and they were asked about the challenges that they were facing with their coffee crop during the coffee harvest of 2012. This is their response (Journal, Nov 28, 2012):

> The coffee crop this year is not as good as last year. The yield of coffee has been affected by the lack of rainfall. Usually if we get good rains in the month of March, then the coffee crop is usually good. This year we did not get enough rain in March, so the coffee crop is on the lower side. This year the rains did not come in March and we got a lot more sun this year than is usual. So because of lack of rainfall and the excess of sun, there were not enough flowers on the coffee which has resulted in lesser yield this year.

Jena and Grote (2016) collected their empirical data in March-April 2010 in 256 coffee farmer households (refer to Table 15 which I have derived from this study). Of these 256 households 155 were members of the co-operative and the rest of the respondents were not certified. In terms of gaining a perspective on the effectiveness of Fairtrade, this study provided a baseline estimate of the potential of Fairtrade since the Coffee Co-op had been certified Fairtrade in 2008 and hence the coffee farmers had been through the experience of Fairtrade certification for only about two years.

Further, Jena and Grote (2016) did not engage with the costs of Fairtrade certification since their data collection was at the household level and hence their analysis did not take into consideration the impact of Fairtrade certification at the level of the Coffee Co-op.

Table 15: Information about a sample of Fairtrade certified and non-certified households (Source: Jena and Grote, 2016).

Information about households	Total	Fairtrade certified households	Non-certified households
Sample size	256	155	99
Total land (acres) on average/ household	4.57	4.84	4.15
Area under coffee (acres) on average/ household	2.15	2.22	2.03
Yield of coffee in pounds/ acre	467.42	471.87	458.52
Price of dry coffee received from middlemen (US$/ pound at 1US$ = 60 ₹)	US$0.69/ pound	US$0.71/ pound	US$0.68/pound
Net income from coffee (US $/ acre)	US$ 64.79	US$ 73.96	US$ 48.65
Total net income (US $)	375.15	404.62	329.92

The Jena and Grote (2016) study has also brought up an issue related to lack of knowledge about the Fairtrade certification system among the members of the Coffee Co-op, with only 17% of respondents being aware of the fact that their co-operative was certified and none of the respondents being able to explain what they understood by certification. This was construed to be due to a lack of engagement on the part of the Coffee Co-op with its members in terms of making them aware of the certification process (Jena and Grote, 2016). In my interaction with the head of the community co-ordinators, he brought up the issue related to the cost of compliance with Fairtrade standards (Interview July 27, 2013):

> The co-operative to ensure the compliance of the farmers and their understanding of Fairtrade and Organic standards for its 11,500 members needs to make about 3 visits a year to the 600 villages where its members are

> based. This needs to be completed with a staff of 25 people and this will cost a significant amount of money.

This shows that the reason for the lack of awareness of Fairtrade certification at the level of the household is that with the limited resources at its disposal, the Coffee Co-op has had to prioritize using its labour resources to ensure compliance with Fairtrade regulations at the expense of being able invest in educating its membership about the Fairtrade system.

With regards the impact of being a member of the co-operative, the benefit that was noted by the participants was the improvement and assurance with regards to the coffee price that they received (Jena and Grote, 2016). The coffee farmers had to take the risk of travelling to a distant market location to sell their coffee before the formation of the co-operative and this involved a high cost in terms of transportation cost as well the as the potential risk of having to sell the coffee at a lower price (Jena and Grote, 2016). A significant benefit of the Coffee Co-op has been that it has brought transport to each of its member villages and thereby taken the cost as well as the risk out of the lives of the coffee farmers (Jena and Grote, 2016). This is a credit to the work done by the CCs of the Coffee Co-op. Further, by being part of a larger organization, the farmers have transparency as well as the assurance of getting a better price for their coffee and the co-operative also provided them with advance payments at the time of planting which they deducted when the coffee was picked up (Jena and Grote, 2016). This has been a motivating factor for the coffee farmers to sell their coffee to the Coffee Co-op.

Within the sample of certified and non-certified coffee farmers, on average the Fairtrade certified farmers earned a higher income of about US$ 20.08 per acre per coffee season versus the farmers who were not certified and hence their overall household income was found to be greater than the non-certified group (Jena and

Grote, 2016). However, this increase income is not significant enough to get the Fairtrade certified farmers out of poverty or to ensure a significant improvement in their living standards (Jena and Grote, 2016). Part of the blame for this goes to the broader socio-economic challenges facing smallholder farmers in India, which I have engaged with in Chapter 4. Within the communities where the Coffee Co-op operates 94% of the respondents fell below the poverty line of US$ 2 per day while 84% of the respondents were facing a situation of chronic poverty falling below the poverty line of US$ 1.25 per day (Jena and Grote, 2016).

The credit for the difference in income between Fairtrade certified and non-certified farmers within the same community is based to an extent on the value chain within which they each operate. The Fairtrade certified farmers do not have to process the coffee themselves, since the co-operative picks up the red coffee berries right after they are plucked from the coffee bushes and takes on the cost of processing them and selling them within the Fairtrade value chain. The non-certified farmers have to dry process the coffee, which involves taking on some additional costs for the processing and then have to sell this to middlemen (Jena and Grote, 2016). The lower prices that the non-certified farmers receive indicate the numerous layers of middlemen within the non-certified value chain, but also cast doubt on the quality of the coffee that they produce (Jena and Grote, 2016).

The Jena and Grote (2016) study found that the certified coffee farmers also have to sell some of their coffee after dry processing to the middle men, since they have to wait months to get paid through the Fairtrade value chain. In the case where the certified coffee farmers were selling their coffee after dry processing to the middlemen, the prices that they received from the middlemen were found to be higher based on having a higher quality product as compared to the non-certified coffee

farmers (Jena and Grote, 2016). This indicates that the work being done at the co-operative level by the Coffee Co-op in providing training and technical assistance to the certified coffee farmers was already beginning to pay off at the time of the study in 2010 (Jena and Grote, 2016).

The discourse of Fairtrade is that the FTMP is going to a farmer, but the reality is that the FTMP is a price paid to a cooperative of farmers (Beacon, 2005; Smith, 2009; 2013). Because the international Fairtrade coffee system (except for the Fairtrade system in the United States of America) certifies and buys coffee exclusively from farmer cooperatives, to effectively understand how the Fairtrade system impacts the livelihoods of farmers, my argument is that there is a need to study cooperatives of farmers who are certified as Fairtrade. Studying the working of a cooperative of farmers that is Fairtrade certified will enable an understanding of the Fairtrade price that is actually received at the cooperative level and the portion of it that is then distributed to its member farmers. This needs to be compared as well to the costs of the farmers and their cooperative of growing and producing the coffee.

5.6 Conclusion

In this Chapter I have focused on the challenges being faced by the Fairtrade certified Coffee Co-op which include the costs of Fairtrade and Organic certification and compliance. Firstly, the Fairtrade premium that is earned at the co-operative level needs to be spent at the community level and cannot be passed to the members of the Coffee Co-op as additional income. Secondly, the Coffee Co-op incurs significant overhead costs towards the processing of coffee for export to the Fairtrade consumer markets for which it does not receive any recognition or monetary support from the Fairtrade system. Thus, it seems to be the case for this particular Fairtrade Coffee Co-op that Fairtrade does not seem to deliver on its promise of providing a sustainable

livelihood, since it does not support the financial viability of the coffee co-operative. In the next Chapter, I will introduce the alternative to Fairtrade which is being considered by the Coffee Co-op in the form of an agroforestry project utilizing the services provided by agricultural biodiversity.

Chapter 6 – Agricultural biodiversity and its provision of ecosystem services to ensure sustainable livelihoods

6.1 Introduction

In this Chapter, I begin with the impact of the Fairtrade certification on the members of the Coffee Co-op and how this has led to them taking up the *Haryali* project which is a grassroots participative agroforestry programme which aims to plant around 6 million saplings during a five-year period in 6000 hectares. I also discuss the relationship of the Coffee Co-op with the Indian government and the Naandi Foundation. A discussion of the *Haryali* project will take the perspective of the smallholder coffee farmers who are members of the producer co-operative facing challenges to their livelihood. The approach taken is to look at the benefits that small farmers who represent the subaltern, get to ensure a sustainable livelihood from their use of biodiversity as a provider of ecosystem services versus the alternative use of the technologies of industrial agriculture. To have a sustainable livelihood, these farmers need to be able to mitigate the impact of stresses in terms of access to credit and shocks in terms of sudden fluctuations in the price of coffee. In this Chapter my focus is to engage with the research question:

- Whether and how agricultural biodiversity would affect the livelihoods of a co-operative of coffee farmers?

Hence, the analysis is focused on the ability of biodiversity to help mitigate these stresses and shocks. By doing so, this thesis extends the field of accounting for biodiversity by engaging with the role that agricultural biodiversity can play in providing sustainable livelihoods. In doing so, it also answers the call of Bebbington and Larrinaga (2014, p.7) to examine in more detail the operational issues in the food and farming industry and account for their ecological impacts.

6.2 Challenges facing the coffee farmers and the need to diversify their income

It was only in 1975 that the forestry department along with the coffee board introduced coffee into the ITDA Paleru area. The coffee was provided at this time in a subsidized way and fertilizer was also provided by the coffee board. So the initial period of starting with coffee was 1975-77 and then the next period of expansion was in 1983. This was when the coffee board set up a coffee market in the Araku valley where the coffee farmers could bring their coffee and sell it directly to the board. During that period of time, the farmers had to walk on foot from their farm to the coffee board's market in Araku valley since at that time; there were no roads anywhere in the Araku valley or the ITDA's area in Paleru. The coffee board had a central market in the Araku valley until 1984-85. It was only the farmers who knew that they had to sell through the coffee board and nobody else knew about that market. During this period of time, the price of coffee was ₹5 per kg of coffee beans and later the coffee board might give a bonus of ₹2 per kg. However, once the market was removed the traders took over the coffee market and whatever they said or wanted was what the farmers had to follow. Essentially, with the exit of the coffee board, the trade in coffee at the level of the smallholder coffee farmers became a monopoly for the traders. In a meeting with the President of the Coffee co-op and the Board one of the board members provided a brief history of coffee in the Paderu ITDA (Interview dated July 21, 2012):

> We found out only around 2004 that coffee was very suitable for our climate. We realized that we could cultivate coffee even though we do not have access to irrigated water and it survives and produces a harvest just with the water provided to it during the monsoon. We got this understanding starting in around 2004 even though coffee had been introduced to us initially in 1975. So during the intermediate period, even though it was cultivated in our area, most of us did not know what it was, and the few that knew about it, that it was a bush that had berries which could be sold, would steal the coffee berries from the people who had them, but did not know their value and sell them in the coffee market. It was only when people started to see other people making

> a profit on the coffee of ₹10,000 to 20,000 a year that the interest in coffee went up.

At this time the Indian Government asked the Naandi Foundation to assist the farmers. In the words of the coordinator of the livelihoods project at Naandi Foundation (Danone Down to earth, 2011):

> So we were essentially asked by the government of India to come and intervene to assist in the marketing and resolve some of the coffee problems being faced by the tribals. That was the beginning. And as we got more and more involved in dialogue with the community, we realized that we got involved with a whole lot of developmental issues. Many of the issues such as the health issues, the nutrition issues, were issues that they [the tribals] did not have access to the forests anymore; many of their traditional foods were not available to them, fruits from the forest, herbs from the forest. We figured out that one of the things that we could do was to rebuild a forest together.

The Naandi Foundation played a central role in setting up this co-operative based on its understanding of the challenge facing small farmers in India in the words of its CEO (Naandi Foundation, 2014):

> 85% percent of farmers in India had…less than 2 hectares of land…and that agriculture was very unlikely to be a viable proposition. We started talking to people and started talking to farmers and eventually grouped people together and created co-operatives which worked on a couple of collective crops, be it coffee, black pepper or fruits, got them niche markets and gave them end to end solutions right from natural resource management to production to marketing including finances and other linkages and made them work like a cluster.

The background for the creation of shade in the coffee gardens by planting trees within the community was provided by the GM of the Naandi Foundation (Interview dated July 21, 2012):

> This was a forestry area, but there were no trees, so the forestry department introduced silver oak to have some trees. But then they found that the farmers were cutting trees for the purpose of firewood. So they got the coffee board of India involved along with the Integrated Tribal Development Agency (ITDA) and introduced coffee as a crop to grow under the shade based on the suggestion of the coffee board. Then they convinced the farmer, that if you want income from the coffee, then you cannot cut the trees, since if you cut the trees, your coffee also will die. So some of the farmers got involved with coffee cultivation and avoided cutting trees.

However as detailed in Chapter 5 the Coffee Co-op is facing challenges with its current approach of being Fairtrade and organic certified, since these are not providing the co-operative the means to ensure sustainable livelihoods for its member coffee farmers. Here is the perspective of a coffee farmer regarding the situation with regards to coffee (Journal dated July 27, 2013):

> We have a good reputation for our coffee internationally, but we the farmers who grow the coffee, feel that we are not getting a price for the coffee that provides an income. Further, the government in its policies is not providing any support or assistance to the coffee farmers. Going forward it is essential that we get a price that covers our cost of production. This will protect us from the hands of the traders, who are coming in and buying our coffee at rock bottom prices.

The reason that some of the farmers who are members of the co-operative chose to sell their coffee to traders is due to the low price of coffee in the international market during the period of this study when the co-operative was unable to find a buyer at a price that covered the costs of production of the co-operative. So, many of the farmers ended up selling some of their coffee to traders to cover their need for cash even though the prices offered by the traders were much lower. Hence there is a need to look for an alternative source of income. In the words of the President of the Coffee Co-op who is himself a coffee farmer (Interview dated July 27, 2013):

> We have to think about this and find a solution and do something to implement the solution. That is what we have been thinking this year that if we can provide the members of the co-operative an alternative food crop, that will enable us to diversify the source of income from a dependence on coffee. The key idea is that we need to start thinking beyond coffee and look for alternative sources of income so that we can reduce the dependence on coffee and ensure that our incomes as farmers do not go down.

A related issue that was brought up by the GM of the Naandi Foundation is relevant since it brings up the issue of the under-utilization of available land by the coffee farmers and their families (Interview dated June 23, 2013):

> Each of the farmers in the co-operative have about 1 acre of land from which they need to generate the income that they need for their livelihood. In some cases, they are able to increase the land under cultivation to 2 or 3 acres, but that is the upper limit of their access to land. In a village with about 60 families, each family has at the most about 2 acres under cultivation which gives about 120 acres under cultivation in each community. There are also some farmers who have given up on cultivation since they were unable to get a sustainable livelihood and have since shifted to other sources of income such as moving to the cities in search of work there. During this time, their land in the village is not utilized for farming. So we have many lands that fit this profile of not being under cultivation.

An equally important issue that was brought up during a focus group discussion of the VDC in village B had to do with the impact of climate change and changes in rainfall on the farming practices (Journal dated Nov 28, 2012):

> During the months of June and July the transplanting of the paddy into the fields was going on in the fields this year. In the normal course of events doing this in June is very late and it usually starts in April and May and gets completed by June ending or the first week of July. But this year because of the delay in the rainfall, it has gotten delayed. In the normal course, once the rice cultivation is completed, the farmer will then plant some of the staple crops that they need for their own household consumption into the fields at this time and after its harvest, they save it for their family food security needs of the year.

Food security becomes an important issue for the farmers since their income from farming is so low that they need to be able to fulfil the nutritional requirements of their family using food that they can grow on their own land. Another member of the VDC from village B acknowledged that food security is a problem (Journal dated Nov 28, 2012):

> We are starting to face this problem from this year. Since September of the previous year, we have not had proper rainfall and as a result of this we are facing a drought and the result of this is that we have not been able to cultivate enough crops to meet our food security needs.

A solution to the problem of food security is to plant a variety of fruit trees for shade on the coffee farm, so that due to the variety, they increase the resilience of the whole coffee farm. In a focus group discussion with the VDC of village A, one of the

farmers spoke about the variety in his coffee garden besides coffee (Journal dated Nov 27, 2016):

> Besides the coffee we are also planting pepper, panasa, mango and sitaphal trees in our gardens. We get a better income from the Pepper as compared to the coffee. We get ₹200 per Kg. for the Pepper. In fact, this season the price went up to ₹400 per kg for the Pepper. With Pepper it is difficult to harvest it from the vines on the trees and we have to be careful when we climb up to get the Pepper using ladders, but once we get it off the vine, there is a not a lot of work that needs to be done in terms of processing it.

The ability of the coffee farmers to diversify their sources of income on their coffee farm is based on the training that they have received about the importance of shade to ensure the yield of the coffee as well as improve the quality of the coffee. Further, as noted by members of the VDC of village A, it also diversifies their income sources. Some of the members of the VDC shared their reasons for utilizing fruit trees for shade since they have had them for a few years and as a need for additional shade was felt due to gaps in the shade, more fruit trees have been planted to fill these gaps.

The GM of the Naandi Foundation also saw a role for the fruit trees that provide shade in dealing with the problem that the coffee farmers are having with low yield (Interview dated Nov 30, 2013):

> There is not sufficient nutrition for the plants. If we plant different shade and fruit trees we will have double the benefit, maybe the fruits will give the income and the leaves will give the nutrition.

The lack of yield for the coffee being cultivated by the coffee farmers in the words of the head of the VDC of village A has to do with the lack of proper implementation of organic procedures (Interview dated Nov 28, 2012):

> So even though the co-operative has an organic certification, this does not mean that the organic procedures are being utilized or followed in the best possible way. There is a lot of room for improvement. We are trying to make an improvement with what we have right now. So the issue is also that the time that should be invested in improving the utilization of organic procedures of farming by providing training to the farmers, is instead being spent on following the procedures and requirements related to bookkeeping for

> maintaining the organic certification. Instead if we spend time on the improvement of the farming practices it will increase the yield of the coffee.

Another reason for the lack of yield according to feedback received during a focus group with the VDC from village B is the lack of water availability on the farm (Journal dated November 27, 2012):

> The farmer said that this has been an issue with irregular rainfall and the lack of availability of regular supply of water. So he mentioned that the co-operative has initiated a training program in setting up trenches around the fruit trees and the coffee bushes, to ensure that the rain water is utilized to the maximum possible extent. Rain water harvesting is a solution that needs to be implemented at the level of the individual farmer and the co-operative has provided training and initiative in this regard.

6.3 Experience with the government and the role of the Naandi Foundation

There has been interference of the government in the functioning of the co-operative and its attempts to expand beyond coffee to include other crops to make their financial condition more stable has been thwarted. For example, the co-operative bought tamarind at US$ 0.167 per kilogram and after further processing was able to sell it at US$ 0.267 per kilogram. Once the government found out about this, they contacted the co-operative and informed them that the government had a monopoly on the tamarind and hence the co-operative could not participate in the trading of this commodity. The issue is that the government does not interfere with petty traders who trade all the different commodities including coffee without having any license to trade from the government. However, when the co-operative which is a union of small farmers tries to improve its financial viability by expanding beyond coffee it is not allowed to do so. Lack of support from the government as far as the co-operative is concerned is an issue brought up by the President of the Coffee Co-op (Interview dated November 27, 2012):

> We have 12,000 families in the co-operative and the government would benefit so much from taking inputs from us in implementing their policies,

> however the government does not care for our perspective and the officer is only interested in getting their way and promoting their perspective. So we have come to the awareness and understanding that we should not depend on the government's welfare to meet our developmental needs. The day that we need to depend on the government is the day that we will lose our independence and autonomy.

There have also been issues with the government's response in case of weather related calamities. Recently, after heavy rains caused by a cyclone destroyed crops, as a response the government announced providing relief through the payment of compensation to the farmers whose crops had been lost. The government had approved a payment of ₹150 to each farmer. However, instead of giving cash, the government issued a cheque. So to be able to get that money, the farmer has to invest the effort to open a bank account. The banks have a requirement that to be able to open an account the account holder needs to make an initial deposit of a minimum of ₹500 to open an account. In the words of the chief of the community co-ordinators (Interview dated November 26, 2012):

> The problem is that the banks take ₹300 and then show zero balance in the account or if the ₹500 is invested at least ₹200/- is taken by the bank as a fee for providing the service.

This is only a part of the problem, since to receive even the cheque from the government requires an investment of time and effort to make numerous trips to the government office. The head of the CCs of the Coffee Co-op explained his perspective on the response of the government to crop loss (Interview dated November 26, 2012):

> In this area in case of crop loss the maximum that the government will provide as compensation is about ₹1500 for an acre and in case someone has two acres then the maximum amount is ₹2500 for these two acres. However, the challenge is that to get this compensation the farmer has to make on average 10 trips to the government office to get this money at an average cost of ₹100 per trip. In many cases, the crop loss compensation can be less than the amount that the farmer would have invested to get the compensation. This lack of support from the government extends to the coffee board as well. To get support from the coffee board's subsidy schemes, the Coffee Co-op is

> not recognized and the individual farmers have to apply for the schemes. Further, to qualify for the schemes, each individual farmer has to get their land documents certified by the government land revenue official and get his signature. They have to then go to the Deputy Director of the Coffee Board who is based in Paderu, which is located 50 kilometres away and get his signature and approval and only then will the process of getting any support from the coffee board begin.

Another issue related to the involvement of the Government of India and the Government of the state of AP on the survival of the Coffee Co-op has to do with its recent approval in November, 2015 to a Bauxite mining project in the area where the members of the co-operative have their coffee farms and are implementing the Haryali project (Bose, 2014; Sarma, 2015a). The Bauxite mining would have been approved decades ago if it was really beneficial to the people, but the fact that it did not happen indicates that if the evidence against Bauxite mining is taken into consideration, it is not really beneficial to the people in the region (Daws et al., 2015). However, according to the government order (GO) issued by the Indian government, the Principal Chief Conservator of forests has been accorded permission to divert 1,212 hectares of forest land in Chintapalli and Jerrila of Narsipatnam forest division in Visakhapatnam for mining lease for Bauxite in favour of Andhra Pradesh Mineral Development Corporation (APMDC) (Sarma, 2015a). This is based on the fact that the state of AP has 18% of the available resources of Bauxite ore that has been discovered in India as of 2014 which comes to 3.48 billion tonnes (Bose, 2014). In this regard the government has simultaneously laid down several conditions to the effect that the legal status of the forest land being diverted for mining shall remain unchanged (Sarma, 2015a). In addition, compensatory afforestation over non-forest land equal in extent to the forest land being utilized for Bauxite mining (1,212 hectares) shall be implemented and maintained by the state forest department and the funds to enable this have already been provided for by the APMDC (Sarma, 2015a).

Despite these efforts by the government, Bauxite mining continues to be staunchly opposed by the smallholder farmers in Visakhapatnam for fear of losing their habitat as well as their livelihood as a result of the destruction of their habitat (Sharma, 2015b; Sudhir, 2015). Bauxite mining if undertaken would ruin the livelihood of the indigenous people in the Paderu ITDA area (Sarma, 2015b; 2015d), cause extensive damage to the flora and fauna in the region and also contribute to the contamination of the hill stream and rivulets which will then lead to contamination and destruction further down in the valley as well as in the urban areas located on the coast (Sarma, 2015b; Sudhir, 2015). As of November, 2015 the Government of AP has put on hold the implementation of the GO that permitted the Bauxite mining project (Sarma, 2015c). However, the Bauxite project had not been withdrawn at this time and there is a high level of uncertainty around the impact it will have on the ecosystem as well as the livelihoods of the members of the Coffee Co-op as well as the broader community within the Paderu ITDA region and the district of Visakhapatnam (Sarma, 2015b; 2015c).

In this situation where the state machinery has almost an adverse relationship with the Coffee Co-op, it is important to understand the perception of the Naandi Foundation regarding their role with the co-operative. The approach taken by the Naandi Foundation and its perception of the role of the state and its relationship with it are also important to understand since they are the basis for their understanding of the relationship between the state and the NGO sector (Naandi Foundation, 2014):

> for Indian NGOs, their fundamental ethos was can we do things which are against government, to oppose the government, bring out the anomalies in the government functioning. So they were as distant from governments in the general sense. And here was an organization coming and saying that their raison d'etre was fundamentally to outsource governments work and to work with the government. We look at the state and tell them we need to outsource your programs, and that it had to be at scale and that allowed us to cut down

> on a number of issues…and a single master stroke of just getting into outsourcing government projects.

Srinivas (2010) sees NGOs as staff driven professional actors in civil society, who are service providers offering social services. NGOs are especially relevant in a context which consists of a reduced role for government along with the privatization of services that it used to provide which are now outsourced to the NGO (Srinivas, 2010). This is all the more relevant with the declining role of the state in the third world which has been replaced by an increasing role for NGOs (Vakil, 1997). There is a contradiction as well in this since while talking about opposing the government, at the same time the CEO of the Naandi Foundation has talked about replacing the government services through the work being done by Naandi. Naandi Foundation's focus on working with the government and outsourcing the services of government to bring the efficiency of the private sector into the provision of services to the people is also evident in its CEO's statement that (Naandi Foundation, 2014):

> The real differentiator that we brought to the social sector is our obsession with outcomes, measurable outcomes and measurable by anybody and that is something that we are bringing to the sector, to the nation, to the way the social sector is looked at, and to the way social services are brought forward.

The driving force in starting the Naandi Foundation in the words of the CEO of the Naandi Foundation was "to bring a corporate ethos into the social sector" (Naandi Foundation, 2014). There is also an acknowledgement of the role of the state in promoting the creation of the Naandi Foundation as per the CEO of the Naandi Foundation (Naandi Foundation, 2014):

> We were set up at the instance of the chief minister representing the state government by four of AP's and India's leading corporate leaders coming together.

According to Dr. Isher Judge Ahluwalia, a trustee of the Naandi Foundation, (Naandi Foundation, 2014):

> The distinguishing feature of Naandi is its management approach. They look at a problem and find a solution as if it were in a corporate office.

The ability to get the best corporate trained human resources talent plays a central role in this approach according to Naandi's CEO (Naandi Foundation, 2014):

> We get the best qualified people either with management expertise or the best of communication skills to come on board and solve issues in the social sector just as they would have done in the corporate sector.

The initiative taken by the corporate funded NGOs has put the government on the back foot and it is making an effort to also show that it can perform its role of providing development. Recently the central government minister Jairam Ramesh (Cabinet Minister for Rural Development in the Indian government at the time of the study), came to area where the Coffee Co-op is located and took the government officials to task for the government administrations inability to provide results when the NGOs such as Naandi that are working in this area are able to do so well. His criticism was especially focused on the MGNREGS performance for which despite the government providing the funds, the government officials were not able to deliver the results. In a focus group discussion with the VDC from village A, one of the members of the VDC explained to me the issues with the implementation of the MGNREGS in the Paderu ITDA region (Interview dated November 26, 2012):

> In a way with the work from the MGNREGA coming in half of the people have benefitted from it and the rest of the people have exploited it. In the case of a project in a village if the work takes one week to complete, the paper trail is created to show that the project actually took three months to do and involved the labour of four people when a single person has completed the task. So in this way, at about ₹100 per day times 3 people that is a fraud being committed of ₹300 per day per project such as this times 90 for the three-month period which comes to about ₹27,000. This is an inflated example maybe, but on average at the level of the mandal, each mandal revenue officer is making about ₹300,000 to ₹400,000 per month in additional income as a result of this type of fraud within the MGNREGS in the Paderu tribal areas.

In this context where the coffee farmers and their co-operative are facing many challenges and not able to get any support from the government officials or the

coffee board, the alternative presented to them by the Naandi Foundation was worth considering. In the following section, I will detail the agroforestry project that was undertaken by the Naandi Foundation in partnership with the Coffee Co-op.

6.4 Haryali: The Agroforestry project

The *Haryali* project is being implemented by farmers belonging to the Coffee Co-op in the Araku valley of AP, India in partnership with the *Naandi Foundation* led by Mahindra and Mahindra and the *Livelihoods Carbon Fund* led by Danone and has been approved by the Government of India under the Clean Development Mechanism (CDM). The Livelihoods Group has invested 75 percent of the cost of the project, while Mahindra and Mahindra have contributed 25 percent of the project cost (Hogg and Joseph, 2013). The farmers of the Coffee Co-op have undertaken the Haryali project as an agroecology programme to plant around 6 million saplings during a five-year period in 6000 hectares. Since high quality coffee is shade grown, the members of the co-operative working with the Naandi Foundation were motivated to create shade for their coffee using fruits trees and trees that would sequester carbon. This has begun to improve the biodiversity of the coffee ecosystem and led to an increase in the variety of trees on the farm along with an increase of the biodiversity of spiders, bees, and birds. The project started with the planting of 1 million saplings each in 2011, 2012 and 2013.

It is relevant to understand the basis of the approach taken by the Livelihoods Carbon Fund in its transformation into the Livelihoods Fund for Family Farming (Livelihoods 3F) (Livelihoods, 2015):

> In both developed and developing countries, family farming is the predominant form of agriculture. 500 million family farmers today produce 70 percent of the world's food supply. For those farmers and their families grappling with environmental degradation and poverty, having access to practices that increase their productivity and incomes while simultaneously preserving or restoring soil fertility, water resources and biodiversity is a

> major opportunity. However, small family farmers are not currently bankable investees for investment funds despite the fact that they dominate the supply side of many major markets like cocoa, coffee or rubber. Livelihoods 3F's purpose is to aggregate these farmers and to integrate them into value chains with the positive impact benefits monetized to give a return for the fund.

Since high quality coffee is shade grown, the members of the co-operative, under the leadership of the Naandi Foundation, came up with the idea of creating shade for their coffee using fruits trees. Given that trees sequester carbon; this enables the community to earn some extra money from selling carbon credits to the international market. In addition, as the fruit trees mature, they provide an alternate source of revenue for the farmers that enable them to diversify their livelihoods from a dependence on coffee alone (Hogg and Joseph, 2013). In the words of one of the members of the VDC from village A (Interview dated June 24, 2013):

> The idea is to have different sources of income growing in different zones of the farm, which will enable us to have income all around the year. For example, since the coffee harvest is from October to December, and the Pepper harvest is in March, it would be important to have other sources of income during other times of the year. So I have planted an indigenous species that we call 'Krici' which bears fruit, whose seeds give edible oil that, has an excellent taste when cooked and I can harvest it in the month of April. In total I have over twenty-five varieties of fruit trees on my coffee farm including mango, guava, bananas, lemon and lime trees among others.

The motivation for Danone to participate in the project is provided by its director (Interview dated December 13, 2013):

> The agroforestry project was based on our belief in a hands-on approach to sustainability wherein, in addition to the purchase of carbon credits to offset our emissions, the hope is for an approach that will deliver strong social and economic impact through the restoration of ecosystems.

The manager of the Naandi foundation in charge of the Haryali project detailed the approach that was taken to provide training to the coffee farmers which he termed 'farm to school' (Journal dated November 30, 2013):

> One of the initiatives that we have started is the 'farm to school' where we have provided training on how to maintain the shade and water the trees. The

> coffee farmers are also taught the purpose of ensuring the shade and what benefit they will get out of the shade.

The diversification of income by planting fruit trees is just one aspect of increasing the biodiversity on the coffee farm by planting shade trees. In the words of the GM of the Naandi Foundation (Interview dated July 21, 2012):

> Initially when the coffee was introduced Silver Oak was the only option given to the coffee farmers to plant as a shade tree on their farms. With Silver Oak, the only source of income is in the form of firewood or timber, nothing else. Instead if they plant a jack fruit, they can use it to feed the animals or they can sell it in the market to get additional income. The leaf of the jackfruit tree is also a good source of food for their animals whether goats or cows. If the farmer does not have animals, he can use the jackfruit leaves as a raw material to make compost. Similarly, if they have a banana tree on the farm, this provides them food as well as compost. By having more variety of trees on the farm, the farmer can get a variety of sources of leaves for making compost which are available directly on the farm and hence does not need to depend on sourcing the raw materials from outside the farm. Based on the topography of these farms, there is no road access and hence to get raw materials from outside, they will need to be carried by a person on their head. The farmers cannot afford to hire outside labour to carry this, so they will have to do it on their own. Thus, having a variety of trees on their farm, besides providing them food and income, also provides them the raw materials for making the compost, which would be a challenge otherwise.

Various horticultural tree species have been planted in a phased approach on 6,000 hectares (ha). 7 different species groups are distinguished based mainly on similar growth conditions (similar biomass accumulation rates) and planting densities. All models have been planted on the 6,000 ha, with different species compositions in the mixed stand models. In the next phase of the project Coffee was introduced starting in 2014 on 3,000 ha under the shade of the trees that were planted in 2011, 2012 and 2013. The different species groups comprise: Mango: *Mangnifera indica* (planting density (PD) 119 trees/ ha); Mixed Group 1: *Achras sapota / Manilkara zapota, Syzygium cumini, Myristica fragrans, Azadirachta indica, Emblica officinalis* (PD 30 trees/ha); Mixed Group 2: *Citrus nobilis, Psidium guajava, Citrus sinensis, Eugenia caryophyllata/ Syzygium aromaticum* (PD 54 trees/ ha); Mixed

Group 3: *Annona squamosa, Carissa carandas, Citrus aurantifolia, Moringa oleifera, Carica papaya* (PD 54 trees/ha); Teak: *Tectona grandis* (PD 79 trees/ha); Bamboo: *Bambusa arundinacea* (PD 30 trees/ha), and Coffee: *Coffea Arabica* (PD 1,000 trees/ha).

The area under study is not a biodiversity hotspot. It is an area that has seen extensive deforestation and remains largely deforested even now. In this regard, the notion of the role of the indigenous in restoring biodiversity by promoting agricultural biodiversity is in terms of their participation in an agroforestry project where trees are being planted in an area completely devoid of vegetation. The Haryali project is exclusively being implemented on marginal or fallow lands. The trees being planted are being done on parts of the community that did not provide any income in the past and did not have much biodiversity as the soil was degraded. The selection of the plots to plant the trees involved a participative rural appraisal (PRA) of each of the villages where the project is being implemented. PRA is a participatory approach which is driven by the needs of local people who work collaboratively to "analyse their living conditions, to share the outcomes, and to plan their activities" (Narayanasamy and Boraian, 2005, p.10). In many cases the selected plots were areas where chemical agriculture had been practised in the past leading to the degradation of the soil and a loss of biodiversity both within the soil and in the surrounding area. In each village all the farmers who were members of the co-operative formed a VDC where they drew a detailed map of the village indicating all the land usage patterns in the village.

Figure 5: Cow Pad Pit (CPP) set up under the Haryali project

Source: author's image

The VDCs focused on the lands which were barren as well as the permanent fallow lands. Since the co-operative uses biodynamics as an agroecological technique, the project is able to take up these types of land and is able to improve the degraded soil. As a result of the variety of tree species that have been planted, the leaves of these trees fall on the ground and create a mulch, which will gradually improve the fertility of the soil. In addition to this, the soil biodiversity is gradually improved using vermicomposting, Cow Pad Pit (CPP) (refer to figure 5) and the use of Gliricidia (*Gliricidia sepum*). Vermicomposting is a combination of the weeds in the farmers' land, cow dung and mud with earthworms. Together, this creates a soil that has enough nutrients in it as well as soil organic matter, so that the tree saplings that have been planted as a part of the agroforestry project, will survive and thrive without the need for expensive external inputs. Further, Gliricidia which is a nitrogen fixer is

a beneficial plant which has been planted in the coffee farms. So when its leaves fall on the ground, they provide nitrogen to soil and its leaves when they are young are ideal for composting since they decompose really fast. A farmer who had built the first bio-centre consisting of a CPP explained what it consisted of (Journal dated June 26, 2013):

> A CPP is 16 inches deep, 2.5 feet length and 2 feet wide. Into this is added the mixture of about 60 kilograms of lactating cow dung, 200 grams of egg shells and 200 grams of silica. This is allowed to sit in the CPP for some time and after this there is no bad smell and then it is ready for use. About 1 kilogram of this should be mixed with 13.5 litres of water and then used as a foliar spray. If more of it is available, it can be put at the roots of the plant as well.

The evidence from the Haryali project suggests that through the application of agroecological principles, it has made a contribution to improving the soil biodiversity of the villages where it is being implemented. The forest is coming back as a result of this project and in fact in both of the villages that were visited as a part of this thesis multiple termite mounds were seen (refer to Figure 6).

Figure 6: A termite mound located within the area of the Haryali project

In the words of one of the managers of the project (Journal dated July 27, 2013):

> Termites are great! In fact, in forest areas, they measure the fertility of a forest by the number of termite moulds per hectare. If it goes down to a certain number, then it is a sign that they need to go in and protect the environment.

This leads to a discussion of the role played by the services provided by agricultural biodiversity in improving the livelihoods of the members of the co-operative which is the focus of discussion in the next section.

6.5 Promote livelihoods that incorporate using the services of agricultural biodiversity

The members of the co-operative consist of smallholder farmers, with all the individual plots being family owned and there is no large plantation in this area. Each of the individual plots of land is between two to three acres. Due to the small size of the land, the members of the family have to work the land without additional help from the outside. This is because at their small scale, they are unable to pay for additional labour. This additional labour would have been required if they had practiced monoculture agriculture, with the dependence on chemical inputs provided by agribusiness. Instead of having a dependence on these, since they have adopted the techniques of agroecology, they do not need to invest this money in expensive inputs or spend money on labour. Instead, they can utilize the CPP, vermicomposting and mulching which are elements of bio-dynamic farming that they have adopted. This provides them the means to secure their livelihoods since it incorporates the use of biodiversity to replace their need for external inputs thereby reducing their need to purchase external inputs. The members of the co-operative provided their rationale for choosing sustainable methods of farming without the usage of chemical inputs (Interview dated June 28, 2013):

> In conventional farming, we would need to buy seed each year, along with fertilizer and pesticide. With the amount of money that it would cost to pay for these inputs, we would not be able to make any money. This is the reason why conventional farmers in other parts of the state are committing suicide. By being an organic farmer, I am making all the inputs on my farm that I need for farming and so I am able to save all the revenue that I get from farming this way.

Coffee farmer groups with master trainers chosen from the community itself were formed to train farmers in plantation maintenance, and harvest techniques. Some of the steps taken include the creation of stone bunds to safeguard crops from animals, inter-planting shade giving trees, making and using bio manure (CPP) and supporting spider populations to grow and provide natural pest control webs. The spiders play a critical role of integrated pest management (IPM), which eliminates the usage of synthetic pesticides, which harm biodiversity and also endanger the health of the farmer (Milligan et al., 2016; Pretty and Bharucha, 2015). The use of the CPP replaces the need to buy synthetic fertilizers and is hence critical to breaking the dependence that the farmer has on buying external inputs. It is an important observation that for this community, the cows that they keep are only used for the purpose of farming namely in the field to till the soil and to provide manure. They do not drink the milk of the cow and respect the fact that the cow's milk is for its own calf.

Since the farmers keep cattle on their farm, the cow dung is available to them and hence without the need to invest money, they are able to produce very high quality soil amendments that improve the fertility of the soil and also improve the health of the plants on their farm. The building blocks of this system of farming are the community and individual farmers with bio-centres that incorporate having a CPP and the use of beneficial nematodes through vermicomposting. This shows the role

that these techniques play in activating the biodiversity that is present in the soil and creating the appropriate conditions for it to provide ecosystem services.

Table 16: Details the composition of coffee costs at the farm level (discounted values at 12% discount rate), for a *conventional coffee farm* (using the inputs of industrial agriculture)[21]

Cost components	Discounted costs at 12% discounted rate (₹ per acre)	Contribution to the total in terms of %
Establishment costs (related to establishing the coffee plantation on the farm)		
Opening and closing pits	3657.2	6.55
Cost of seedlings	1606.0	2.88
Planting costs	327.4	0.59
Making contour drains	49.9	0.09
Fencing costs	2129.5	3.81
Irrigation investment	4231.2	7.58
Subtotal	12001.2	21.49
Recurring costs (related to maintaining the coffee plantation on the farm)		
Chemical fertilizers	20033.4	35.87
Farmyard manure	3329.9	5.96
Pesticides/plant protection measures	2440.9	4.37
Fertilizer/farm manure application	2763.7	4.95
Irrigation maintenance	4557.0	8.16
Electricity/ fuel charges	622.3	1.11
Pruning of coffee bushes	1683.6	3.01
Coffee picking	7486.6	13.41
Drying and processing	253.6	0.45
Supervision	437.7	0.78
Taxes, etc.	234.7	0.42
Subtotal	43843.4	78.51
Grand total	55844.6	100.00

It is relevant to the discussion of cost of production to take into consideration the available information in the literature as provided by Ninan and Sathyapalan (2005) who provide details of the cost of coffee cultivation in South India, based on 1999 prices (refer to table 16). In the study by Ninan and Sathyapalan (2005), they found that the establishment costs of coffee include cost of renovation pits, contour

[21] Indicate that the establishment costs account for about 21.49% of the total discounted costs of coffee cultivation at the farm level. Recurring costs such as value of material inputs like chemical fertilisers, farmyard manure, pesticides, and coffee picking account for about 78.51% of the total discounted costs of coffee. Based on: Ninan and Sathyapalan (2005, p.65)

drains, planting and cost of seedlings. In addition, Ninan and Sathyapalan, (2005) found that there are fixed costs by way of irrigation investments and fencing costs, while the recurring costs include material costs such as fertilizers, manure and pesticides, labour costs for applying fertilizers, manure and pesticides, repairs and maintenance, and supervision, etc.

In the case of the Coffee Co-op, the lesson learned from some of the farmers who were able to provide their families a better quality of life was the importance of changing the source of inputs away from chemical inputs towards the use of the services provided by nature. This care for nature and a drive to change practices resonated with a farmer (Journal dated July 28, 2013):

> The people from the ITDA [governmental agency] used to come and give us incentives to use urea, including a subsidy that gave it to us for free. However, we do not accept this subsidy now since we have seen the negative impact that urea has on the land and the soil. In the past many years ago, when my father was farming and we used urea, it would require more and more each time. We then dug up the soil to see that the urea had formed a black layer about a foot under the top soil. This black layer has a consistency like salt. So now when the ITDA comes around with their subsidy, we tell them that we prefer using biodynamic organic farming methods. We make CPP [organic soil amendment] and use it after mixing with water as a spray on the coffee plants. We have found that since we shifted to organic farming, the quality of the soil is much better, with a high degree of microbial nutrients and it will produce a good harvest without any need for chemical pesticides or fertilizer.

Based on discussions with some of the farmers who are participating in the Haryali project, it is evident that the training on biodynamic farming techniques they have received as part of the agroforestry program has empowered them to reduce their dependence on external inputs. Through the planting of a variety of fruit trees, the project has had a positive impact on the livelihood of these farmers. Evidence from some of the farmers, who have already diversified their coffee farms, provides further validation of the impact the agroforestry project has had. One of the farmers told us about his farm (Journal dated June 26, 2013):

> I have at least ten sources of income on my farm. I have turmeric, bananas, marigold, broomsticks…In fact I have lost count of how many different income sources I have. I find something good; I just go ahead and plant it. Further, I have a CPP bio-centre that I have built on my farm, so that I do not need to buy CPP or depend on it from the outside. I also have the potential to sell my CPP to other farmers who have not yet built their own bio-centre.

In the area of study of the thesis, it is important to clarify that since the Coffee Co-op is Organic certified, its farmers do not use fertilizers or pesticides as a result of which, they save on the costs associated with using them. In addition, once the coffee begins to yield (from the sixth year), there are recurring costs towards coffee picking, pruning coffee bushes and drying (Ninan and Sathyapalan, 2005). In the case of the Coffee Co-op all of these activities are performed by the coffee farmer and their family hence will be considered as the value in terms of labour invested by them in their coffee farm.

In the Ninan and Sathyapalan (2005) study, there were also external costs incurred by the coffee growers by way of wildlife damage costs, and defensive expenditure incurred to protect against wildlife attacks. In the case of the Coffee Co-op, since their area of coffee cultivation is a completely deforested area without any wildlife at this time, these are costs that they did not have at the time of the study. Based on these differences in conditions, I have created Table 17 (p.196), which reflects the costs at the farm level for a member of the Coffee Co-op using agroecological methods of farming.

One of the managers of the project on the first bio-centre of the project (Journal dated June 25, 2013):

> This is a model bio-centre where we are trying to reproduce this kind of model, trying to get it into every village. Around fifty bio-centres are planned. As of this time, we have completed ten of these already. The locations of these are centrally located to a group of villages, so that they can do the production there and then distribute to the surrounding villages. The cost for setting up

each one of these is US$250.00 and the total budget for one of these per year is US$500.00 of which the remaining US$250.00 is for running and working.

Despite the benefits noted at the level of the farm, issues still remain for the co-operative and its farmers in terms of commercializing the produce from the agroforestry project. An issue that needs to be discussed is the difference between the coffee co-op developing a brand on its own and in co-ordination with the Naandi Foundation. At present it is important to keep in mind that although at the level of the processing of the coffee, the coffee co-op is in charge of the process, it loses control of the value chain once the drying process is completed. At this stage, the steps involved in processing the coffee consisting of peeling and polishing and grading the coffee are completely outside the control of the coffee co-op.

Table 17: Details the composition of coffee costs at the farm level (discounted values at 12% discount rate), for an *agroecological coffee farm* (using the inputs of agricultural biodiversity)[22]

Cost components	Discounted costs at 12% discounted rate (₹ per acre)	Contribution to the total in terms of %
Establishment costs (related to establishing the coffee plantation on the farm)		
Opening and closing pits	3657.2	17.06
Cost of seedlings	1606.0	7.49
Planting costs	327.4	1.53
Making contour drains	49.9	0.23
Fencing costs	2129.5	9.93
Irrigation investment	4231.2	19.74
Subtotal	12001.2	55.99
Recurring costs (related to maintaining the coffee plantation on the farm)		
Farmyard manure	3329.9	15.53
Irrigation maintenance	4557.0	21.26
Electricity/ fuel charges	622.3	2.90
Drying and processing	253.6	1.18
Supervision	437.7	2.04
Taxes, etc.	234.7	1.09
Subtotal	9435.2	44.01
Grand total	21436.4	100.00

[22] Indicate that the establishment costs account for about 56% of the total discounted costs of coffee cultivation at the farm level. Recurring costs of industrial agriculture like the usage of chemical fertilisers and pesticides are not relevant in this type of coffee farming and since the farmer and their household are doing all the work relating to applying manure, pruning of the coffee bushes and coffee picking, these costs are not out of pocket costs. Hence total costs of maintaining the coffee farm account for about 44% of the total discounted costs of coffee. Based on: Ninan and Sathyapalan (2005, p.65)

At this time the decisions relating to the milling of the coffee and the decision on blending is taken over by the consultants led by Araku Originals Ltd (AOL). AOL is a social enterprise company created with the main objective of facilitating the work of Naandi Foundation and small farmer groups (with a current focus on the coffee co-op) in the field of value addition in agriculture and marketing resulting in income generation for marginalized farmers. The vision of AOL is to create a world class global Indian brand that reflects the core values of social enterprise by being ecologically sustainable, focused on supporting small producers and adding real value for discerning global consumers. Despite this vision and the evidence of an improvement in the livelihoods of the coffee farmers who are members of the coffee co-op, there is a dependence of the coffee co-op on AOL for the survival of its business model.

The related concern is that the co-operative does not have marketing and international trade expertise. The limited success that the co-operative and its farmers have achieved in selling their coffee on the international market is largely due to the efforts of the Naandi Foundation working in partnership with Danone and the Livelihoods group to provide the co-operative access to international buyers. The sale of its coffee in the international market has been facilitated by AOL that is owned and controlled by the Naandi Foundation. AOL is presented as the marketing arm of the co-operative formed by the tribal farmers in Araku valley. This is based on the argument that in partnership with AOL the co-operative will be able to brand and position the coffee grown in Araku as something unique and sought after instead of selling their coffee as a commodity.

AOL has enabled the Organic and Fairtrade certifications, but these certifications are in the name of AOL and not the co-operative. AOL has launched an

annual 'Gems of Araku' Festival to attract coffee lovers from all over the world. AOL has been participating lately in the “Cup of Excellence” global competition and auctions with remarkable results with a few boutique roasters now paying AOL three times the market price for coffee. The coffee from the co-operative is now exported to 18 countries. The argument of AOL is that its participation in marketing the co-operative by creating a global branding and promotion exercise is beyond what the co-operative could have achieved on its own. The marketing company does acknowledge that it controls the coffee value chain and makes the argument that it will provide a share in the benefits to the co-operative in the future. “The farmers' co-operative will soon hold equity in the marketing company,” reveals its CEO.

From the evidence presented in this case study, it is clear that the coffee farmers face a lot of hurdles in being able to use the coffee they grow to sustain their livelihoods. This is due in part to their lack of control over the coffee commodity supply chain, but also due to the volatility of the commodities market in general. In order to mitigate the effects of the coffee market volatility, the farmers in this case study have turned to participation in an agroforestry program which has supplied them with other income sources in the form of fruit trees and carbon sequestration credits. They have also received training and support in how to utilize agricultural biodiversity to replace costly inputs and thereby produce organic produce which can fetch them a higher price in the marketplace. Despite this, their lack of marketing acumen and access to end consumers imposes on them a continued dependence on corporate supply chains.

6.6 Conclusion

In this Chapter I have detailed the challenges being faced by a Fairtrade certified co-operative due to the problems in the Fairtrade coffee value chain as well as due to the

lack of support from the government at the level of the Coffee Co-op as well as its broader policy objectives. Hence the use of the services of agricultural biodiversity using the science of agroecology seems to be a good alternative to achieve sustainable livelihoods. The evidence and potential for this is provided by agroforestry project that is being implemented by the Coffee Co-op in partnership with the Naandi Foundation and the Danone led Livelihoods group. Despite its potential, the evidence is that since dependencies of the Coffee Co-op on corporate value chains would continue under this project in its current form, this does not seem to provide the required solution of the need for sustainable livelihoods. In the following Chapter, I will provide a more detailed discussion and analysis of the issues being faced by the Coffee Co-op in its engagement with Fairtrade as well as agricultural biodiversity.

Chapter 7 – Discussion and Analysis

7.1 Introduction

The purpose of this Chapter is to discuss and analyse the empirics that I have developed in Chapters 5 and 6 within the context of the details of the macro environment developed in Chapter 4 and the literature that I have introduced in Chapter 2, especially the theoretical framework that combines the labour theory of value with the science of agroecology. This Chapter is structured as follows: Section 7.2 will engage with issues related to sustainable livelihoods in the context of the Fairtrade system, the macro environment within India and the Haryali project being implemented by the Coffee Co-op. Section 7.3 deals with the impact of neoliberalism and the food regime within the Indian context as well as within the Fairtrade system and how this impacts the Coffee Co-op. Section 7.4 will discuss the issue of downward accountability in the context of the Fairtrade system as well as with regards to the relationship between the Coffee Co-op, the Indian government and the Naandi Foundation. Section 7.5 will delve into how the concepts of alienation and primitive accumulation can explain the situation being faced by the Coffee Co-op and its smallholder farmer members in the context of their relationship with the Fairtrade system, the Naandi Foundation and the Indian state.

7.2 Challenges to achieve a sustainable livelihood

Fairtrade's delivery of sustainable livelihoods

Consistent with the idea of sustainable livelihoods, in Chapter 5 I provided information about the challenges being faced at the level of the Coffee Co-op in India in the context of it being certified Fairtrade. The evidence related to the costs involved in processing the coffee for export to the coffee consuming countries

through the Fairtrade value chain. In this section my focus is to engage with the research question:

- Does Fairtrade deliver on its promise of providing a sustainable livelihood at the level of a coffee co-operative?

Marx (1976) had stated that within capitalism labour could be exploited by paying it a wage below the value of its labour power. This was not considered a viable option by Marx (1976), since he felt that labour would receive its full value under capitalism. However, Smith (2015) has shown that, surplus value extraction by capital involving the reduction in the price paid to labour for its work to a level below its value is the reality of neoliberal capitalism.

In the context of the Fairtrade value chain, the argument made by Smith (2015) can be related to the situation facing coffee farmers and their co-operatives that are Fairtrade certified. As noted in Chapter 2 on Fairtrade, there is much more coffee available on the market that is certified Fairtrade than is sold as Fairtrade. This means that about 70-80% of the coffee produced by a Fairtrade co-operative has to be sold by the co-operative through other channels of distribution that might not pay the Fairtrade minimum price (FTMP). At the same time, since 60% of coffee that is sold as Fairtrade also carries the organic certification, it means that for a coffee co-operative that sells its coffee as Fairtrade and Organic, it must take on the costs related to being both Fairtrade and Organic certified.

This requires an investment of free labour which is both unpaid and uncoerced (Beverungen, Böhm, and Land, 2015) by the Coffee Co-op for this purpose which becomes productive labour (Marx, 1976), based on its ability to generate surplus value for the Fairtrade system while being consumed in the process of ensuring that its coffee is Fairtrade certified. In the context of this thesis, the work that is performed

by the farmers and the co-operative towards meeting the needs of both Fairtrade and organic certification has both paid elements as well as unpaid elements. To the extent that this work to ensure certification covers the amount received in terms of the Fairtrade and Organic premium, it is paid work. However, the hours of work that needs to be invested beyond the premium is unpaid work, which translates into surplus value for the certifying organizations but more so for the retail corporations, which sell this coffee at a higher price and a greater amount of surplus value as compared to uncertified coffee. This work relates to the labour associated with the unproductive labour that is "concerned merely with reproducing capitalist relations of production" (Beverungen, Böhm, and Land, 2015, p.483).

To supplement their income from Fairtrade, cooperatives might join a plethora of other organisations with their own requirements for accountability. All of these different systems with their additional costs must then be maintained by the cooperative. This leads to additional costs for bookkeeping and outside consultancy assistance plus the additional amount of labour and time that must be invested in these efforts by the farmers. This thesis finds that from the perspective of the coffee farmers and their co-operative, the performance of Fairtrade at the grass roots level does not match up to its public relations discourse in terms of its actual impact on improving the livelihoods of the coffee farmers. In many cases, Fairtrade has not been responsive to their needs and the main point in favour of Fairtrade is the fact that it provides the farmers access to the international coffee market along with a Fairtrade premium.

Despite a variation among coffee growing countries in terms of their labour, input and living costs, the Fairtrade floor price and premium are the same worldwide as determined by the FLO. This ensures that the Fairtrade retail partners have a

guaranteed price irrespective of the coffee's origin. This emphasis of the Fairtrade market on export brings out the fact that Fairtrade is a marketing organization focused on developing its markets in the Global North. To remain relevant, Fairtrade needs to acknowledge these issues. It has an opportunity to be more accountable to smallholder farmers and fulfil its rhetoric of providing them sustainable livelihoods.

Livelihoods provided by agricultural biodiversity

In this case study I have focused on the coffee farmers and their relationship with their immediate environment, which unlike the focus of most accounting for biodiversity studies is not a pristine habitat under threat, but a destroyed habitat that is in need of restoration. This thesis is an attempt to document the challenges being faced by the coffee farmers in undertaking the restoration, since to be able to restore their habitat; they need to ensure that they have a sustainable livelihood. Further, the focus of my study was to understand the role that the restoration would play in ensuring that the coffee farmers chance to achieve a sustainable livelihood was improved. Specifically, the goal was to answer the research question:

- Whether and how agricultural biodiversity would affect the livelihoods of a co-operative of coffee farmers?

In Chapter 6, I introduced the Haryali project being implemented by the Coffee Co-op and discussed the challenges that it faces in supporting the livelihoods of the members of the Coffee Co-op. In comparison to the farmers in India, the farmers of the Coffee Co-op are in a better situation, since using the framework developed in Chapter 2, they are at Level 3 of the agroecological transition, wherein they have been able to replace the need to purchase the inputs of industrial agriculture. This means that they did not have to take on significant amount of debt and were able to provide for the food security of their families. This was based on the

agricultural biodiversity that has been built up on their farms, which as detailed by Marx (1988) is consistent with the relationship between the farmer and nature. In the case of the farmers of the Coffee Co-op, they have been able to utilize the labour provided by nature.

The evidence from this thesis indicates that the coffee farmers from the Coffee Co-op have been able to get ecosystem services from the services provided by agricultural biodiversity through the use of agroecological methods such as CPP, vermicomposting and the planting of beneficial plants such as Gliricidia which is a nitrogen fixer. This provides evidence of the fact that these farmers have managed to transition through Level 1 and Level 2 of the stages of implementation of agroecology (refer to Table 3, p.71). At the current stage of the agroforestry project the coffee farmers have been able to substitute the inputs of monoculture agriculture with alternative practices such as the use of CPP and vermicomposting. Based on this, the coffee farmers have reached a position where they do not have to purchase external inputs and hence retain a portion of the value generated on their farm.

In the next level (Level 3) of transition to an agroecological agroecosystem, the practice of biodynamic coffee farming with the planting of fruit trees based on agroecological principles is enabling the indigenous coffee farmers to be able to cope with and recover when there are shocks or situations of stress that endanger the continuation of their livelihood (Chambers & Conway, 1992; Scoones, 1998).This is because the increasing biodiversity on their farms is a cost effective means of soil conservation, water conservation, as well as ecological pest and weed control (Shiva, 2000). The early evidence from the agroforestry project suggests that farmers who have diligently set up bio-centre's, prepared CPP and practiced vermicomposting are seeing a reduction in the vulnerability of their household with an increase in the

sustainability of the natural resource base (Scoones, 1998; 2009) through the improvement in both soil and agroecosystem biodiversity (Altieri, 1983; 1993; Moonen and Barberi, 2008).

The farmers who are participating in the agroforestry project have shown a level of interest and excitement based on the evidence that it's beginning to have a positive impact on their livelihoods. The coffee farmers have actively diversified their income by cultivating different fruit trees, encouraging biodiversity, and opening up new sources of income beyond coffee using agroecology. This has led to farmers having an increased level of immunity from the fluctuations of the global coffee commodity prices resulting in the potential improvement in their livelihoods and autonomy. Agricultural biodiversity, through the practice of agroecology can provide services to farmers which could replace the use of costly inputs (Altieri 1983; 2002) and promote the sustainable livelihood of smallholder farmers as opposed to conventional agriculture using chemical inputs and mechanization (Altieri, 1983, 1993; Martínez-Torres and Rosset, 2014).

This continued dependence of the coffee farmers and their co-operative on the Naandi Foundation and its marketing company indicate that despite the evidence of progress towards an agroecological transition at the level of the farm, challenges still remain within the value chain. The agroecological transformation can be considered to be complete at Level 4, when the agroecosystem is able to reconnect the two most important parts of the food system – consumers and producers, through the development of alternative food networks. In the case of the co-operative of coffee farmers, their dependence on the Naandi Foundation and its marketing company AOL for access to markets leaves them very much within the control of corporate value chains.

Influence of the macro environment in India on livelihoods

In Chapter 4, I have detailed the challenges being faced by smallholder farmers in India. They have been under the impact of two years of drought that has seriously impacted their livelihoods. The farmers in India have had to invest their labour power as well as invest in the costs of the external inputs in the hope of achieving a sustainable livelihood. However, due to the impact of the weather and the lack of policy response from the Government of India, the labour of the smallholders in India has become unproductive labour. With regard to the situation facing farmers in India detailed in Chapter 4, their situation is worse off, if they are farmers who in addition to losing their crops have to also take on debt for the purpose of buying the inputs of industrial agriculture.

On the farms of the average Indian smallholder farmer who is at Level 1 according to the theoretical framework, very little value is created since these farmers have not yet begun to utilize the labour provided by nature. An understanding of value and its explanation of how profit is generated is the basis of accounting (Bryer, 1994). We can define value based on “the view, developed subsequently by Marx, that "value" is ultimately a social relation because it is concerned with the exchange of the life experiences of people whose labor is bound-up in the products” (Tinker, Merino & Neimark, 1982, p.179).

In the context of this study, the value is in the labour invested by the coffee farmers and more broadly in the labour invested by smallholder farmers in general. The crops that farmers grow on their farms are commodities whose value in monetary terms is below the value of the labour that the farmers need to invest in order to grow them. Moreover, when farmers practice monoculture agriculture, they must invest additional labour doing jobs outside their farm in order to be able to afford the

external inputs. As noted by Jack (2007) third-world smallholder farmers also have to deal with the subsidies that are provided to farmers in the USA and in Europe.

In this context, The Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGA) is a scheme of the government to provide livelihoods to smallholder farmers in India. Based on the empirics provided in Chapter 4, instead of the original 100 days as a result of the drought, it has been expanded on paper to 150 days. However, the evidence on the ground is that in most states smallholder farmers and workers are unable to get more than 10-15 days of work. Further, only about 40% of the eligible citizens have been provided with access to the program. Finally, the audit of the CAGR has shown evidence of fraud in the running of the scheme by officials within the government running the scheme in cahoots with staff at local banks. This is evidence that the Government of India has not been effective in its policy towards providing sustainable livelihood opportunities to its citizens. This leads to a discussion of the role of neoliberalism and the food regime.

7.3 Neoliberalism and the food regime

In Chapter 2, I introduced the concept of neoliberalism along with the notion of a food regime which is the representation of neoliberal ideas within the field of agriculture. The current global agricultural industrial system is the manifestation of the dominant neoliberal ideology in the field of agriculture, undermining local markets and agro-ecosystems and emphasizing global foodstuff markets, controlled by transnational corporations (TNCs) (Abbots and Coles, 2013; McMichael and Myhre, 1991; McMichael, and Raynolds, 1994; Peet, 2011). This is part of the privatization and marketization of whole sectors of the economy based on the neoliberal logic of the efficacy of free markets (Abbots and Coles, 2013; Harvey, 2005). Within the field of agriculture, the growth of neoliberalism has meant the

domination of industrial agriculture with its concoction of high input cost chemicals, seeds and a heavy need for the usage of water (McMichael, 1992; 2005; 2009; Pechlaner and Otero, 2008). This neoliberal food regime is having a negative impact on small farmers around the world (McMichael, 2000; 2005; 2013).

The neoliberal Fairtrade system

The structure of the Fairtrade system using the annual reports of the Fairtrade Foundation that I analysed in Chapter 5 is to support the retailers increased sales of Fairtrade products. The Fairtrade system is set up to promote retail sales as evidenced by the data on the spending of the Fairtrade Foundation in the UK. This also relates to the issue that I have discussed in Chapter 5 about the power of the NLIs and their retail partners with regards to the FTMP setting process. I will delve in issues with the Fairtrade system in greater detail when I discuss issues of downward accountability in Section 7.3. In the following section, I provide details of the impact of neoliberalism on the Naandi Foundation.

Naandi Foundation: the product of a neoliberal state

In Chapter 4 I provided the background story of the actors involved in the creation of the Coffee Co-op in a neoliberal policy context in India where the state has itself promoted the creation of NGOs such as the Naandi Foundation to outsource its work of providing welfare. In essence, the nation state is subservient to the market and capital and any changes in state policy will take place as long as they are in the interests of capital accumulation (Catchpowle, Cooper, and Wright, 2004). When the co-operative was being started under the initiative of the Naandi Foundation, since it was a corporate funded foundation with the explicit support of the government, they received full co-operation from the government agencies. The purpose of the state in

terms of the scope of its activities relate to doing anything that will ensure preserving the dominance of the ruling class (Cooper, 1995).

This also relates to the concept of neoliberalism that I discussed in Chapter 2 as well as the issue within NGO accountability of the preponderance of upward accountability to funders as well as the issue that I have discussed in Chapter 6 about the lack of access to global supply chains for the Coffee Co-op without the support of AOL the marketing arm of the Naandi Foundation. As seen through the continued dependence of the co-operative on the Foundation and its marketing company, the coffee farmers are still at the mercy of agribusiness supply chains that control the price of the produce on the farm. A case in point is the fact that the Fairtrade and Organic certifications and brands are controlled by the AOL. AOL controls the value chain of the Coffee Co-op. The Naandi Foundation was set up with the goal of outsourcing the services provided by the government, but it is in the process of transferring these services to social enterprises, which take funding from corporates and promise to provide them with a return on investment. This is consistent with neoliberalism where different sectors of the economy get privatized bringing the profit motive of the corporation into play.

Hence at this stage the indigenous coffee farmers and their co-operative are still providing surplus value to the companies that own the value chain into which these farmers sell their produce. As evidenced by the treatment meted out to the coffee co-operative by the government authorities, when they attempted to take up the trading of tamarind, this indicates that an effective transition at Level 4, will require support from the government in terms of agricultural policy to enable the transition to take place in the practice of agriculture beyond the farm level to the produce value chain. The agroecological transformation of the value chain of the coffee co-operative

cannot be completed until the sustainable farm-scale agroecosystems of Level 3 that have been achieved are complemented by the setting up of sustainable food relationships of level 4.This is also connected to the Naandi livelihoods project detailed in Chapter 5, where the government agency the ITDA provided assistance to the smallholder farmers based on the influence of the Naandi Foundation, in Chapter 6, but when the Coffee Co-op tried to get government assistance, there was no support available. In the next section, I will engage with the role of the Indian government at a larger scale.

India's neoliberal government agricultural policy

Neoliberalism in agriculture has consisted of the introduction of the technologies of industrial agriculture through the participation of various NGOs and governments under the umbrella term "the green revolution". The green revolution technologies which are designed to increase the use of external chemical inputs at a huge financial cost to smallholder farmers as well as to the environment are designed to produce more profit for the corporations that make them at the expense of the viability of the livelihood of the small farmer. These technologies were designed for a large scale monoculture mechanized form of farming under the assumption of having access to unlimited amount of water and financial resources to be able to purchase these external inputs. In the context of the framework (on p.71) this relates to persisting at Level 1 with a continued dependence on the inputs of industrial agriculture.

In Chapter 4, I provided details of the implementation of this green revolution in the case of India. I discussed in Chapter 4 the impact this has had on the agricultural economy of India as well as on the livelihoods of smallholder farmers in India along with the factors impacting the agrarian structure in India. The growth of industrial agriculture in facilitating the exploitation of the Indian farmer has been

enabled by corporations in terms of promoting and funding agricultural research (Holt Giménez and Shattuck, 2011). As a part of the green revolution, farmers adopted the farming of cash crops at the expense of food crops leading to a crisis of food security, which is achieved in the context of a farming household by their ability to grow enough food for self-sufficiency, and/or having enough income to buy food if they cultivate cash crops (Krishnaraj, 2006).

Lack of support for agriculture in India is seen in the limited funding given to the MGNREGA program. Further, the system of agricultural subsidies in India that I discussed in Chapter 4 is designed to provide surplus value to the TNCs which provide the external inputs. The way it is set up is not beneficial to the livelihoods of the smallholder farmers since instead of being a direct subsidy to the farmer, currently it is an indirect subsidy which provides payments directly to the TNCs that make the fertilizer. In the context of the labour theory of value, this imposes on smallholder farmers the need to take on debt to be able to afford these external inputs. This means that the average Indian smallholder farmer needs to generate additional revenues beyond what the members of the Coffee Co-op have to generate since they must cover the costs of their sustainable livelihood plus the cost of the external inputs.

In the neoliberal context, where the nation-state has stepped away from its primary function of providing ‘welfare’ as a ‘developmental state’, there is a danger of non-governmental organizations (NGOs) of a transnational nature filling this gap, but with an agenda that might not be in the best interest of promoting the welfare of the broader population (Catchpowle, Cooper, and Wright, 2004; Chatterjee, 1997b, p.32; Cooper, 2015). I will discuss the role of the NGO in the context of the need for downward accountability in the next section.

7.4 Downward accountability

In Chapter 2, I discussed the emphasis on upward accountability within the NGO sector and discussed the need to have downward accountability towards the intended beneficiaries of the NGOs. The NGO accountability literature talks about beneficiaries need to receive information and accountability downwards (Andrews, 2014; Dixon, Ritchie, Siwale, 2006; Ebrahim, 2003). A reduction of the regulatory role of government with respect to food systems in the field of agriculture has provided transnational corporations (TNCs) an increasing role in global governance along with non-governmental actors (Schilpzand et al., 2010). As the state has stepped back without a formal privatization in some cases the welfare role has fallen to non-governmental organizations (NGOs) which have tended to be corporate controlled civil society organizations. This does not mean that the state is weakened, but that it has been reconfigured in a manner subservient to the corporate entity while maintaining the nexus between the state and the business sector. The key difference is that the state is still dominant based on the support of the corporation.

Downward accountability of Fairtrade

In Chapter 2, I had discussed the Fairtrade movement which is the most successful among the ATOs which were set up as a response to the food regime with the goal of supporting smallholder farmers to achieve a sustainable livelihood. In Chapter 5, I have provided the details of the empirical data relating to the issues impacting the Fairtrade system within the coffee value chain. I provided an analysis of the Fairtrade Foundation, which receives most of its revenues from products that license its label and in return it spends most of this revenue to promote the marketing of these products. In this section my focus is to engage with the research question:

- Does Fairtrade deliver on its promise of providing a sustainable livelihood at the level of a coffee producer co-operative?

To test the delivery of sustainable livelihoods, the focus was on looking at the impact of the FTMP on its ability to cover the costs of production of coffee farmers. Fairtrade claims that it covers the average costs of production, thereby ensuring a sustainable livelihood for the farmers and their families. The evidence from this thesis suggests that the business model of the mainstream Fairtrade value chain is focused on upward accountability to the corporate partners in the chain at the expense of downward accountability in terms of ensuring the livelihoods of coffee farmers. This is evidenced by the negotiation process discussed by Bacon (2010) and Reinecke (2010) in the FLO. Both of their studies which looked at the FTMP setting process found that limited credence was given to the CoSP study conducted by Bacon (2010) for the union of coffee producer co-operatives in Latin America. The FLO gave more weightage to the concerns raised by the NLIs that increasing the FTMP would have a negative impact on the demand for Fairtrade in consumer markets which would in turn hurt the coffee producers.

An additional argument made by the NLIs was that increasing the FTMP would only subsidize inefficient production among the coffee producers and go against the principles of the free market. It is worth noting that the FLO was more forthcoming in increasing the FTMP in March 2011, when the market price of coffee on the New York mercantile exchange reached a 34 year high leading to a concern among the NLIs that the coffee producers would not uphold their Fairtrade contracts signed in the previous year at the FTMP. This indicates the dominance of the neoliberal free market ideology within the working of the Fairtrade system at the

expense of upholding the principles of solidarity with the coffee producers which was the foundation of the Fairtrade movement.

To be viable for the farmers, Fairtrade "producer prices" should cover not only the costs of production of the individual farmers, but also the cost of operating the Fairtrade cooperative. This also relates to the processing of coffee beans to enable their export to Fairtrade markets. These costs do not decrease when the international market price of coffee drops. The discourse of Fairtrade is that their price is going to a farmer, but through this thesis it was determined that the Fairtrade price is actually not going directly to a farmer, but to a farmer organization. So, when Fairtrade talks about producer prices, what is in fact being considered is the price at the level of an organization. Thus, the price that is paid by Fairtrade as the "producer price" is in fact the price to the cooperative.

The Fairtrade premium is not enough to cover the costs of annual certification and audit and the interest payments to short term money lenders for the delay in payment from the Fairtrade organizations and their corporate buyers for the cooperatives (Valkila, 2009; Wilson, 2010; Haight, 2011). Further, since the Fairtrade organizations have been very aggressive with certifying different groups of coffee growers even through the supply of Fairtrade certified coffee far exceeds the demand in the Northern markets (Valkila, 2009; Wilson, 2010; Haight, 2011).

This provides further evidence of the preponderance of upward accountability to the corporate supply chain partners of the NLIs versus the provision of downward accountability to coffee producers. Downward accountability would mean that the members of the Coffee Co-op would have improved livelihoods by being a part of the Fairtrade system. But as evidenced by the information from Chapter 5, this is not the case. There is a clear disconnect at the FLO between the mission of the Fairtrade

organization based on the need to have downward accountability with the reality being an emphasis on upward accountability.

An issue in this regard that did not factor into the FTMP discussion is that a greater share of value in the corporate Fairtrade supply chain remained in the coffee consuming country versus even a non-Fairtrade corporate supply chain (Valkila, Naaparanta and Niemi, 2010). This indicates that the corporate partners of the Fairtrade NLIs take a greater share of value produced in the coffee value chain within the Fairtrade system than what they take in their conventional supply chains. This means that not only do they accrue the goodwill and positive branding from being associated with the Fairtrade brand, but they also seem to be doing better for their bottom line.

Consistent with the idea of downward accountability, in Chapter 5 I provided information about the challenges being faced at the level of the Coffee Co-op in India in the context of it being certified Fairtrade. The evidence related to the costs involved in processing the coffee for export to the coffee consuming countries through the Fairtrade value chain. In the cooperative that was studied, their cost of production in 2012-13 was US$3.341/lb plus an overhead cost of US$1.668/lb for export-ready coffee while the price on the international market for this was only US$1.318/lb. This thesis found that before the Fairtrade price translates into being income for coffee farmers, it must first cover the overhead costs of running the cooperative. These overhead costs are related to the processing of coffee into a form that is able to be exported to the Fairtrade consumer markets in the global north.

This thesis argues that Fairtrade should take into consideration their promise of providing a sustainable livelihood to the coffee farmers when setting their producer prices. There is a limited relationship between the actual cost of production at the

level of a coffee co-operative and the market price of the coffee on the international market. Even with the Fairtrade premium plus the organic premium, the price would usually be no more than about $1.873/lb which would still not cover the costs of production. Further, the Fairtrade premium must be invested by the cooperative in various projects to improve the lives of its members and their communities, which is a good thing. But, since most of this money is spent at the community level, it does not translate into additional household income for the individual farmers.

Accountability of the Indian state

The corporation has created in its image the foundation, an NGO which performs the role that has been performed by the state in the past. In effect by performing the role of providing welfare that was the monopoly of the state in the past and that has been forsaken by the state, the NGO has managed to acquire the dominant position that has been forsaken by the state. The NGO with a board of directors who are often heads of corporations themselves, has an aura of independence, while being very much an instrument of the corporate agenda as well as being firmly within the sphere of influence and control of a corporation. This mechanism enables the corporation to replace the role played by the nation-state with a corporate NGO which enables the corporation to extend its influence by overcoming the barriers within civil society.

The ITDA and the other agencies are supposed to be set up to provide support to the Tribal population of the ITDA area. However, they are not supporting the Coffee Co-op and the only support that they provide is when it is through the Naandi foundation. This indicates that they see value only if it through a neoliberal corporate structure and there is no value given to the indigenous Coffee Co-op. This is evidenced by their support of the Traders and their lack of support for the initiatives of the Coffee Co-op to diversify away from a dependence on coffee. This is evidence

of the lack of downward accountability within the Indian government. Additional evidence of this has already been provided in the discussion of neoliberalism in the context of India.

Accountability of the Naandi Foundation

In the case of this thesis the evidence of the relationship between the Coffee Co-op and the Naandi Foundation indicates that this is the type of relationship where the NGO is prioritizing corporate interests over the need to provide downward accountability to the Coffee Co-op and its members. For example when asked about the lack of control of the Coffee Co-op on the coffee value chain, the response of the CEO of the marketing company AOL is that without the support from the Naandi Foundation, the co-operative would not be able to navigate international markets for farm produce. This response indicates that despite taking an agroecological approach at the farm level, the Naandi Foundation has not made the transition in their thought process and planning to take the agroecological approach to a transformation of the relationship of the co-operative with their consumers. This will require empowering the coffee co-operative to begin a focus on consumers within their local area in Southern India.

As evidenced by my interaction with the members of the VDC, they have indicated that the Coffee Co-op has not been responsive to their requests to get the Fairtrade premium to spend on their local communities. Further, all the money from the Fairtrade premium was used to build a warehouse for storing the coffee. This shows that the Coffee Co-op which is being managed by employees of the Naandi Foundation is focused on using the resources available to grow the coffee business, but has not given due consideration to the opinion at the grassroots level in the VDCs.

This means that the neoliberal third world state has evolved from a state that worked for the oppressed in the post-colonization period to a state in the neoliberal context which promotes exclusively the interests of the corporate-financial oligarchy, thereby aligning the state interests with that of globalized capital. This leads to alienation and primitive accumulation for the people as a result of this process of prioritizing the interests of capital.

7.5 Alienation and primitive accumulation

In Chapter 2, in the context of the discussion of the nature of capitalism, I have introduced the notion of alienation in the context of the smallholder farmer. This relates to the fact that despite investing their labour power, due to the commodification of the produce of their labour, the labour of the smallholder farmer gets converted to surplus value for the capitalist represented by the TNC value chains.

Accounting for biodiversity studies have failed to account for marginal perspectives such as the indigenous people living in the forest despite an acknowledgement of their dependence on the natural resources provided by the forest for their livelihoods (Siddiqui, 2013). It is essential to have the involvement, commitment and initiative of the people to be able to preserve the ecosystem and its biodiversity (Agrawal, 2002). This failure to give voice to indigenous people leads to their alienation and within the capitalist system it leads to primitive accumulation.

Primitive accumulation by the Indian state

The neoliberal food regime within agriculture that has to do with industrial agriculture and the modern food system is a possible threat to smallholder agriculture which means that the farmers have to use expensive chemical inputs and because they do not have access to credit, there is an agrarian crisis. This agrarian crisis means that people who have some land after a few years, they get into debt, they lose their land

and they become manual labourers who then have to move to the cities since they are losing their land. That is the impact of neoliberalism within the food industry. The farmers that were the focus of this case study have managed to get out of the dependence on buying chemicals and that is why their livelihoods are more sustainable because they are not taking on the debt that the conventional farmers around the world and even in India have had to take on.

In India the challenge faced by smallholder farmers who are still using chemical fertilizers, pesticides and having to take on debt is that they are losing their livelihoods and are under threat of losing their land and in danger of committing suicide. The "green revolution" technologies which are designed to increase the use of external chemical inputs at a huge financial cost to smallholder farmers as well as to the environment are designed to produce more profit for the corporations that make them at the expense of the viability of the livelihood of the small farmer. These technologies were designed for a large scale monoculture mechanized form of farming under the assumption of having access to unlimited amount of water and financial resources to be able to purchase these external inputs. What was conveniently ignored was the combination of crops that were grown in traditional agriculture.

The lack of value creation on the farm is not for a lack of effort on the part of the farmers. As such, it is because in capitalism, the profit that is generated comes from the production and sale of commodities based on unpaid labour (Bryer, 1999). The unpaid labour is the labour invested by the farmers in growing crops whose value is not paid to them when they sell their produce into the value chain. Instead, the value that is generated for this produce at the retail end of the commodity chain becomes profit for the companies that own the value chain. From the perspective of

Marx's labour theory of value, the source of profit is surplus value (Bryer, 1994). The generation of surplus is enabled by "the commodification of labour" and is the defining principle of the capitalist system (Cooper and Puxty, 1996, p.290).

In the long run, the trajectory of capitalist accumulation shows that primitive accumulation is not only a phase in, or original form of accumulation, but rather lies at the very heart of the world system of capitalism (Patnaik, Moyo and Shivji, 2011). Dispossessing people from their land and their labour power is at the root of neoliberalism. This was achieved through the implementation of neoliberal policies, which broke down the state support system in the field of agriculture by breaking "down tariffs, dismantled national marketing boards, eliminated price guarantees and destroyed national agricultural research and extension systems in the global south" (Holt Giménez and Shattuck, 2011, p.111). The most significant way in which the goal of income deflation for people can be achieved involves the unleashing of a process of primitive accumulation of capital vis-à-vis the peasantry, where large capital, in the name of "development" and "infrastructure", takes over not just common or government land, but even land that belongs to the peasants at "throwaway" prices (Patnaik and Patnaik, 2015).

In Chapter 4, I have discussed how the agrarian structure in India provides subsidies to the providers of agricultural inputs, but there is limited support available to the smallholder farmers. The Bauxite mining approval by the Indian government shows utter disregard for the livelihoods of the smallholder farmers of the Coffee Co-op. The evidence is that this type of projects will destroy the ecosystem and hence the livelihoods of the members of the Coffee Co-op. This will lead to the alienation of the smallholder farmers wherein they might end up losing their livelihoods and their land. This would become a case of primitive accumulation where, as the lands of the

smallholder farmers become unviable for agriculture due to the possible impact of Bauxite mining, this would enable the Indian state to expand its mining operations and provide mining licenses to more companies.

The lack of support for the co-operative from the government and the governmental agencies is keeping with the neoliberal doctrine which has facilitated the conditions for capital accumulation by enabling a greater degree of monetization and financialization within the world economy (Fine and Milonakis, 2011). In combination with public and private institutions, corporations are in effect able to dominate and control governments of nation states and multilateral organizations consisting of them (Holt Giménez and Shuttack, 2011). The subsidy provided by the Indian state to the fertilizer companies instead of funding the MGNREGS is evidence of the interests of the state being aligned with that of capital at the expense of the livelihoods of the smallholder farmers.

Alienation and primitive accumulation by the Fairtrade system

Holt Giménez and Shattuck (2011) criticize "mainstream Fairtrade" as being part of the corporate food regime which provides a monopoly power to corporate supply chains in the neoliberal food system whereby the TNC supply chains take the majority of the value generated in international food supply chains. This thesis indicates that by focusing on the amount of labour expended at the level of the farm by the coffee farmer and ignoring the labour investment at the co-operative level, the Fairtrade system is under valuing the coffee produced. This leads to Fairtrade thereby facilitating the extraction of surplus value equal to the labour power invested at the co-operative level by its corporate partners at the retail and consumer end of the coffee value chain. This is essentially accumulation of capital within a value chain

that has been implicitly created to prevent this from happening. This is leading to a sense of alienation for the members of the Coffee Co-op.

The principle on which the co-operative is based is the idea that the members of the co-operative have an equal share in what they produce. They each earn an equal share in the profit generated by the co-operative. A co-operative is an NGO that is democratic and exists on the principle of one vote per person versus greater power for shareholders who own a greater number of shares in a corporate context. Fairtrade has created a system within its corporate value chain wherein a corporation is able to impose itself on the structure of a co-operative and is able to extract surplus value from the collective labour provided by the members of the co-operative. The fact that the FTMP does not cover the cost of conversion of the coffee beans to green beans ready for export indicates that the Fairtrade system is practicing a form of primitive accumulation on smallholder farmers and their co-operatives.

Essentially, this is labour invested by the Coffee Co-op which translates into surplus value for the certifying organizations but more so for the retail corporations, which sell this coffee at higher price and a greater amount of surplus value as compared to uncertified coffee. This work relates to the labour associated with the unproductive labour that is “concerned merely with reproducing capitalist relations of production” (Beverungen, Böhm, and Land, 2015, p.483). For Marx, the basis of the theory of value is the social relationship within the context of production between wage-labour and capital (Tinker, Merino and Neimark, 1982). In the context of the coffee value chain, the amount of labour time that needs to be invested by the coffee farmer in order to be able to make the coffee berry on his coffee plant to be converted to green bean coffee that is ready for export, is the sum total of the socially necessary labour time (Marx, 1976). Part of this labour time needs to be invested at the level of

the coffee co-operative in the processing of the coffee berry into the green bean that is ready for export. Consistent with Rosa Luxemburg (2003) this is the capitalist system alienating non capitalist organizations such as the Coffee Co-op while ensuring that retail chains that sell their commoditized produce continue to get surplus value.

7.6 Conclusion

In this Chapter, I have provided a discussion and analysis that combines the themes covered in the literature review in Chapter 2 and in the context setting Chapter 4 with the empirics from Chapters 5 and 6. In doing so I have also answered the last two research questions of the thesis. In the following Chapter, I provide the conclusion for this thesis.

Chapter 8: Conclusion

8.1 Introduction

This Chapter provides a conclusion to the thesis. It begins with a summary of the findings of the thesis in section 8.2. In section 8.3, I provide details of the contributions of the thesis to the literature. Section 8.4 details the implications of these contributions to theory and practice. In section 8.5 I provide the limitations of this thesis along with possible avenues for future research.

8.2 Summary of the findings

In this thesis the focus was on the role played by alternate trade organizations (ATOs) to provide a sustainable livelihood to farmers. Specifically, the focus of the thesis was on Fairtrade, an ATO that promises and claims to provide a sustainable livelihood to the farmers who participate in its certification system. In this thesis I have answered the research questions relating to the ability of the Fairtrade system to provide sustainable livelihoods at the level of a coffee co-operative. With regard to Fairtrade, the research questions that this thesis engaged with are: **What does a sustainable livelihood in the coffee supply chain entail at the level of a co-operative? Does Fairtrade deliver on its promise of providing a sustainable livelihood at the level of a coffee producer co-operative?**

Fairtrade started as an effort to mitigate the crises caused by crashes in commodity prices, such as coffee, helping farmers in the developing world to live a decent life. The Fairtrade Foundation claims that it covers the average costs of production, thereby ensuring a sustainable livelihood for the farmers and their families. It hopes to provide a degree of financial stability to the farmers through long-term trading relationships that provide access to pre-finance access to credit, enabling the farmers to plan their production and invest in the necessary agricultural inputs. I focused on the role of Fairtrade within the coffee commodity chain using a

case study of a Fairtrade certified producer cooperative in India. I looked at the ability of Fairtrade to mitigate the impact of shocks which in the context of the coffee commodity chain is represented by the coffee crisis which is an ongoing event based on the volatility in the price of coffee.

In effect the focus of this thesis was to check the accountability of Fairtrade to a coffee producer co-operative with regards to its promise to provide sustainable livelihoods. The evidence from this thesis suggests that the business model of Fairtrade is focused on providing profit to corporations at the expense of the livelihoods of smallholder farmers. It can be concluded that for the particular co-operative in India that was the focus of this case study, at the scale at which it was operating, the Fairtrade price was unable to provide a sustainable livelihood to the members of this co-operative. In the case of Fairtrade and Organic coffee, the farmers not only invest their usual labour power to grow the coffee, they also have to invest additional labour power for setting up and maintaining accounting systems and documentation on an ongoing basis. On top of this, they have to pay Fairtrade for being certified. Instead of benefiting from this, they get a meagre Fairtrade premium, while the real beneficiaries are FLO and other Fairtrade registration organizations which charge the farmers as well as the coffee transnational corporations (TNCs) for the certification.

Fairtrade “producer prices” are prices paid to a cooperative of farmers. To be viable for the farmers, they should cover not only the costs of production of the individual farmers, but also the cost of operating the Fairtrade cooperative. This also relates to the processing of coffee beans to enable their export to Fairtrade markets. These costs do not decrease when the international market price of coffee drops. In the cooperative that was studied, their cost of production in 2012-13 was US$7.35/kg

plus an overhead cost of US$3.67/kg for export-ready coffee while the price on the international market for this was only US$2.90/kg. Hence, there is a limited relationship between the actual costs and the market price. At the level of a coffee co-operative there is a disconnect between their cost of production and the price of the coffee on the international market taking into consideration the possible additional income from the Fairtrade and Organic premium. Even with the Fairtrade floor price and premium plus the organic premium, the price would usually be no more than about $4.12/kg which would still not cover the costs of production.

This thesis finds that from the perspective of the coffee farmer, Fairtrade has either already lost its legitimacy or is in the process of losing it. This is because the performance of Fairtrade at the grass roots level does not match up to its public relations in terms of its relationship with the coffee farmers. In many cases, Fairtrade has not been responsive to their needs and the only point ensuring its continuing legitimacy is the fact that it provides the farmers access to the international coffee market along with a Fairtrade premium. Further, the Fairtrade premium must be invested by the cooperative in various projects to improve the lives of its members and their communities, which is a good thing. But, since most of this money is spent at the community level, it does not provide enough income to individual farmers.

Despite a variation among coffee growing countries in terms of their labour, input and living costs, the Fairtrade floor price and premium are the same worldwide as determined by the Fairtrade Foundation. This ensures that the Fairtrade retail partners have a guaranteed price irrespective of the coffee's origin. This emphasis of the Fairtrade market on export seems to perpetuate a dependency relationship with Northern buyers. To remain relevant, Fairtrade needs to acknowledge these issues. It

has an opportunity to be more accountable to southern farmers and fulfil its rhetoric of providing them sustainable livelihoods.

The evidence from the thesis is that within the context of the mainstream Fairtrade coffee value chain, Fairtrade organizations have a corporate like mentality. This is in terms of their focus on growth in the amount of product that carries its label since their income is based on this. The strategy of Fairtrade is also within a corporate mind set, since to enable growth in the sales of its certified products, it aims to ensure that there is enough of supply of the products that it certifies at the producer to ensure availability of product at the retail level. It charges fees from the producers to be certified while also gaining income at the retail level from the sale of the products that carry its label. Fairtrade is in effect behaving more as a corporation than as a non-profit entity with its focus on the increase of market share (with regards to other completing certifications) and market size (growing the amounts of various products that carry its label).

Then I delved into the role that agricultural biodiversity could play in providing sustainable livelihoods by engaging with the research question- **whether and how agricultural biodiversity would affect the livelihoods of a co-operative of coffee farmers?** This thesis extended the accounting for biodiversity literature to the field of agriculture by developing a framework that combines the science of agroecology with the labour theory of value. The purpose of this framework was to provide the basis for an understanding of the significant role played by intensified agricultural practices for the loss in biodiversity and in the loss of habitat (Sizemore, 2015). It concluded that the practices of agroecology reduce the dependence of the coffee farmers on the need to purchase external inputs.

In addition, through this framework, I also provide a direction for agricultural policy and practice. The agroecology and labour theory of value framework has been applied to explain the accountability of the Fairtrade system at the level of a coffee producer co-operative as well as an agroforestry project that was set up in the Paderu ITDA region of the state of AP in Southern India using the principles of agroecology. The agroforestry project is based on restoring habitats through the planting of trees where land was lying fallow under the influence of industrial agricultural practices that caused its soil biodiversity to be degraded.

However, in the case of this co-operative the fact that it is enmeshed in corporate value chains due to its dependence on the Naandi Foundation for its marketing and distribution support mean that it is unable to achieve a sustainable livelihood in its current relationship with the Naandi Foundation. The Haryali project provides evidence that agroecological food production practices using the ecosystem services provided by biodiversity, which are widely seen as radical alternatives to the rather unsustainable and exploitative nature of the global agri-food system can provide a means for a sustainable livelihood. The case analysis has argued that the project might indeed contribute towards the development of independent livelihoods of local, smallholder farmers. It is however important to acknowledge that while this is the case, a new set of dependencies have been established, which might be regarded as regressive rather than progressive. This is in terms of nature of involvement of the Naandi Foundation and the fact that this project is implicitly dependent on their management and organization of it using funding from corporate actors namely the Danone led Livelihoods Carbon Fund and the Mahindra and Mahindra group of companies. Thus, while on one hand, the Haryali project can be understood as an important testing ground for how to address the crisis of the global capitalist agri-

food system, it does provide a legitimation function for corporate actors. Thus this thesis shows that for an effective agroecological transformation, there is a need to develop short supply chains consisting of the reduction in the influence and role of corporate intermediaries. Only then can the process of building a new global food system, based on resilience, participation, localness, fairness and justice, begin. This will require participation from government by supporting research on agroecology as well as reducing support to agribusiness subsidies which promote the continuation of industrial monoculture agriculture.

With regard to the role of subsidies, the relevant take away from the story of the fertilizer subsidy in India is that of the imposition of a system of agriculture, which requires expensive inputs, which through collusion between the government and the corporations that produce the fertilizers have been subsidized for over thirty years. However, since 2010 when these subsidies have been taken away gradually, the regulations placed by the government on the prices that the companies can charge for these fertilizers have been removed (Mehdudia, 2013). This has put the farmers at a greater risk especially where they have soils that have lost their natural fertility and hence they are dependent on external inputs. The potential solution to this problem is what I have detailed in Chapter 6 and involves the transition to a form of agriculture without the use of chemical fertilizers. As evidenced by this case study, this is a slow process, that will require the strength to make a radical change towards using a system of agriculture that will respect the agroecological system and make use of the services provided by nature especially its agrobiodiversity.

However, this radical transition by its very nature is not one that many farmers in India are able to make, and hence they are stuck in an inertia, wherein their yields are going down and they have to use more fertilizers to get a yield. This has put them

into a cycle of having to take on debt to purchase these fertilizers and at the end of the year all of their hard labour produces a yield which does nothing more than pay for the fertilizer. This has created a situation that if there is a failure of the crop as detailed in Chapter 4, due to the adverse weather conditions, this cycle is broken. This has led to farmers being unable to pay off the debts that they have taken on in order to purchase the agricultural inputs and has led to them losing their lands which they have put as collateral for their loans. As detailed in Chapter 2, this has led to about 15 million farmers losing their lands and being converted to either farmworkers or migrant workers (the proletariat) living in the crowded slums of India's cities.

Consistent with the focus of this thesis on the livelihoods of indigenous coffee farmers, my focus was on its connection to building biodiversity habitats (Agrawal and Gibson, 1999; Salafsky and Wollenberg, 2000).When discussing the role of indigenous people in conservation and protection of biological diversity, the focus in the literature has been on existing biodiversity hotspots that need protection (Salafsky and Wollenberg, 2000).In this thesis, the area under study was not a biodiversity hotspot and is an area that has seen extensive deforestation over a century ago and remains largely deforested even now. In this regard, the notion of the role of the indigenous in restoring biodiversity is in terms of their participation in an agroforestry project where trees are being planted in area completely devoid of vegetation by promoting agricultural biodiversity. Sustainable agricultural biodiversity is at the centre of effective sustainable livelihoods of smallholder farmers and is the basis of all food, fibre and other products used by them (Mulvany, 2014).

8.3 Contributions of the thesis

The Fairtrade movement has built its reputation on its promise to provide a sustainable livelihood to smallholder farmers which it has not fulfilled as evidenced

by the analysis of the working of the Fairtrade certified coffee cooperative in India. Secondly, this thesis showed that smallholder farmers can have a greater chance to obtain a sustainable livelihood through the use of agricultural biodiversity and the ecosystem services it provides through a reduction of their dependence on external inputs and the diversification of their sources of income.

However, a theoretical contribution of this thesis was an acknowledgement that despite the utilization of the services provided by agricultural biodiversity which I have referred to as "the labour power of nature", corporate value chains have been able to accumulate the labour of nature just as they have accumulated human labour. Thus in this thesis I have taken a critical look at how the existence and preservation of agricultural biodiversity contributes to the livelihood of smallholder farmers, and extended the field of accounting for biodiversity by answering the call of Bebbington and Larrinaga (2014, p.7) to examine in more detail the operational issues in the food and farming industry by accounting for their ecological impacts. This thesis specifically questioned this premise by looking at the accounts of smallholder farmers from the coffee cooperative in India who had chosen nature and its biodiversity as their provider of inputs through their adoption of agroecological farming practices. The farmers provided an account from the margins of the improvement in their livelihoods by reducing their dependence on chemical inputs and mechanization by making a transition away from conventional agriculture by adopting agroecological farming practices.

Based on my focus on the perspective of the producer co-operatives in the Indian case study focused on the Coffee Co-op I have answered the call of Gray and Laughlin, (2012) to take into account marginal perspectives as well as engaged in 'high quality field work' that is 'focused on understanding the 'real world problems''

(O'Dwyer & Unerman, 2016, p.38). In doing so, I have made use of an innovative method consisting of the use of journals to document my observation during the process of participant observation. This thesis with its focus on the situation of the coffee farmers and their producer co-operative engages in a 'transdisciplinary inquiry' that involved 'working in partnership with disciplines as diverse as…agriculture' (Bebbington & Larrinaga, 2014, p.409).

My engagement with supply chain issues within the Fairtrade commodity chain also answers the call of O'Dwyer and Unerman (2016) to delve into such issues which despite being central to social sustainability have not received enough attention. Further, through my involvement with co-operatives and NGOs, I have contributed to a better understanding of social sustainability issues within the context of these "diverse organizations" (O'Dwyer & Unerman, 2016, p.38). My "scrutiny" of Fairtrade as a certification scheme opens up an opportunity for the social and environmental accounting discipline to further engage with such schemes to enable accounting's "support [of] sustainable development" (Bebbington and Larrinaga, 2014, p.409).

The connection between accounting, biodiversity and livelihoods has been explored with this thesis. The argument made is that the way the farmers use agroecological strategies to replicate the logic of natural ecosystems enable them to have a sustainable livelihood. The agroecological approach is a bottom up (Altieri, 1983) alternative narrative to the agrarian crisis impacting a majority of the farmers in India. Smallholder farmers are stuck in the debt cycle of borrowing money to cultivate their crops each year (Kalkat, 2010; Sidhu, 2010; Srivastava, 2010) since they required this money to cover the costs of their external inputs (Kalkat, 2010; Sidhu, 2010).

The practices of mainstream agriculture degrade the soil through the use of pesticides and fertilizers which have been shown to destroy the soil biodiversity (Altieri, 1993; Anand and Chang, 2010). Monocultures are vulnerable to ecological catastrophe and compromise the survival of nature's diversity by promoting large scale species extinction (Shiva, 1997). The Coffee farmers have actively diversified their income by cultivating different fruit trees, encouraging biodiversity, and opening up new sources of income beyond coffee using agroecology. This has led to farmers having an increased level of immunity from the fluctuations of the global coffee commodity prices resulting in the potential improvement in their livelihoods and autonomy.

8.4 Implications of the thesis for theory and practice

Overall there is a need for the Fairtrade organizations to give a greater emphasis to downward accountability mechanisms within their organizations to ensure that their actions become complaint with their rhetoric. With regards to Fairtrade, there is an opportunity to reconfigure its international coffee price setting mechanism to make it more inclusive of producer needs and thereby ensure that Fairtrade is actually fair.

This thesis has extended the accounting for biodiversity literature into the field of agriculture since when looking at the causes for the loss in biodiversity, intensified agricultural practices have played a significant role in the loss of habitat (Sizemore, 2015). The Haryali project is based on restoring habitats where land was lying fallow under the influence of industrial agricultural practices that caused its soil biodiversity to be degraded. Trying to measure biodiversity without due consideration for its complexities will lead to accounting being used as a tool to rationalize both habitat and species destruction (Tregidga, 2013). The understanding of the interdependence between habitats, flora and fauna (Perfecto and Vandermeer,

2015; Weis, 2007) is important when looking at ways that biodiversity can be recovered and will require an agroecological perspective (Altieri, 1983; Altieri, 1993). In this regard the farmers undertaking the Haryali project have used a PRA approach to understand these interrelationships at the local level by creating VDC's that have an understanding of the interdependencies relating to biodiversity.

Arguably, we can see more agroecological and other sustainable methods of food production as an attempt to address this very crisis. The Haryali project experiments with new ways of diversification, away from monocultures towards a system that makes local smallholder farming communities more sustainable and independent of global, fluctuating coffee prices. Yet, with the help of the Naandi Foundation and the involved multinational companies, the market is never far away from the considerations of this agroecological project. Rather than forging new, non-capitalist social and economic relations, the aim is always about how to make the best of existing market conditions and how to make the market work for these food growing cooperatives.

Discussion with both the members of the co-operative and the farmers indicate that they are very much prone to the fluctuations of the coffee market, and hence additional sources of funding had to be found. The benefit of the organizational effectiveness of the co-operative structure was that, rather than a few farmers doing it, whole villages were involved with the co-operative, which provided assistance to their members for planting fruit trees, aiding additional food security. The case study from the cooperative is significant in that it provided evidence of the impact of large-scale implementation of agroecological techniques in mitigating the need for external inputs. In the two villages that were visited as a part of the research project, the members of the co-operative were well trained in the techniques of biodynamic

organic farming, which excludes the use of any external inputs. All the inputs for farming were grown on the farm or were available within the community.

The practice of biodynamic coffee farming with the planting of fruit trees based on agroecological principles is enabling the indigenous coffee farmers to be able to cope with and recover when there are shocks or situations of stress that endanger the continuation of their livelihood (Chambers and Conway, 1992; Scoones, 1998). The early evidence from the Haryali project suggests that farmers who have diligently set up bio-centre's, prepared CPP and practiced vermicomposting are seeing a reduction in the vulnerability of their household with an increase in the sustainability of the natural resource base (Scoones, 1998; 2009) through the improvement in both soil and agroecosystem biodiversity. A socio-ecological account of smallholder coffee farmers has made visible (Gray and Laughlin, 2012) the role that agroecology plays in the recuperation of biodiversity and in the resultant restoration of agroecosystems leading to the improvement in the livelihoods of the coffee farmers. Smallholder farmers are representative of the subaltern (Graham, 2009; Jayasinghe and Thomas, 2009), the most marginalized of society. Their voice from the margins supports the incorporation of agroecological practices into public policy and practice in the field of agriculture.

This case study of the coffee farmers shows that this so called "primitive" means of production is not really primitive, but promotes a sustainable livelihood. In the case of model farmer members of the co-operative, the thesis found that they were able to eliminate the use of external inputs, which made them financially viable and reduced their dependent on the vagaries of the commodity market for coffee. Further, due to the agroecological nature of their farms, they were able to grow a significant portion of the food for their own personal consumption, thus ensuring food

sovereignty to their families. These were the model farmers who had been able to harness the power of nature by creating agroforestry on their farms. This also enabled them to diversify their sources of income beyond coffee.

The policy implementation within the Government of India sees increasing migration away from rural areas by promoting more urbanization as the means to fight poverty and improve the productivity of agriculture. Further, smallholder farmers have a weak bargaining position at the ends of agricultural food value chains, where their produce is sold as a commodity at a rock bottom price, below their cost of production. As a result of this, there is a transformation that is taking place in India's rural countryside, with villagers being driven into bankruptcy as a result having to sell their lands to moneylenders who are often turned into the largest landholders in village and rural communities. This has facilitated the transformation of village lands from being managed by smallholder farmers to being converted to industrial agriculture with large farm sizes with the use of agricultural inputs and machinery. This is leading to a fundamental demographic transformation in India, with the migration of farming communities to the cities to work as manual labour. Despite the significance of this change in India, it is being promoted as a positive development in the media and among the elite. This is due to the fact that the policy makers and the corporate elite are wedded to the notion of an idea of development as being transformed to be just like the countries of the first world where less than five percent of the population is into farming and the rest of the population lives in urban areas.

In this broader policy context, the case study that I have focused on which details the transition of a co-operative of Indian farmers to a type of farming that does not make use of these chemicals inputs that require the taking on of debt is very relevant. To understand the economic arguments, it is important to examine the "cost"

side of chemical agriculture versus that of an agroecological approach, which represents agriculture without the use of chemicals. Agroecological farming involves fewer costs related to the use of external inputs but is both knowledge and labour intensive. Many organic farmers use both the concept of agroecology which I have detailed in Chapter 2 as well as using traditional seeds that work best in local soils and ecosystems. The result of this change is that there is the potential for costs to reduce and their incomes to rise as I have documented in Chapter 6. The key takeaway from this experience is the role that the effective utilization of the concepts of agroecology can play in developing agroecosystems with a minimal dependence on high agrochemical and energy inputs.

In the next phase of the Haryali project coffee plants are being planted under shade trees, providing shade to the coffee, and creating a diversity of trees and plants which will provide habitats for many other species which will in turn limit pests of the coffee (Perfecto and Vandermeer, 2015). Maintaining a functional diversity in soils, crop species, trees, animals and insects to maintain ecological balance and nutrient cycles will promote the long term viability of farming (Weis, 2007).In the case of model farmer members of the co-operative, the research found that they were able to reduce the use of external inputs, which made them financially viable and reduced their dependence on the vagaries of the commodity market for coffee. Further, due to the agroecological nature of their farms, they were able to grow a significant portion of the food for their own personal consumption thereby ensuring that they had food sovereignty and food security. These were the model farmers who had been able to harness the power of nature by planting of fruit trees on their farms. This also enabled them to diversify their sources of income beyond coffee while contributing to the restoration of nature and its biodiversity in their agroecosystems.

The promotion of biodiversity on their farms has the potential to give coffee farmers the ability to cope with and recover from the shocks and situations of stress that endanger the continuation of the livelihood (Chambers and Conway, 1992; Scoones, 1998). This is because the increasing biodiversity on their farms could be a cost effective means of soil conservation, water conservation, as well as ecological pest and weed control (Shiva, 2000). Their use of biodynamic organic farming techniques using agroecological principles that incorporate traditional knowledge (Altieri, 1983; Anuradha,1998) have placed them in a better position to ensure their sustainable livelihoods (Bengtsson, Ahnström and Weibull, 2005; Butler, Vickery and Norris, 2007).

8.5 Limitations of the thesis and avenues for future research

In order to be able to reconfigure Fairtrade's international coffee price setting mechanism to make it more inclusive of producer needs, there is need for research similar to the current thesis that looks at the impact of Fairtrade certification on the coffee cooperatives in different parts of the world. This should include details of information regarding the fixed and variable costs of coffee production, Fairtrade certification and compliance at the level of the cooperative. This could be supplemented by studies which look at costs at the household and farm level for coffee farmers taking into consideration the impact of inflation. A limitation of this study is the fact it did not provide the situation in relation to Fairtrade as well as the use of the ecosystem services of agricultural biodiversity for a great number of coffee co-operatives. Expanding this type of research which looked at the impact of Fairtrade at the level of the coffee co-operative in multiple locations, would have strengthened the arguments presented in this thesis. An argument could be made that

the issues that I have detailed with the Coffee Co-op are the result of factors that are unique to the micro environment of the Coffee Co-op as well as the macro environment in India. I concur with this and acknowledge that the conclusion that I have come to in this thesis are limited to this case study of a coffee co-operative in India. However, there is a need to acknowledge that the findings of this thesis raise relevant questions both towards the policy makers within the Fairtrade system as well as within governments looking to make agricultural policy. In addition, my hope is that the agroecological alternative that I have presented will promote greater research support to investigate the effectiveness of the agroecological approach in practice.

My argument is that the claims made in the mainstream discourse about the ability of the technologies of modern agricultural system including GM seeds and the resultant herbicide resistant crops to provide livelihoods and feed the world, do not apply to the situation faced by the smallholder farmer. This is because these technologies were designed for a large scale of operation with the assumption of access to credit, resources such as water and land. I have argued that from the perspective of the smallholder farmer, it is biodiversity and agroecological techniques of farming that might support their livelihoods. There need to be more studies that look at the accountability of industrial agriculture. This needs to start with looking at the accountability of the nexus between neoliberal governments and their agencies and the agribusiness corporations that dominate agriculture. These studies could document the agrarian crisis which perpetuates the accumulation of capital by large agricultural corporations at the expense of the livelihood of the smallholder farmer.

This case study by questioning the approach of the mainstream agricultural industry also brings out the need to consider the nexus between governments and large agribusiness corporations. Specifically, there is a need to look at issues of

governmental accountability in the approval of genetically modified organisms and food to enter the food system. A policy issue with relevance to the EU is to look at the attempts being made to allow the farming of genetically modified crops in the EU. Recently a number of EU countries have taken the option to opt out of doing this. This brings into question the efficacy of this type of cultivation and the role of the lobbying efforts of agribusiness corporations which would benefit from this.

Since the centrality of biodiversity has not been evidenced in corporate sustainability and biodiversity reporting (Freeman and Groom, 2013; Rimmel and Jonäll, 2013; van Liempd and Busch, 2013), these studies could be extended using third party reports of the biodiversity impacts of these companies' operations. These could also include more socio-ecological accounts from the margins on the impact of the operations of companies that have an adverse impact on biodiversity. There could be more studies that look at the accountability of industrial agriculture, which could not only have an adverse impact on the livelihood of the smallholder farmer, but also reduce the choices available to the consumer in their food choices. Accounting for biodiversity studies should account for the reduction in biodiversity that is taking place due to 'habitat loss and modification as a result of intensified agricultural practices' (Sizemore, 2015, p.145).

There is also potential for further research on the extinction of species such as the Monarch butterfly caused by the practices of monoculture agriculture. Looking at biodiversity in the context of coffee cultivation is relevant since Dolia, Devy, Aravind and Kumar (2007) have demonstrated the role played by coffee plantations as a buffer for butterfly fauna, while Bali, Kumar and Krishnaswamy (2007) have found that besides being buffers around forest reserves, coffee plantations can also improve the connectivity between them. The literature on accounting for biodiversity has used the

framework developed by Jones (1996, 2003) that has focused on the measurement of corporate natural assets using an inventory and total population count of the species of flora and fauna within the demarcated habitats under consideration. Applying Jones's approach in the habitat of the Monarch butterfly (*Daraus plexippus*) for example, would take an inventory of the population of the butterfly and the Milkweed (*Asclepias incarnate*) on which the butterfly depends on to survive (Pecenka and Lundgren, 2015). Using Jones's approach, there might not be an account of the fact that the populations of the Monarch butterfly have declined by over 81 percent in the Midwestern USA, due to the loss of habitat for Milkweed by 58 percent (Pecenka and Lundgren, 2015). There could also be no account of the cause of this decline related to an increase in monoculture agriculture that has reduced the presence of Milkweed and promoted the increasing use of neonicotinoid insecticides which might have negatively impacted larval monarch populations (Pecenka and Lundgren, 2015).

8.6 Conclusion

This thesis has engaged with the idea of accounting for sustainable livelihoods using dialectical analysis of Fairtrade and agricultural biodiversity using the case study of a coffee co-operative in India. The evidence suggests that the Fairtrade system fails to provide sustainable livelihoods at the level of a coffee co-operative. Agricultural biodiversity shows some promise in being able to replace the input costs of industrial agriculture, however within the context of the Coffee Co-op its effectiveness in providing a sustainable livelihood is curtailed by dependence on corporate value chains.

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Appendices

Appendix 1: Report of the Fairtrade Foundation
Is Fairtrade a subsidy that encourages farmers to grow more coffee and therefore contribute to global oversupply and low prices?

Appendix 2: Excerpts from the Annual reports of the Naandi foundation

Is Fairtrade a subsidy that encourages farmers to grow more coffee and therefore contribute to global oversupply and low prices?

Subsidies

A subsidy is a grant given by a government which lowers the price of a good with the intention of encouraging production and/or consumption of that good or to make a domestically produced good more competitive than an imported good. The cost of these subsidies is imposed on taxpayers or consumers.

Fairtrade, on the other hand, is a voluntary model of trade that brings consumers and companies together to offer smallholder farmers a price for coffee that covers their cost of production and provides a sustainable livelihood. As a result they are able to send their kids to school, improve their business and marketing skills, and diversify if they choose. Whilst it may not be the only solution to the coffee crisis, this is surely more effective than relying on rock-bottom and ever declining world market prices that currently lock farmers into growing more and cheaper coffee each year simply to stand still.

Conventional market

The multinational coffee companies say that it is impossible to help all coffee producers and use that as an excuse for not helping anybody. They are happy to pay rock-bottom market prices for the bulk of their coffee requirements and only pay a higher price when necessary to source a particular quality or origin.

The reality is that the high-volume, low-cost producers can only supply 30% of the quantity needed by the industry. The market therefore relies on around 15 million smallholders who supply 70% of the total market, including a wide range of different qualities, origins and speciality coffees. Inevitably, their production costs are considerably higher than Vietnam's low-wage industry, boosted by government policies to expand agricultural exports, and the large-scale, low-cost Brazilian plantations that have invested in mechanisation and innovative and intensive production techniques.

While the major companies expect smallholders to continue to make available the quantities of coffee they need for their businesses, they aren't prepared even to cover the growers' production costs. This amounts to using smallholders as casual labour to be called on when required and dismissed when surplus to requirements. In the light of this, it is disingenuous for the big players to dismiss Fairtrade as insignificant on the one hand and as distorting the market on the other.

Fairtrade approach

Fairtrade aims to address this situation with particular regard to the most marginalised and disadvantaged producers. Fairtrade works in partnership with traditional coffee growing communities - not recent entrants to the market - and is about promoting production that is both commercially and environmentally sustainable. With the resources to finance cupping laboratories, for example, growers can improve the quality of their coffee which will help them penetrate new markets.

Oversupply and diversification

Most Fairtrade certified coffee co-operatives currently sell only a small part of their crop to the Fairtrade market; therefore their main incentive is to increase sales to the Fairtrade market rather than expand overall production. Like any grower, many may understandably want to increase production to try to recapture from conventional sales some of the income lost as a result of the all-time low prices of the past five or six years. But the reality for most farmers is that they simply don't have the finances to increase planting or purchase additional land to up their production.

Working with Fairtrade can provide opportunities for diversification: in Guatemala, Fairtrade coffee farmers are intercropping with citrus fruits and bananas to increase their incomes and

reduce dependency on coffee. And Fairtrade sales have provided the finances for their co-operative to buy a plot of land to build processing facilities which will increase their share of the export price. Others are growing macadamia nuts and setting up tourism projects. Banana farmers in the Windward Islands now also grow passion fruit and mangoes; tea farmers in Sri Lanka are cultivating spices, while tea estate workers there are accessing low interest loans to set up small enterprises such as vegetable growing, chicken rearing and milk production.

With a global market share of less than 0.5%, Fairtrade is not trying to apply this model across the board, but there is no reason why it can't be applied further into the market to benefit higher cost small-scale producers. We agree with many others, from Oxfam to neo-conservatives, that small-scale coffee farmers would benefit from access to market information, technical support, investment in diversification, a co-ordinated strategy to promote consumption, the reduction or scrapping of tariff escalators on processed agricultural products, and the scrapping of rich nations' agricultural subsidies. Until that day arrives, Fairtrade will continue to engage with producers, consumers and commercial organisations in the development of an equitable coffee market.

The Economic Arguments

Fairtrade coffee is achieving rapid growth but, as mentioned above, remains a very small part of the global market – less than 0.5%. The extent to which the Fairtrade model can be adopted by the world market is debatable, but there are a number of lessons that can be taken from the Fairtrade system in developing a more equitable market for all coffee:

1. The need for new thinking on markets.
2. A more cohesive approach to sustainability.
3. The importance of demand factors and the need to engage with consumers.

With regard to market operations and the crucial mechanism of price, the most frequent criticism of the Fairtrade model is that the adoption of a minimum price for all coffee would encourage further over-production. This has tended to polarise the discussion rather than looking at how Fairtrade principles could be applied more widely. It is clear that a sustained period of low prices has not had the corresponding effect in reducing production that the classic free market model envisages. There are two reasons for this:

(a) The fact that many small growers are almost totally dependent on coffee production for their livelihoods. Not only do they not have the means of investing in alternative production (whether skills, information or capital) but their market opportunities are limited, often by the trade barriers of developed countries. In fact, as the International Coffee Organisation (ICO) and others have pointed out, their dependence on coffee means that many small farmers will increase output at the expense of quality in an attempt to compensate for lower prices. We should not forget the caveat that is applied to most economic rules such as output responding to price - *"ceteris paribus"* (other things being equal). Clearly in world trade things are not equal and this is why Fairtrade sees part of its role as the mobilisation of consumers in the campaign for trade justice and the honouring of the pledge for the current round of World Trade Organisation (WTO) negotiations to be the "development round".

(b) The other problem with the classic market model applied to coffee is that the bulk of consumption is in well-developed and mature markets, which limits the potential for low prices to stimulate demand. This underlines the importance of developing coffee markets in emerging economies and producing counties.

Conversely, our experience in Fairtrade suggests that price support need not increase production if it is matched to market requirements and linked to other sustainability measures such as diversification and quality improvements. The minimum Fairtrade price is not something that is just given by purchasers; it is part of the trading relationship and places obligations on producers in respect of complying with Fairtrade standards and improving quality and sustainability.

The final factor in the price discussion has to be the distinctive structure of the coffee market, which touches the lives of millions of people at both the production and consumption end but is

heavily consolidated in the centre through commodity trading, roasting and retailing. Again we see a model that does not conform to the classic free market model of a large number of independent buyers and sellers operating with equal information and power and with no barriers to new entrants. This is not to open an argument about whether or not companies are exploiting their position – merely to suggest that we need new thinking of how markets can best work with the structure that has developed in order to best serve the needs of all participants in the chain.

The second point is that sustainability initiatives need to be considered in their broad social and economic context. Clearly diversification and reduced reliance on coffee by growers is important in helping to make production more responsive to market conditions, but this can only become a reality if producers have markets for alternative crops. Sustainability also focuses on quality improvements but there is a real challenge in making the knowledge and skills necessary for improved quality accessible to weaker producers who are the ones most likely to be producing low-grade coffee. Our experience in Fairtrade strongly suggests that the co-operative model can provide a good opportunity to encourage best practice among small farmers, and that they can also get involved further along the supply chain to improve information exchange and cost-efficiency. However, all these measures, especially developing the capacity of co-operatives to work effectively, require investment which is a real problem for producers who are not recovering their cost of production in the current market. People cannot think about investment for future years when they are struggling to put food on the table tomorrow, and this is something that the Fairtrade price addresses.

Finally, Fairtrade has a very important role in engaging with consumers - the development of an equitable coffee market must consider demand factors as well as supply ones. Fairtrade has always envisaged part of its role to be a way of reconnecting producers and consumers in the belief that this can add to the perceived value of the product by making it less of a commodity. Fairtrade has demonstrated that many consumers are prepared to pay more for products like coffee if they are given a good reason to do so. And in this respect, education about quality is also vital in the consumer market so that the range of different coffees can be more differentiated, and so that consumers can be encouraged to trade-up to higher value products. However, this has to be more than just marketing hype – it needs to be reflected in the business practice of companies in order to have credibility. In the UK, the Fairtrade Foundation has spent 10 years in establishing the credibility of the FAIRTRADE Mark, so that it can support the work of our licensees in promoting their products. A MORI Poll conducted in March 2004 shows that awareness of the FAIRTRADE Mark among the UK population has increased from 25% to 39% over the past 12 months, making it one of the most widely recognised labels in the consumer market.

Brief background to price volatility and market deregulation

Poor countries are under ongoing pressure to increase exports of cash crops like coffee to pay debts and finance development and to open up domestic markets to international competition in order to meet economic conditions set by institutional lenders such as the World Bank. The collapse in coffee prices has had a disastrous effect on producing country economies and thrown millions of small-scale producers into crisis. The complex reasons behind supply and price volatility in commodities, particularly coffee, have been the subject of various studies and reports funded by institutions such as the World Bank, UNCTAD, and the ICO, as well as TechnoServe and Oxfam[i]. Along with quality improvement, improved knowledge of the market, diversification into other crops, and promoting consumption, many of these studies recognise the development of a sustainable coffee market, including Fairtrade, organic, shade grown and speciality coffee, as a means of bringing relief to struggling coffee farmers.

Coffee has historically been subject to supply and price volatility, mostly due to weather shocks. The repeated cyclical nature of the industry is demonstrated by the 1994 frosts and the 1997 drought which damaged the crop in Brazil, by far the world's largest producer. This resulted on both occasions in global supply deficits which many growers responded to by increasing production to capitalise on the consequent, if short-lived, high prices. These booms were followed several years later by low prices when both supply and stocks recovered to create a further period of oversupply.

From the 1960s until 1989, the market was kept in reasonable balance in part due to successive International Coffee Agreements (ICA). The ICA regulated much of global trade through a system of export quotas and buffer stocks which largely maintained stable and remunerative prices to growers. The economic clauses of the ICA were suspended in 1989 because of abuse of the quota system and their incompatibility with prevalent free market economic policies. These same policies also drove the economic restructuring which progressively dismantled state control of the sector and the support provided by national coffee boards or governments in the form of agricultural subsidies and services and investment in infrastructure.

While liberalisation exposed farmers to market price volatility, it also in many cases initially improved their share of market prices, previously controlled by often incompetent or corrupt institutions. This provided an incentive and, importantly, the opportunity to expand production. Following the suspension of the ICA quota and control provisions, prices immediately dropped to around half their previous level and remained at these lower levels for more than four years until the weather intervened as mentioned above. In effect, coffee producers were left to sink or swim in a liberalised market in which private enterprise had largely failed to fill the vacuum created by the withdrawal of institutional support.

The periods of oversupply historically occur as a result of difficult-to-predict bumper Brazilian crops. The situation has been compounded in recent years by huge production increases in Brazil (mainly arabica) and Vietnam (mainly robusta), which along with Colombia (arabica) account for around 60% of global production and 55% of exports. The combined production surges in Brazil and Vietnam increased global supply by around 12% in 2001 and 2002 at the peak of the current price crisis. That's their prerogative; but it effectively created a 400,000 tonne coffee glut rather than a 400,000 tonne shortfall had their production remained at previous levels. Brazil and Vietnam have cost advantages over other producers because of their high efficiency. In the case of Vietnam this can be attributed to very low labour costs, while Brazil's high labour costs[ii] are mitigated by the use of improved mechanical harvesting and a consequent reduced need for labour.

Interestingly, the increased supply in Brazil is a direct result of the deregulation, private investment and technical innovation so approved of by neo-conservatives, while Vietnam's supply surge was made possible by their bêtes noires – government subsidies and institutional funding.

Vietnam's huge growth in coffee production appears to have hit the buffers as even this low-cost, low-wage producer is struggling to survive on current price levels. According to an ICO report[iii], 45% of Vietnamese coffee-growing families lack adequate food, 66% have bank debts and many children have been taken out of school. Farmers are now being urged to change to higher value arabica production but many are understandably reluctant to grub out their robusta trees and, instead, are upping output in a desperate attempt to earn enough money to survive. Vicofa, the national coffee industry body, is also considering diversifying over 110,000 ha of low quality plantations (out of a total 500,000 ha under coffee) into other crops such as cocoa, cashew, rubber and peppers.

The Fairtrade Foundation, Room 204, 16 Baldwin's Gardens, London EC1N 7RJ.
Tel: 020 7405 5942 Website: www.fairtrade.org.uk

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[i] For example: *The State of Sustainable Coffee: A study of twelve major markets*, Daniele Giovannucci with Freek Jan Koekoek, World Bank 2003
Mugged: poverty in your coffee cup, Oxfam 2002
Coffee Markets: New Paradigms in Global Supply & Demand, Bryan Lewin, Daniele Giovannucci, Panos Varangis, World Bank 2003
Business Solutions to the Coffee Crisis, TechnoServe/McKinsey 2003
International Coffee Crisis – Looking for long-term solutions, High-Level Round Table Report, ICO/World Bank 2003
Coffee: An exporter's guide, International Trade Centre UNCTAD/WTO 2002

[ii] Labour costs per person per day: Brazil, US$4.3 – US$9.5; Guatemala, US$3.9 – US$4.8; Vietnam, US$1.3, *Business Solutions to the Coffee Crisis*, TechnoServe/McKinsey 2003

[iii] *Impact of the coffee crisis on poverty in producing countries*, ICO 2003

Pillars of the Foundation

In spite of the corporate support, Government facilitation and guidance of an eminent Board, Naandi strongly believes that its true strength lies in the combined commitment and character of its small team of dedicated young professionals drawn from diverse backgrounds with complementary core competencies. And the team at Naandi relies on the following four tenets which they consider as the pillars of the Foundation.

Objectivity

Our core values, beliefs and work ethics are all tailored and honed towards objectivity and merit – be it an NGO, a project or an idea. Meeting of minds between Naandi and the implementing NGO or community group or individual is therefore, critical. Thus an objective selection process precedes all the development projects that are undertaken. The in-house appraisal is followed by field visits, expert consultation and then approval by the Board.

Value Addition

Naandi plays the role of a platform to leverage resources and catalyze development projects. The team at Naandi is focused on optimizing the intrinsic value of the donations by identifying credible implementing NGOs; designing cost effective and sustainable projects; and monitoring the project through regular field visits for hands-on non-financial resources support. Thus, making every donation yield manifold in value to the benefactors as well as the donors.

Organic Farming and Tribal Micro-finance

"With coffee, I'm growing pepper and bottlegourd. I am able to get more out of this barren land. Many in my village are asking me to help them shift to coffee."

Lingiah, Gummaguda village, Araku Valley

The tribal community in India has had the worst breaks when it comes to development opportunities. The sheer remoteness of their habitations has often marginalised them from any progressive development efforts.

And from among this community there are a considerable number even worse off. They can't live off the land because they have none, and are barely able to eke out a living from the depleting forests.

By creating stable income opportunities for the poorest among tribals, Naandi created a model of integrated tribal development that could be replicated in larger agency regions.

Organic Coffee and Micro Finance. Our effort at enabling the tribals towards self-reliance has been supported by the Integrated Tribal Development Agency (ITDA) and the local tribal NGO, Adivasi Abhivrudhi Samskrutika Sangham Araku Valley (AASSAV).

Converting 1,000 landless tribal families into coffee cultivators by giving them an acre of semi-wasteland each was an initiative already begun by the ITDA and AASSAV.

Converting them into organic plantations was a Naandi initiative.

Andhra Pradesh

Status - Ongoing
Duration of initiative - January 2002 to March 2005
Project expenditure (2001-2003) - Rs 16,49,024 **Cumulative project expenditure** - Rs 16,49,024
Area - Araku and Dumbriguda Mandals, Visakhapatnam District
Impact - 50,000 tribals in 74 habitations

Organic Farming for Tribals

Coffee is the world's second most valuable commodity ranked right after petroleum.

Coffee is also one of the most sprayed crops in the world, cultivated with extensive use of chemical pesticides.

Concern for health and the environment has been awakening a worldwide demand for organic cultivation standards, and taking a cue from the world demand has been the Naandi organic coffee initiative in Araku, which is home to a majority of Andhra Pradesh's indigenous people.

Different tribes people the Araku region of the Visakhapatnam district of Andhra Pradesh. And 95 per cent of them live a hand-to-mouth existence. Araku is also ideal coffee growing country. There are acres of Arabica plantations here maintained by the Forest Department, which yield good revenues to the state.

Enabling landless tribal families for the first time in this area to cultivate coffee as a livelihood option is the focus of Naandi's tribal livelihood initiative.

For the past three years, this program has been combining the need for an ecological regeneration in

Natural yields

Chemical-free Arabica beans are grown by Araku's tribals following SKAL International's (the Dutch organic farming accreditation agency) stipulations

Partnering with Coffee Board

Lakshmi Venkatachalam, Chairperson, Coffee Board, at an Araku coffee stall

Tribal farmers' clubs

Isolated tribal coffee growers are organised into groups by Naandi to create a platform for collective problem solving

Vital Statstics

Location:	Araku and Dumbriguda mandals, Visakhapatnam district Andhra Pradesh
Programme began in:	2001
Partners:	Indian Coffee Board, Integrated Tribal Development Agency
Programme coverage:	1064 tribal families 1014 acres of organically cultivated coffee plantations on semi wasteland areas 25.78 metric tonnes of clean coffee produced

Key Change Agents

- Enhancing the productivity of denuded land through intensive Natural Resource Manangment techniques.
- Creating market linkages and securing appreciably higher prices for the coffee compared to the rates offered by the local taders.
- Training tribal youth as Barefoot Botanists to enable them to transfer international best practices in organic farming to their communities.
- Grouping nomadic tribals into registered Coffee Farmer Groups and training them to meet their financial needs both on and off-farm effectively.

Glad to Announce

- SKAL International, Netherlands has certified the coffee grown in this project as organic making it possible to explore export options for the coffee crop for the coming year.
- The replicability of this initiative has been proven as 2000 new tribal farmers, and an additional 2000 acres of semi wasteland will be brought under this project in the coming year.
- The Tribal Coffee Farmer Groups have been linked to a range of institutional support mechanisms such as the Price Stabilisation Fund provided by Indian Coffee Board, which secures them against wild price fluctuations.