HIGH VALUE AGRICULTURE STUDY:
THE AFRICAN COFFEE INDUSTRY AND JAPAN’S TRADE AND AID
—SUPPORTING THE TANZANIAN AND ETHIOPIAN COFFEE INDUSTRIES AND THEIR EXPORT PROMOTION—

PROMAR CONSULTING

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1 Introduction

1.1 Project Background

The objective of this project “Fundamental Survey for the Support of Aid to Developing Countries” is to collect and analyze information regarding Sub-Saharan Africa and present it in a format which can become a solid basis for the future implementation of efficient aid activities in Sub-Saharan Africa by international cooperation organizations, particularly in the field of agricultural development. The environmental, geographic and social conditions in Sub-Saharan African countries vary widely. Therefore, it is important to have an understanding of the present situation and the existing challenges within specific countries and for specific crops before determining targets and methods for aid activities. This project looks at this issue from two points of view: the role of subsistence crops in contributing to increases in food security and famine reduction and the role of high-value agriculture in contributing to poverty reduction and income generation, in order to determine ways to approach the current challenges related to these crops.

This project has been executed through the Overseas Development Assistance (ODA) budget framework established by the Japanese Ministry of Agriculture, Forestry and Fisheries. The Ministry's own commitment to international aid and cooperation activities is based on the following six principles:

1. There is a large number of malnourished people in the world, the majority of whom live in Sub-Saharan Africa;
2. There is concern that global food supply will be insufficient for the world's growing population;
3. In Africa, primary industries support more than 50% of the workforce, with agriculture and fisheries being the key industries;
4. The continuing destruction of rain forests and increasing desertification are leading to global environmental issues;
5. There is a need to increase the number of countries that understand and share concerns with Japan during WTO and EPA negotiations;
6. When engaging in post-conflict recovery assistance in developing countries, the agriculture
and fishery industries are highly important.¹

In order to respond to these core issues, it is important to use ODA funding strategically, and the Ministry of Agriculture, Forestry and Fisheries has defined the main aims to be supported by the ODA budget as: 1. Insuring food security in Japan and internationally 2. Facilitating international negotiations related to the agriculture and fishery sectors in WTO and EPA trade talks and 3. Responding to critical global environmental problems and cross-border diseases.

This project primarily supports the first aim, i.e. insuring international food security and it includes two studies. One study focuses on a subsistence crop, collecting and analyzing information on the crop, in order to inform more efficient international agricultural cooperation, as well as to improve the production technology of the crop. This year’s subsistence crop study targets cassava in Mozambique and Tanzania. In previous years, studies have focused on products such as beans from Benin, maize from Zambia and Malawi, grains from Niger and plantains from Uganda.

The second study focuses on a high-value agricultural crop and looks at how a high-value agricultural industry contributes to poverty elimination, as well as analyzing production, processing and trade related to this product. This year’s study targets coffee in Tanzania and Ethiopia. Previous studies have focused on sericulture in Uganda, medicinal crops in Ethiopia, apiculture in Kenya and natural plant fibers in Ghana.

This report in hand summarizes the research on coffee. Our research on subsistence crops, focusing on cassava, is summarized in a separate volume.

1.2 High-Profit Agriculture Research Background and Project Objective

Coffee is one of the most important cash crops and export products in Africa. Coffee beans represent 6% of all African agricultural exports and they are the second most important export product after cocoa. However, the international market for coffee is already well developed. Coffee producer prices are linked to fluctuating international market prices, and producers have difficulty maintaining profit. Furthermore, while coffee production in South America and Asia is expanding, Africa is struggling to keep up with global trends, particularly in terms of plant

replacement and technological innovation.

In Japan, “Moka” and “Kilimanjaro” are considered to be two of the most recognized types of coffee by consumers. Japan is the world's largest importer of moka coffee (produced in Ethiopia) and of Kilimanjaro coffee (produced in Tanzania). However, Ethiopia has recently seen a huge drop in exports to Japan ever since the discovery of pesticide residues on beans in 2008. In addition, confusion resulting from the establishment of the new Ethiopian commodity exchange (ECX) has not been completely resolved. Concurrently, Tanzania has suffered from a dramatic decrease in coffee production in the Kilimanjaro region which has hindered the supply of high quality Kilimanjaro coffee to the demanding Japanese market.

In 2005, WTO's Hong Kong Ministerial Conference proposed the Aid for Trade initiative and Japan announced its own more comprehensive approach entitled Japan's Development Initiative for Trade, which was a combination of various support mechanisms for proactive contribution to the Aid for Trade initiative. The Aid for Trade framework proposed that developing counties can achieve economic growth through international trade under a multinational trade system centered around the WTO. The framework also supports capacity building for international trade and infrastructure development in developing countries. Japan’s initiative called for assisting manufacturing in developing countries to adapt better to market demand through support in three main areas: production, distribution/sales and purchasing. This support would be implemented through a comprehensive combination of the knowledge, technology, funds, people and systems which link producers and laborers in developing countries with consumers in developed countries.

In particular, among the development initiatives for least developed countries (LDC) set by Japan’s Ministry of Agriculture, Forestry and Fisheries is the “ Marketable Agriculture Products” initiative which aims to supporting the entire supply chain from production in developing countries to dining tables in importing countries. The aid activities target not only production in developing countries, but also the distribution and export systems. Aid is targeted at sales channels as well by proposing duty-free and quota-free measures for products coming from developing countries. In other words, in order to develop trade in the products produced in developing countries, it is important to analyze market opportunities by looking at three key elements: expansion of production capacity, streamlining of the transport and logistics system and investigation of the consumption habits overseas.

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3 “Toward Positive Circle of Development and Free Trade”, Ministry of Agriculture, Forestry and Fishery at
Therefore, collecting data and analyzing the dynamics of current or potential aid for producing marketable coffee for consuming countries corresponds directly to the objectives of the development initiatives of the Ministry of Agriculture, Forestry and Fisheries. For this year’s study, we chose Tanzania and Ethiopia as research targets because they are key suppliers to the Japanese coffee market.

While Japan tends to import the highest quality coffee beans from Ethiopia and Tanzania, this coffee does not necessarily always satisfy Japanese market requirements due to issues with the stability of supply or the overall quality. Therefore, in order to maintain and expand their share in Japan, Ethiopia and Tanzania must understand Japanese market requirements and build coffee supply systems that can meet these requirements. Based on these considerations, the objective of this project is to provide basic information to support marketable coffee production, producing coffees in Ethiopia and Tanzania that can be sold in the lucrative Japan market, thereby contributing to poverty reduction through income generation for Ethiopian and Tanzanian producers.

The study looks deeply at the current situations on the ground in Tanzania and Ethiopia as well as analyzing the international coffee market, both for commodity coffee and for specialty and niche coffees such as those certified as organic, Fairtrade or environmentally-friendly, in order to assess how the Ethiopian and Tanzanian coffee industry is linked to international markets.

1.3 Project Methodology and Execution

A summary of how the research was conducted is found below. This project also included an advisory board of experts in related fields who helped insure efficient research with their experience and insight, participated in lively debates and provided feedback for fine-tuning conclusions.

Project Execution Team

<table>
<thead>
<tr>
<th>Project Manager</th>
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<tr>
<td>Rie Yoshida, Promar Consulting Executive</td>
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<table>
<thead>
<tr>
<th>High-Value Crop Research Project Team</th>
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<tr>
<td>Lucia Vancura, Promar Consulting, Senior Consultant</td>
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</table>

In order to get a better understanding of the coffee industry, coffee import mechanisms and other key coffee issues, we first conducted interviews with Japanese importers, roasting companies and fair-trade certification companies, as well as several organizations in London. Following this initial phase, field research was conducted in Tanzania and Ethiopia in order to obtain accurate
understanding of the present situation in the coffee industries in the two countries. The types of interviewees are given in the table below.

<table>
<thead>
<tr>
<th>Interview Location</th>
<th>Dates</th>
<th>Interviewee</th>
<th>#</th>
</tr>
</thead>
<tbody>
<tr>
<td>Japan and London</td>
<td>Oct-Nov, 2010</td>
<td>Importers</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Roasters</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Industry organization</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Fair Trade Organization</td>
<td>2</td>
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<td></td>
<td></td>
<td>Government Agency</td>
<td>1</td>
</tr>
<tr>
<td>Ethiopia</td>
<td>Nov 14-20, 2010</td>
<td>Ethiopian Government Agency</td>
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</tr>
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<td></td>
<td></td>
<td>Research Centers</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Aid Organization</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Producer Cooperatives</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Distributor</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Processor/Roaster</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Japanese Government Representative Office</td>
<td>2</td>
</tr>
<tr>
<td>Tanzania</td>
<td>Dec 4-11, 2010</td>
<td>Tanzanian Government Agency</td>
<td>2</td>
</tr>
<tr>
<td></td>
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<td>Processor/Roaster</td>
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<tr>
<td></td>
<td></td>
<td>Industry Organization</td>
<td>1</td>
</tr>
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</table>
1.4 Project Outline

This study consists of six chapters. The next chapter (Chapter 2) gives an overview of global coffee demand and a look at the coffee industry in Africa today. Raw green coffee beans are a global commodity that is traded in every country in the world. The report will explain how the majority of producers’ prices for raw coffee beans are dictated by the international commodity future market prices and analyze trends in world production and consumption of coffee beans over the past 30 years. We also discuss how the international commodity futures price of coffee is based on changes in international supply and demand. In the final part of the chapter, we provide an overview of the coffee industry in Africa, comparing it with the coffee industries of countries in South America and Asia.

In Chapter 3, we summarize trends in Japanese coffee imports and explain the Japanese coffee market structure, as well as the import volume and prices, emphasizing the positions of Tanzania and Ethiopia throughout. In addition, we look at the coffee market size for regular roasted coffee and instant coffee, as well as the structure and the ongoing changes in the market. In the final section of the chapter, we discuss challenges in the Japanese coffee industry and the growing market for certified fair trade and sustainable coffee products.

Chapter 4 deals with the existing dynamics of coffee production and distribution in Tanzania. We discuss the Tanzanian government’s new development policies for the 5-year period starting from 2011 and analyze the present situation and challenges for coffee production and distribution. With this background, we show the reasons for the decline in coffee quality and production volume in the Kilimanjaro province, and trace the journey of Kilimanjaro beans from tree to export. Finally, we introduce case studies of aid and investment for the Tanzanian coffee industry by US and Chinese organizations.

We deal with coffee production and distribution in Ethiopia in Chapter 5. One of the important issues that we discuss is the recent change in the coffee industry in Ethiopia due to the fact that the auction system has been replaced by the new Ethiopian Commodity Exchange (ECX), affecting the distribution system. Another key issue is the declining exports of Ethiopian coffee to Japan due to the detection of pesticide residue levels higher than Japan’s acceptable minimum levels in 2008. With these two issues in mind, we discuss the current government policies towards coffee industry development and trace the Ethiopian coffee production chain from picking to packing. Finally, we introduce a pair of aid and investment case studies from Japan and Germany, related to Ethiopian coffee marketing.

The last chapter presents our concluding remarks regarding effective aid policies for the coffee industries in Tanzania and Ethiopia. It summarizes the challenges for the coffee industries in the
two producing countries, especially in the context of market demand in Japan, and recommends areas for foreign aid and investment that could both help further develop the coffee industries and improve the lives of coffee producers in Tanzania and Ethiopia.
2  African Coffee Production within the Global Market

2.1  Global Coffee Production and Consumption

There are two types of coffee produced in the world – Arabica and Robusta. Arabica is considered to be a higher quality bean, prized for its complex aroma and flavors. Robusta is a higher caffeine bean and, while sometimes described as bitter, it is often blended with Arabica to bring caffeine and flavor balance. Lower quality Robusta is often used for processing as instant coffee or other coffee-flavored products. The two types of coffee prefer different cultivation environments, with Arabica found in highland areas and Robusta produced in lowlands. In general, Robusta trees are hardier and more tolerant of pests, allowing for higher yield under harsher conditions than Arabica. This has led to Robusta being a cheaper, and some say easier, bean to produce.

<table>
<thead>
<tr>
<th></th>
<th>Caffeine Content(%)</th>
<th>Yield (kg/ha)</th>
<th>Optimum Yearly Average Temp.(C)</th>
<th>Optimum Rainfall (ml.)</th>
<th>Optimum Altitude (meters)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arabica</td>
<td>0.8~1.4</td>
<td>1,500~3,000</td>
<td>15~24</td>
<td>1,500~2,000</td>
<td>1,000~2,000</td>
</tr>
<tr>
<td>Robusta</td>
<td>1.7~4.0</td>
<td>2,300~4,000</td>
<td>24~30</td>
<td>2,000~3,000</td>
<td>0~700</td>
</tr>
</tbody>
</table>

Source: Tanzania Coffee Research Institute

Green coffee beans are produced by picking ripe coffee cherries from coffee trees and then processing to remove the flesh of the cherry. There are generally two methods of processing: wet processing (resulting in washed coffee beans) and dry or natural processing (resulting in unwashed beans). Wet processing is generally divided into initial primary processing on the farm and then secondary processing at a processing center. In the primary processing on the farm, a pulping machine is used to remove the flesh from the cherry, leaving only the bean inside. The green beans are then submerged in water to let them ferment for 12-24 hours, a process that breaks down the slippery mucilage that still covers the bean. The beans are then washed again to remove the loosened mucilage, and dried, often on raised tables outside. Drying can take ten or more days. Once dried, these beans are known as "parchment" because of the parchment-like skin that still covers the bean. Next, at the curing factory (dry mill), a hulling machine will remove the parchment and the "silverskin" that surrounds the bean and what will be left is the green
beans, ready for roasting. In contrast, dry processing involves simply drying the whole red cherry in the sun, and then later using a machine to remove the skin, dried cherry flesh and parchment.

Robusta coffee is primarily dry processed. For Arabica, wet processed Arabica is known as “Mild” Arabica and dry processed as “Hard” Arabica. Mild Arabica is considered to be higher quality and commands higher prices, because in dry processing where the fruit flesh is not removed directly after harvesting, the aroma and flavor of the bean can be affected by any unpleasant smell of the fruit flesh as it dries around bean. It should be noted though, that for some types of beans such as Ethiopian moka, dry processing is preferred by some buyers as it produces richer flavors.

The majority of beans are exported as green coffee beans, and then in the consuming country they are roasted, and then either sold as roasted beans or further processed into instant coffee or other coffee drinks. Once coffee beans are roasted, the flavor and quality begins to deteriorate, so exporting roasted beans from coffee producing countries is difficult due to the long shipping times required to reach the main coffee consuming nations. Processing instant coffee or other coffee-based products in producing countries is a possibility. However, developing these industries would require investment, and because coffee processing is not particularly labor intensive, the low-wages of developing countries do not provide much advantage over established processing industries in developed countries. Coffee bean producing countries which also process beans for instant coffee are limited to Brazil and a small number of others.

Other challenges facing the potential development of coffee processing industries in producing countries, are that, as developing countries, there is also a lack of locally-produced vacuum packs and other packaging and preservation technology that are needed for creating a product that is marketable in the coffee-consuming countries.

2.1.1 Global Coffee Production and Export Volumes

To understand African coffee production today, it is important to look at it with a global production context. World coffee production, of Arabica and Robusta beans combined, has increased from 81 million bags or 4.8 million tons in 1980/81 to 120 million bags, or 7.2 million tons in 2009/10. Coffee is grown primarily in countries situated in the “Coffee Belt”, the tropical area between the Tropic of Cancer and Tropic of Capricorn.
World production is dominated by Brazil; Vietnam has also expanded its industry since it began producing in 1994, becoming a major coffee powerhouse, as the chart below indicates. On the other hand, Africa – the coffee’s country of origin – lags this production increase in Latin America and Asia, producing a total of 810,000 tons which accounts for just 11% of the current world production.

Graph 1: Global Coffee Production, 1980-2010

Six of the top ten are South American producers, with Ethiopia the only African producer (though Uganda is nearly even with 10th place Peru). Although production is biennial, Brazil remains the world leader whether it is an on or off year. Brazil is on a recent upswing, however, with a 20% increase between 2009 and 2010, and production was forecasted to increase 20%+ in 2010-2011, driven in part by a push to expand Arabica production as Arabica beans command higher prices. 2011-2012 is an off year, but Brazil is still expected to have only slightly less production than 2010-2011.
Graph 2: Coffee Production Volumes for the Top 10
Global Coffee Producers, 2010

Source: International Coffee Association

*Vietnam's production is Robusta; Brazil, India and Indonesia are a mix of Arabica and Robusta; the others are Arabica.

The entry of Vietnam into the world coffee market has had a large impact. Vietnam’s Robusta coffee has quickly become in demand as a less expensive component of coffee blends, as well as instant coffee and coffee drinks. Vietnam’s success is seen to have come at the expense of producers in South American and African countries who have not been able to compete with the low-cost, efficient production and large volumes Vietnam has been able to supply.

Global Coffee Export

About 45 countries export coffee and the top export countries are a similar list as the top producers, with the notable exception of Ethiopia, which has a strong and ancient coffee drinking culture and consumes around 50% of the coffee it produces, while Brazil and other developing countries are also increasing domestic consumption.
Global Coffee Consumption

The top consuming countries are the US, Brazil, Germany, Japan and France. However, per capita coffee consumption is highest in the Scandinavian countries. Recently, emerging countries are expanding their coffee consumption. Brazil went from consuming 460 thousand metric tons in 1980/81 to 1.1 million metric tons in 2009/10, an increase of 650 thousand metric tons; Indonesia increased by 100,000 metric tons, Vietnam by 70,000 metric tons, Russia by 80,000 metric tons.

Brazilian per capita consumption in 2009 was 5.64 kg per capita, Japanese was at 3.36, while the US was 4.09 kg per capita. The Scandinavian countries average around 10 kg/capita.
The vast majority of coffee production takes place in developing countries while the bulk of coffee consumption is in developed countries. This creates a stark dichotomy between coffee exporting countries and coffee importing countries. What is primarily in demand in importing countries is simply green coffee beans of various prescribed qualities. Therefore, producing countries must supply a commodity coffee – a coffee defined purely on its physical characteristics. The roasting, packaging, retailing and “image-making” is all conducted within the importing countries, meaning that businesses in the developed countries are collecting the profits from the value-added activities of roasting and marketing. Four major coffee multinational coffee companies (Nestle, Kraft, Proctor and Gamble and Sara Lee) dominate the global coffee trade. Within this system, coffee producers have some control over improvements in the physical quality of the beans, but very little control over the downstream activities that roast the beans to suit a market and offer them to consumers. Addressing this imbalance in the power dynamic and benefit sharing is one of the motivations behind initiatives such as Fair Trade certification, and proposals for capturing more of the benefits of coffee processing and marketing within their own countries is a feature of developing country governments.

2.1.2 World Coffee Prices and Commodity Futures Trading

Coffee is the world’s most traded commodity after crude oil. The main Arabica coffee options and futures are traded in New York at the Intercontinental Exchange (ICE), while Robusta futures are traded in London. In addition, several other exchanges including Singapore, Brazil and Tokyo
also trade in coffee futures. However, it is NY and London that set the price for world Arabica and Robusta.

Producer countries have little control over these global prices, as the coffee prices are essentially set on the New York or London exchanges; the prices determined there are the benchmark for the price worldwide. Coffee price volatility, even within one day, makes coffee futures trading popular with speculators. Coffee futures trading is extremely complex, but essentially, the traders are bidding on a set type of contract, the Coffee “C” contract. The specification is for 37,500 pounds of coffee, delivered from one of 19 producer countries to one of 7 possible warehouses in the US or EU. The coffee delivery is set for one of 5 months: March, May, July, September or December. Major coffee importers and traders buy huge volumes of coffee and store in their own warehouses, selling off little by little, depending on the prices they can get or the needs of their customers. However, with huge volumes of coffee in storage, these companies are at risk if prices fall, or if their stocks are low they face risk if prices rise. Coffee futures trading therefore, is a way for major coffee traders to hedge risk by buying and selling coffee contracts now and then receiving the coffee in the future at one of the pre-determined delivery dates, for the price decided previously on ICE.

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Unlike other major commodities like sugar or cotton, globally coffee production and export is not highly subsidized or controlled by trade restrictions. This means that coffee is very subject to free market cycles and stabilization of world coffee prices is a constant topic of discussion.

One way for coffee to be traded outside the commodity market is for the coffee to be sold as specialty coffee. Specialty coffee is generally defined as a single origin coffee, with the growing region, sometimes called a "microclimate" having ideal characteristics to produce a coffee with unique flavor and aroma. The Specialty Coffee Association of America (SCAA) has created a grading system for specialty coffee.
Specialty coffee as well as other niche coffees, such as organic and fair trade, are a small part of the overall coffee trade but are a robustly growing segment.

To prevent a decline in coffee prices, in 1962 the International Coffee Agreement was put into force and the International Coffee Organization was established soon after to oversee the ICA. Under the International Coffee Agreement, producing countries were given an export quota and the volume of coffee beans traded on the international market was artificially controlled, with an aim of avoiding low price stagnation and ensuring price stability. Member countries were classified as either exporting (producing) countries or importing (consuming) countries and at the yearly General Assembly meetings, the allowable export volume for each exporting country was decided. The International Coffee Agreement was effective to a certain degree. During the 4th International Coffee Agreement (1983-89), the New York commodity coffee price did not fall much below the stable price range of 120-140 cents/lb established by the ICA. However, in July, 1989 the International Coffee Agreement expired, the export quota system fell apart, and commodity coffee prices began to decline.

After the end of ICA, the world coffee price became volatile. World coffee prices fell dramatically in 2001, and triggered what was known as the coffee crisis, threatening the livelihoods of millions of coffee growers. The cause of the price collapse was a supply-demand imbalance. Growth in supply, primarily driven by Vietnam’s expansion as well as new Brazilian plantations, was increasing supply at 3.6% per year while demand was rising only 1.5%. In countries where coffee farming was part of subsistence agriculture, as it often is in African countries, the falling coffee price meant less income for basic necessities.

Currently global demand for coffee is strong, partly due to high consumer demand in buying countries and partly because of a need replenish stocks that are unusually low. According to the International Coffee Organization, stocks have been depleted due to increased exports and supply problems. Exports in the first 4 months of the 2011 coffee year are 13.4% than that same period last year. (ICO)

Since then, coffee prices have recovered and in February 2011 they reached a high of $2.16, the highest composite price since 1977 – so high that consumers in developing countries were told to brace for rises in retail prices.
While the coffee prices have recovered from the coffee crisis years of 2001-2005, commodity prices are still vulnerable to the natural cycles of global supply and demand and the coffee economy will continue to experience these highs and lows.

Unlike other major commodities like sugar or cotton, global coffee production and export is not highly subsidized or controlled by trade restrictions. This means that coffee is very subject to free market cycles and stabilization of world coffee prices is a constant topic of discussion.

Nevertheless, because coffee importing countries can shop the globe for the type of commodity coffee they need, supply in Vietnam can have a direct effect on coffee sales in Ethiopia and impact can be swift. Countries like Ethiopia and Tanzania are part of the “global commodity chain” for coffee and are vulnerable to the volatility found in commodity markets, which tend to hurt the developing country which is highly dependent on this commodity trade.

Ethiopia and Tanzania make up only 4% and 0.6% of global production, respectively and the countries’ production have little or no affect on world coffee prices. And yet the Ethiopian and Tanzanian producers are directly linked to the New York commodity futures price for coffee. In both Tanzania and Ethiopia, governmental control of coffee distribution was liberalized in the early to mid 90s, and from that point the link with international market prices became even clearer. In countries like Brazil with large plantations that harvest coffee by machine, a 0.50 cent/lb New York commodity price can cover the production costs. However, in Tanzania where
small scale farmers harvest coffee by hand, the price must be over 150 cents/lb in order for them to make a basic living.  

0.50 cents per pound is a constant reality, but 150 cents/lb is a peak that is seen only a once every several years. More often than not, those price peaks are related to poor production volumes in Brazil, the world’s dominant supplier. However, Brazil has been moving coffee production to its Northeast, introducing new coffee varieties and irrigation technology and mechanizing its production. The expectation is that the frosts and droughts that have hurt Brazilian production in the past, and have led to high international prices, will become less common.

Graph 6: Commodity Coffee Bean Prices (ICE) vs. Tanzania and Ethiopia Producer Prices

The ICO determines its commodity indicator price as a weighted average of the four commodity coffee types (both Arabicas and Robustas) based their market share and on the prices in main markets. The commodity coffee market prices used for the indicators are US and the EU (France and Germany). The four coffee types currently hold the following shares (Robusta is expected to decrease slightly this coming coffee year).

Source: International Coffee Organization

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4 Tsujimura, Hideyuki *The Economics of Great-Tasting Coffee - Kilimanjaro Coffee’s bitter reality*, 2009
In general, Colombia Mild is the most expensive, followed by other Milds, Brazilian Natural and then other Naturals. Colombia Mild is a bean produced only in Colombia, Tanzania and Kenya, and while it only totals 9% of the world’s production, it is considered the top quality bean. The remaining world coffee production is split fairly evenly between other Mild Arabicas, Hard (Natural) Arabicas and Robustas.

Below we can see how African coffees fit within these commodity coffees:

**Table 1: African Coffees By Type**

<table>
<thead>
<tr>
<th>Type</th>
<th>Countries</th>
</tr>
</thead>
<tbody>
<tr>
<td>Colombian Mild (Arabica)</td>
<td>Tanzania, Kenya</td>
</tr>
<tr>
<td>Brazilian Naturals (Arabica)</td>
<td>Ethiopia</td>
</tr>
<tr>
<td>Other Milds (Arabica)</td>
<td>Burundi, Cameroon, Madagascar, Malawi, Rwanda, Uganda, Zambia</td>
</tr>
<tr>
<td>Robusta</td>
<td>Angola, Cameroon, Central African Republic, DRC, Cote d’Ivoire, Gabon, Madagascar, Tanzania, Togo, Uganda</td>
</tr>
</tbody>
</table>

*Source: International Coffee Association*
2.2 African Coffee Production

2.2.1 Production Origins, Varieties and Volumes

Africa’s share of the world coffee market has been slowly, yet continuously shrinking, from 17% in 1995 to 13.6% in 2007, to closer to 11% today. Below we can see Africa’s production alongside that of the other coffee-producing regions of the world.

Graph 8: Global Coffee Production by Region, 2010/2011

![Graph showing global coffee production by region.](image)

*Source: USDA FAS*

The style of production depends on the country and region; Africa has both large plantations, and small-scale family plots, although the small-scale producers dominate. In West Africa there are many areas where coffee is the single crop of small-scale farmers. In East Africa there are many examples of garden-style coffee where coffee is planted among other crops in the family plot.

In 2009, 22 African countries produced coffee. In 2009, according to the International Coffee Association, Africa produced 13,447,000 bags of coffee or 806,820 MT. Ethiopia, Uganda and Cote D’Ivoire were the top producers, having 70% share of total African production.
The largest coffee producer in Africa is Ethiopia, a target of this study. Ethiopia produces only Arabica and more than 95% of Ethiopian coffee is produced by small farmers, with the rest produced by large coffee plantations. While Ethiopia does not have a huge share of world exports, the high quality of its beans still make it an important player in the global coffee market. Ethiopia exports coffee to Germany, US and Middle East and it used to export a significant amount to Japan, before exports declined sharply in 2008 due to the detection of pesticide residues on coffee beans, an issue that will be discussed later in this report.

Uganda, the second largest coffee producer in Africa, and Cote D’Ivoire, the third, both mainly produce Robusta. Uganda, which is located in the East African Highlands, has the unusual distinction of growing Robusta at high altitude, but the production has unfortunately been severely affected by coffee wilt disease in recent years. Uganda exports coffee mainly to Germany. On the other hand, Cote D’Ivoire, famous also for cacao, exports to its former colonial ruler France as well as other European countries.

Tanzania, the other target country in this study, holds 5% of African production, and is the fourth largest producer in Africa. Tanzania produces mainly Arabica, but also produces some Robusta. Again, 90% of production is done by small farmers. Japan is the largest export destination with the US and EU also importing from Tanzania.

The balance between Arabica and Robusta production for Africa in the 2010-2011 season can be seen in the chart below.
Graph 10: African Production of Arabica and Robusta by Country, 2010-2011

Map 1: Major African Coffee Producers

Source: USDA FAS

Source: Promar Consulting
2.2.2 The African Coffee Industry within African Agricultural Economy

Coffee is an important cash crop for millions of Africa's farmers, and yet overall Africa's coffee production has been declining. Coffee is certainly still a cash crop, but only in a few countries is it produced in volumes that make it a major cash crop for the country. This has been attributed to the coffee industry in Africa struggling in the unregulated international coffee market, after the export control quotas of the International Coffee Agreement broke down in 1989. Without export quota controls, African coffee industries face stiff competition from countries like Vietnam, which has rapidly built an efficient coffee production system that international buyers appreciate and Brazil, which continues to modernize its industry. African producers, however, are no longer protected.

In addition to the lack of quota protections, there are other factors which are affecting competitiveness of African coffee production. These factors include wars and conflicts in some of the producing countries over the past decades that have destroyed coffee industries as well as aging coffee trees due to lack of investment in the industry.

Environmental degradation and soil erosion are other key issues. In many areas, the growth of the African coffee industry had been due to the availability of fertile land and the availability of labor for coffee farming, which is very labor intensive. In many cases, increased productivity came from increased planting and labor usage, not from improved inputs or production methods.
However, as soil fertility now declines and African farmers lack the improved seeds, inputs and production methods their competitors use, African productivity is faltering.

Furthermore, in many countries, government investment and support for the coffee industry is inconsistent. Overall in Africa only 1% of agricultural GDP is spent on research, which means there has been little to spend on research into coffee production methods, improved processing methods or new coffee varieties more tolerant to pest, disease or climate change. The gaps in government funding also mean that many African countries suffer from a lack of extension services and support for linkages between farmers, inputs and markets.

The main challenge is for African coffee industries to remain competitive within today’s liberalized coffee market against the Asian and South American producers. The areas of greatest interest:

- Development-oriented agricultural research that will develop high yield, disease resistant plants and analyze the effects of climate change on the particular country’s ecosystems.
- Investment in infrastructure and logistics throughout the supply chain
- Improvement in quality control and traceability
- Enhancement the capacity of smallholder farmers and farmer associations through extension services and training
- Provision of services to farmers and coffee industry stakeholders including financial services such as microloans or credit for inputs
3 Japanese Coffee Trade and Market Characteristics

3.1 Imported Coffee

Because Japan produces virtually no coffee, it relies solely on imports for its coffee consumption. Japan’s coffee imports have increased an average of 2.7% annually since 1980 and reached 430,000 tons in 2009, double that of 1980. Imports peaked in 2006 with 450,000 tons and import volume has fluctuated between 420,000 and 430,000 tons since then.

Graph 12: Japan Coffee Imports*, 1980-2008

Source: All Japan Coffee Association and Ministry Of Finance Trade Data

*Green bean equivalent

The top five origins of Japan’s coffee beans in 2009 mirror the top 5 global coffee producers: Brazil, Colombia, Vietnam, Indonesia and Guatemala. These five countries make up 85% of Japan’s imports. Out of these, Brazil, Columbia and Guatemala mainly produce Arabica beans while Vietnam and Indonesia produce mainly Robusta coffee beans. Import volumes from the
three Arabica-producing countries have more than doubled over the last 30 years. Of the Robusta-producing countries, imports from Vietnam began to take off in the mid 90s as the country expanded its coffee industry and in 2007 Vietnam overtook Indonesia and became Japan’s third largest coffee supplier.

The targets of this report, Ethiopia and Tanzania - both Arabica-producing countries - marked increases since 1980. Tanzania, whose “Kilimanjaro” type coffee has built its own unique position in the Japanese market as a high quality coffee bean, has maintained stable exports since the late 1990s of 8,000 to 10,000 tons. In contrast, Ethiopia, whose “moka” style coffee bean in particular is prized in Japan for its unique flavor, grew steadily from the late 1990s, as it was increasingly used in coffee blends, until it peaked at around 40,000 tons in 2006, making it the year’s 4th largest supplier, behind Brazil, Colombia and Indonesia. However, as will be discussed further in this report, Ethiopian coffee beans were found to have pesticide residues above the Japanese import limits in 2008 and subsequently Ethiopian exports to Japan dropped, reaching only 1,000 tons in 2009.

Other than Tanzania and Ethiopia, imports to Japan from other African producers such as Uganda, Cote D’Ivoire, Cameroon or Kenya are small.

Graph 13: Top Green Bean Imports to Japan by Country 1980-2009

*Source: Japanese Ministry of Finance*
The New York Intercontinental Exchange (ICE) futures price is the base for the export prices (FOB price) of commodity coffees in producing counties; import prices in consuming countries like Japan take this base export price, adjusted slightly according to bean quality, export volumes and negotiating power of the buyer and then add surface shipment costs and marine insurance fees.

In general if one looks at import coffee prices by country, Colombian Mild Arabica from Colombia and Tanzania command the highest prices, followed by Brazil while the lowest is the Robustas from Vietnam and Indonesia.

Green beans have no import tariffs in Japan, but processed goods like roasted coffee, instant coffee, and coffee extracts have a base tariff of about 10% to 20 %. However, many coffee producing countries are developing countries, which are designated as the beneficiaries of the GSP (Generalized System of Preferences) preferential rate. All of the top five green bean exporting countries qualify for GSP. In addition, Tanzania and Ethiopia are designated as LDCs (least developed countries) which benefit from a special preferential rate and owe no tariffs at all for processed coffee products. In this way Ethiopia and Tanzania have some degree of price advantage in the Japan market over the world’s major coffee producing countries.

<table>
<thead>
<tr>
<th>Product</th>
<th>HS Code</th>
<th>Tariff General</th>
<th>Tariff WTO</th>
<th>Tariff GSP</th>
<th>Tariff LDC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coffee (Not roasted)</td>
<td>0901.11 000</td>
<td>Free</td>
<td>(Free)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Coffee (Roasted)</td>
<td>0901.12 000</td>
<td>Free</td>
<td>(Free)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Coffee extracts, essences and concentrates</td>
<td>2101.11 100</td>
<td>24%</td>
<td>-24%</td>
<td>15%</td>
<td>Free</td>
</tr>
<tr>
<td>Instant Coffee</td>
<td>2101.11 210</td>
<td>12.30%</td>
<td>8.80%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td>2101.11 290</td>
<td>16%</td>
<td>15%</td>
<td></td>
<td>Free</td>
</tr>
<tr>
<td>Preparations based on coffee extracts, essences and concentrates</td>
<td>2101.12 110</td>
<td>24%</td>
<td>-24%</td>
<td>15%</td>
<td>Free</td>
</tr>
<tr>
<td>Instant Coffee</td>
<td>2101.12 121</td>
<td>12.30%</td>
<td>8.80%</td>
<td></td>
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<td>16%</td>
<td>15%</td>
<td></td>
<td>Free</td>
</tr>
</tbody>
</table>

Source: Ministry of Finance trade data; tariff rates in parenthesis have not yet been implemented

3.1.1 Issues and Challenges for Tanzanian “Kilimanjaro” Coffee in the Japanese Market

“Kilimanjaro” is a widely recognized and well-liked type of coffee in the Japanese market, and the word “Kilimanjaro” has strong marketing power. Traditionally it referred to a Colombian Mild Arabica coffee from the Kilimanjaro region of Tanzania; it was imported into Japan at high prices and gained the status of being the top-priced bean among the popular commodity coffees on the Japanese market. However, Tanzania’s coffee production is not limited to coffee from the Kilimanjaro province. Coffee is produced throughout the country and both Arabica and Robusta are grown. Furthermore, there are different processing methods that can result in washed Arabica (mild Arabica) and non-washed Arabica (hard Arabica.) Therefore, not all Tanzanian coffee can really be called “Kilimanjaro”. Nevertheless, in 1991 the All Japan Fair Trade Council of Coffee set the “Fair Trade Code of Roasted Coffee and Instant Coffee” and approved the labeling of all mild Arabica coffee produced in Tanzanian as "Kilimanjaro" coffee, regardless of whether it is grown in Kilimanjaro or in the southern highlands. In addition, blended coffee comprised of 30% or more Tanzanian mild Arabica beans could be labeled as "Kilimanjaro". The guidelines went into effect in 1993 and coffee imports to Japan from Tanzania began to rise around the same time, due in part to the fact that coffee beans produced in other countries around Tanzania could no longer be labeled as "Kilimanjaro".

Tanzanian Kilimanjaro coffee has a sweet, mild aroma and high acidity, resulting in a bright, high quality flavor. According to a survey conducted by the All Japan Coffee Association, the top reasons Japanese consumers gave for liking Kilimanjaro were: 1. The flavor and aroma are good 2. It’s what I always drink 3. The name and image are good. Internationally, Kenyan coffee, which is also a Colombian Mild, has a good reputation, but in Japan, only 1,700 MT of Kenyan beans were imported in 2009, one-eighth the volume of Tanzania, illustrating that not only is the flavor of Tanzanian coffee popular in Japan, but the positive name and image of “Tanzanian Kilimanjaro” has been successfully established. Tanzanian beans do not face serious competition from Kenyan beans in Japan.

In addition to being sold as high quality roasted beans, Tanzanian beans are also used as an ingredient in high quality blends for home or restaurant use, as well as in canned coffee or coffee drinks by a variety of manufacturers who add the label "Kilimanjaro" to the can and are then able to sell in a slightly higher price range.
However, in the early 2000s when the international coffee price stagnated and producer prices fell, there was a subsequent abandonment of coffee trees by some producers which damaged the quality of Tanzanian coffee. At the same time, production volumes fluctuated dramatically and coffee traders became extremely concerned about the stability of supply and quality of Tanzanian coffee. In particular, in the north, coffee producers continued to abandon coffee production, and coffee traders have indicated that supply of the highest quality, true Kilimanjaro coffee (that actually grown on the slopes of Kilimanjaro mountain itself) has became harder to obtain.

At the same time, demand has been increasing for Tanzanian coffee beans from the southern regions for use in roasted blends and canned coffee. Coffee from southern Tanzania can also be labeled as Kilimanjaro and the prices are cheaper. In the past the quality of coffee from the south was extremely poor. However due to the support of Western donors and NGOs, more coffee washing and processing facilities have been established and quality has greatly improved. However, southern beans are still considered inferior to northern beans in quality and many roasting companies complain of the low quality of southern Tanzanian beans.

For these reasons, many in the Japanese coffee industry think support is needed for the continued production of high quality Mild Arabica in the north and for further quality improvement in the south.

### 3.1.2 Issues and Challenges for Ethiopian “Moka” Coffee

*Moka* coffee is defined as coffee beans produced in Ethiopia and Yemen. Ethiopia is the birthplace of Arabica coffee and wild coffee trees can still be found in Ethiopia. The name *moka* is derived from the fact that, historically, coffee beans produced in Ethiopia and Yemen were exported from the Yemeni port of Moka. However, Japan’s imports of Yemeni beans are only around 460 tons, meaning that in the Japanese market, *moka* primarily refers to Ethiopian coffee beans, especially those produced in Harrar and eastern areas of the country.

Ethiopia produces primarily unwashed coffee and while, in general, unwashed coffee is less favored due to the negative affect that the dried and deteriorating cherry skin can have on the flavor or smell of the beans, for Ethiopian beans, unwashed beans are actively sought by Japanese coffee retail chains and roasting companies because the smell is regarded as "*moka*-like." *Moka* coffee has a unique aroma, mild acidity and full-bodied flavor. Once the
"moka-like" aroma became popular in the Japanese market, Ethiopian coffee became a key product, not only to sell on its own but also as an essential ingredient in blends.

Although Ethiopian coffee is an essential part of the Japanese coffee market, imports to Japan have recently faced two significant challenges. The first was the discovery of pesticide residues over the acceptable maximum limit during routine agrochemical residue inspections of imports in April and May of 2008. Tests found samples of excess of Lindane, chlordane and heptachlor, all powerful pesticides. Furthermore, in June and July, DDT was also discovered. Accordingly, the Ministry of Health, Labor and Welfare (MHLW) issued an Inspection Order which effectively stopped imports, by requiring thorough inspection of every shipment of coffee, at the importer’s expense. Coffee bean imports from Ethiopia dropped from 29,000 tons in 2007 to 8,000 tons in 2008, and then to just 1,000 tons in 2009.

Except for coffee production at large scale plantations, Ethiopia uses little to no pesticide in coffee production and therefore it was thought that perhaps the pesticide contamination occurred during the domestic transport or packing process, with particular suspicion on the jute bags used to transport green beans. Also, because DDT is used in Ethiopia for malaria vector control, there was also concern that the contamination could be related to household use of DDT.

Another issue facing Ethiopia is that the domestic coffee bean distribution system has recently changed, as a result of the switch from an auction system for selling beans to the new Ethiopian Commodity Exchange (ECX). Chapter 5 will discuss this in more detail, but one of Ethiopia’s competitive advantages is its vast variety of beans whose flavors differ by producing areas. There is demand for very specific types of beans from different buyers. However, in the new commodity system, beans are grouped by general growing area rather than sold by specific production locations and have therefore often lost traceability down to the producer level. This has both on-going and long-term implications. On-going is the fact that international buyers want to be able to trace back their beans to the production level for basic safety and quality assurance. Longer-term in the fact that because Ethiopian coffee producers are mainly small farmers who sometimes struggle with supply and production quality, a long-term sustainable trade relationship between producers and buyers is critical for maintaining stable imports of coffee beans of a specific quality. Therefore, the launch of the Commodity Exchange has for the time being

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disrupted some of the domestic Ethiopian coffee collection and distribution systems, and according to people in the Japanese coffee industry, it currently does not meet the needs of the Japanese market.

Therefore, the Japanese market hopes for a quick and thorough resolution of the pesticide residue issue and restoration of a domestic distribution system that will allow for traceability down to the producer level.

3.2 Structure of the Japanese Coffee Market

3.2.1 Roasted Coffee and Instant Coffee

After Japan imports the green beans from producing countries, roasters then roast the beans and sell them primarily as either roasted/ground beans or as instant coffee.

While the consumption of instant coffee has remained constant at around 40,000 MT for the past three decades, the volume of roasted coffee consumption has tripled from 92,000 tons in 1980 to 270,000 tons. With this increase in demand for roasted coffee, Brazil and Columbia have been able to increase their exports of Arabica to Japan and beans with unique aromas such as Ethiopian and Guatemalan beans which are used as accent flavors in blended coffee also expanded their share in the Japanese market. In addition, Tanzanian Kilimanjaro coffee with its high-end image, has also been able to establish a certain share during this period. Total Robusta imports, from Indonesia and Vietnam, are growing more slowly, in part because of the stagnant instant coffee market which is a main end-use for Robusta.

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8 In fact, since the economic recession began in 2007, consumption of inexpensive instant coffee has been increasing. In 2007, consumption was 39,619 MT while in 2010 it was 43,143 MT, a nearly 10% jump in 3 years.
Retail prices of roasted coffee have been falling since 2000 due to deflation in the Japanese economy. Import prices, on the other hand, hit their lowest point in 2002-2003 and then rose up through 2008. One reason for this contrast in price trends is that large retailers and food service chains in Japan have stronger bargaining power than roasters; in addition, the pressure of domestic deflation was reflected in consumer prices more than in import prices.

The total market for roasted coffee in 2009 was 322 billion Japanese yen. The roasted coffee market can be divided into three categories: retail coffee sold for home use (Home Use), coffee sold at food service outlets including cafes, restaurants and cafeterias (Commercial Use) and coffee used to produce canned coffee and coffee-flavored drinks (Industrial Use). Home Use and Industrial Use each account for 40% of the market with Commercial Use taking the remaining 15%.
Graph 15: Share of Roasted Coffee Sales by End-Use, 2009

Source: Junichi Yoshida, “Key to stabilizing roasted coffee market: approaches and schemes for increasing consumption opportunities”, Alcoholic Beverage Statistics Monthly, February 2010

3.2.2 The Home-Use Coffee Market

The market for roasted coffee for home use expanded throughout the mid 2000s. The most popular home use products have been large (400g or more), inexpensive bags of ground coffee. In addition, the popularity of the relatively inexpensive, “easy drip” style packages of ground coffee, packaged together with a disposable filter also grew, despite the deflation of the decade. Nevertheless, overall purchasing prices have been falling and at the end of the 2000s, market expansion also seems to have hit a lull.

Graph 16: Annual Household Purchase Volume and Average Price

Source: Source: Ministry of Internal Affairs and Communications ‘Household Survey’
3.2.3 The Market for Industrial-Use Roasted Coffee

Roasted coffee is used in the processing industry for coffee drinks, especially as the main ingredient for canned coffee. In the 1980s canned coffee consumption skyrocketed and then in the 1990s, growth began to level off. At the beginning of the 2000s, a series of new higher-end, “premium” canned coffee products were released and became hits – this trend established Ethiopian moka and Tanzanian Kilimanjaro coffees as an ingredient for canned coffees, but overall canned coffee consumption still remained stagnant. Instead, growth in the coffee drinks market has been driven by other new products and packaging. The end of the 2000s brought new packaging trends that have been growing quickly and driving a new expansion of the coffee drinks market – coffee drinks in plastic bottles, as well as chilled coffee in sealed cups that just need a straw to drink. In particular, high growth is currently found in the new “premium” chilled cups⁹, including those sold under brands such as Starbucks and other well-known coffee shop chains.

Graph 17: Coffee Drink Consumption Volume and Canned Coffee’s Share of the Coffee Drink Market

Source: All Japan Coffee Association

⁹Nikkei NEEDS, “The rapid growth of the chilled coffee market: now second to canned coffee in convenience stores”, http://www.nikkei.co.jp/needs/analysis/05/a051101.html
3.2.4 The Commercial-Use Roasted Coffee Market

Demand for roasted coffee for commercial use is driven by the spread of “cafe culture” as represented by coffee shop chains like Starbucks. In the mid 2000s a new demand for beans for cafes blossomed and was also linked to a stimulation of household demand for coffee beans. However, in 2008 coffee shop chains reported lower numbers of customers per outlet and with the financial crisis the tendency not to eat out became stronger, and coffee shop chains were forced to reorganize their branches. Due to this, since 2008, demand for commercial use coffee has begun to fall.

Graph 18: Trends in number of coffee shops, volumes of customer and prices of coffee. 2000-2009

![Graph 18: Trends in number of coffee shops, volumes of customer and prices of coffee. 2000-2009](image)

Source: Japan Food Service Association and Ministry of Internal Affairs and Communications

3.2.5 Coffee Consumers

In Japan 70% of coffee is consumed by those 40 years or older. We can see this illustrated in the statistics on weekly consumption by age group in Japan: Under 18 (2 cups/week), 18–24 year olds (6 cups/week), 25–39 Year Olds (11 cups/week), 40–59 Year Olds (14 cups/week) and those 60 and over (10 cups/week). In each successive age group up to age 60, the volume of coffee consumed increases, which is of course explained by the fact that Japan has an aging population and population numbers are skewed towards the older age ranges; as a result older consumers make up the majority of coffee consumption.
The chart below illustrates the size of coffee consumption by age group and category of coffee. The vertical axis shows each age group’s yearly consumption volume and the horizontal axis shows the share of coffee by type and consumption location within total yearly consumption; each colored block on the graph indicates the size of coffee consumption for that age group and type of coffee.

**Graph 19: Coffee Consumption Volume Among Age Group by Coffee Type (2008)**

Source: All Japan Coffee Association and Ministry of Internal Affairs and Communications population survey data.

### 3.3 Fair Trade and Sustainable Coffee Issues in the Japanese Market

In recent years, as increasing numbers of corporations put value on social responsibility, and more consumers demand products which are environmentally friendly and socially responsible, the number of companies dealing with coffee certified as Fairtrade or sustainable are also

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10 Food service includes cafes, restaurants and fast food outlets. Coffee purchased vending machines or on trains or other transport is not included.
increasing. Understanding the issues related to the different certifications, as well as their position in the global market in general and Japanese market in particular is important in the context of this study for two main reasons. First, certified coffee has been considered a way for producers to potentially break out from under the control of the international coffee commodity price system. Coffee traded as certified coffee, depending on the certification and market conditions, can command price premiums for producers. As we look for ways that coffee can generate higher incomes for farmers, the potential of the certified coffee market is important to understand. Secondly, certification systems explicitly encourage sustainable use of natural resources and, often, improved living standards for producers. As we look for ways to protect the coffee growing environment, preserve coffee genetic resources and improve the lives of coffee farmers, again the current status of certified coffees in Japan is important to understand in order to determine the potential for Tanzanian and Ethiopian certified coffees in the Japan market.

3.3.1 Fair Trade/ Sustainable Coffee

In addition to the well-known Fairtrade certification system set out by the Fairtrade Labeling Organizations International (FLO), there are other sustainable certification systems such Rainforest Alliance, Good Inside, Bird Friendly, and various organic certifications. These certification systems all follow a basic framework – third parties audit products and production methods and certify the product as meeting the standards of the certification. Once a product is certified, producers and sellers can label it with the logo of the certification standard. The certifications set economic, environmental, and social standards that give consideration to both environmental sustainability and the quality of producers’ lives, while also seeking to improve the producer’s working environment. The hope is that certified coffee can be sold at a higher price than uncertified coffee, and producers can benefit from this price premium, which will support sustainable business practices and improved production control. Environmentally or socially responsible certification adds value to the product and allows sellers to differentiate their product within the coffee market. However, as we will see in this study, the value-added is not always guaranteed for the producers. Even if a producer’s coffee is certified organic or Fairtrade, if there are no buyers, the certified coffee will have to be sold as regular commodity beans to a customer not interested in using the certification logo.

Globally 8% of coffee beans exported in 2009 were either certified or had some kind of guarantee on the sustainability of production. Of the certified coffee, the largest share belongs to organic coffee, but the shares for Fairtrade, Rainforest Alliance, Good Inside (UTZ) certified
coffee have been increasing sharply in recent years.\textsuperscript{11}

\textbf{Graph 20: Global Sales of Coffee by Certification Type, 2006-2009}

\begin{center}
\includegraphics[width=\textwidth]{graph20.png}
\end{center}

\textit{Source: ITC, Pierrot and Giovanucci, 2010}

\textbf{Fairtrade Coffee}

The idea of “Fairtrade” was developed in the 1960s under the central principal of helping to improve the livelihood of producers and laborers in the global south who held a weak position within the international trading system and to encourage fair and sustainable trade.

At that time, NGOs and fair trade associations primarily from coffee consuming countries in Europe and the United States created individual relationships with producer associations in developing countries and sold handicrafts and coffee through outlets such as Fair Trade shops. However, in the latter half of the 1980s, the individual organizations began to form networks including the Third World Information Network (TWIN) from UK, The International Fair Trade Association, European Fair Trade Association (EFTA), Network of European Worldshops (NEWS!).

\textsuperscript{11} Pierrot and Giovanucci., “Sustainable Coffee Report – Statistics on the Main Coffee Certifications”, 2010
And also starting from the latter half of the 1980s, fair trade standards, as well as labels for products that had met the standards, were established by various certifying organizations. In 1988, the world’s first fair trade label, Max Havelaar, was launched in Holland. In 1997, 17 certificating agencies, including Max Havelaar, established Fairtrade Labeling Organizations International (FLO) and began to harmonize the various standards and logos. Starting from 2002, the Fairtrade\textsuperscript{12} label became the uniform label for products certified by FLO\textsuperscript{13}.

Once the FLO Fairtrade label was created, Fairtrade products were able to gain much wider acceptance in the market and the 2000s saw increasing mainstreaming of Fairtrade products, especially in the European market. However in Japan, FLO-certified, Fairtrade-labeled products are still not common. Instead, the Japanese fair trade product market still belongs to traditional fair trade schemes similar to those used in the early days of the fair trade movement, where individual Japanese organizations are affiliated with individual producer groups. This is known as “affiliation” style fair trade or “uncertified” fair trade. These organizations pioneered the Japanese fair trade market, set their own standards and definitions for fair trade and did not necessarily use a labeling system. For these organizations, the main emphasis is still on the idea of “joining hands” with producer organizations and creating a personal relationship between the organization in Japan and the producers in a developing country.

Nevertheless, outside of Japan, certified Fairtrade holds the vast majority of the fair trade product market. As of 2007, FLO-certified products comprised 90% of the world’s fair trade market and only 10% were uncertified.

Under the Fairtrade labeling system, FLO defines the Fairtrade standards, and then the independent third-party certifying agency (FLO-CERT) inspects and certifies the producer associations and importers based on the standards. The system has three sets of standards: the economic development standards are related to securing stable income for producers, the social development standards set guidelines for the working environment and management of producer associations, and the environmental development standards provide guidelines on resource management, the use of agrochemicals and other environmental issues. Standards concerning product quality are not set – the Fairtrade label does not guarantee the quality of the product. Below is a summary of the key FLO standards.

\begin{itemize}
  \item \textsuperscript{12} The spelling “Fairtrade” (capitalized and no space between the words) is used in this report to refer specifically to the trademarked label and certifying standards set by the Fairtrade Labeling organization (FLO). The spelling “fair trade” (uncapitalized and with a space) refers to the concept of fair trade including as used by fair trade products not certified through FLO.
  \item \textsuperscript{13} Note that America’s main certifying body Fair Trade USA (formerly Transfair), while a member of FLO, does not use the FLO Fairtrade logo. It uses its own trademarked logo.
\end{itemize}
Table 3: FLO International Fairtrade Standards Outline

<table>
<thead>
<tr>
<th>Economic Standards</th>
<th>Social Standards</th>
<th>Environmental Standards</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Guarantee a Fairtrade minimum price</td>
<td>- Provide a safe work environment</td>
<td>- Regulate agrochemical and chemical usage</td>
</tr>
<tr>
<td>- Provide an additional premium</td>
<td>- Create a democratic structure with producer organizations</td>
<td>- Manage soil and water resources</td>
</tr>
<tr>
<td>- Facilitate long-term, trading relationships</td>
<td>- Ensure worker's human rights</td>
<td>- Practice environmentally-friendly agriculture</td>
</tr>
<tr>
<td>- Provide credit for producers</td>
<td>- Support regional social development projects</td>
<td>- Encourage organic cultivation</td>
</tr>
<tr>
<td></td>
<td>- Prohibit forced or child labor</td>
<td>- Prohibit genetically-modified (GMO) products</td>
</tr>
</tbody>
</table>

Source: Based on FLJ Website

Fairtrade’s guaranteed minimum price and additional premium are the key points within the Fairtrade standard. The idea is that producer organizations must be paid a price that will cover the sustainable production of their product. The Fairtrade price is considered the minimum price that farmers can be paid and still be able to continue sustainable production. Under this scheme, importers pay the producers either the Fairtrade minimum price (set by the Standards Unit at FLO\(^\text{14}\)) or the international market price, whichever is higher. On top of the minimum price, buyers also pay a Fairtrade premium. This premium is put into a fund managed by the producer organizations; they invest the money in education, health services, and social development for the communities in the producing region.

A price review in March 2011 raised the price for Arabica beans, and reset the organic premium and Fairtrade premiums. The Fairtrade minimum price for green Arabica beans was raised about 12% to: washed 140 cents/pound, unwashed 135 cents/pound. Robusta beans were: washed at 105 cents/pound, unwashed at 101 cents/pound. Certified organic coffee now gets 30 cents/pound (up 50%) and the Fairtrade premium was set at 20 cents/pound (up 100%). Of this 10-cent increase in the Fairtrade premium, 5 cents is earmarked for productivity and quality improvement. How exactly this earmarked fund is to be used will be up to the producer organizations to decide for themselves.

\(^{14}\) The minimum price is reviewed once every five years, but depending on fluctuations in the international market price, reviews can be made more frequently.
In addition to the social, economic and environmental standards listed above, there are special requirements related to production and trade of Arabica and Robusta coffee. Below is a summary of the main standards related to trade, pricing and contracts with small-scale coffee producers’ organizations, as of 2009. In March 2011, FLO has announced new additional standards for coffee which aim to encourage fairer negotiation, deal better with price fixing and reduce speculation.

Table 4: Fairtrade Trade Standards for Small-scale Producers’ Organizations (Coffee)

<table>
<thead>
<tr>
<th>Category</th>
<th>Main Content</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contracts</td>
<td>For contracts between producers and Fairtrade payers, price fixations must be made at producer’s call. If a Fairtrade payer requires an extension of the shipment schedule beyond the limits of sound commercial practice of the producer (three months after the harvest), the real costs of storage, interest and insurance must be covered (by the Fairtrade payer) in the terms of the contract.</td>
</tr>
<tr>
<td>Sustaining Trade</td>
<td>Sourcing plans must cover each harvest. Sourcing plans must be renewed a minimum of three months before they expire.</td>
</tr>
<tr>
<td>Pre-financing</td>
<td>On request from the producer, the Fairtrade payer must make up to 60% of the value of the contract available as pre-finance to the producer at any time after signing the contract.</td>
</tr>
<tr>
<td>Pricing and Premium</td>
<td>Fairtrade Minimum Prices and Fairtrade Premium levels for Fairtrade products are published separately from the product standards.</td>
</tr>
</tbody>
</table>
For Arabica coffees the reference market price shall be based on the New York ICE Futures\textsuperscript{15} “C” contract price. For Robusta coffees the reference market price shall be based on the London “EURONEXT LIFFE” contract.

http://www.fairtrade.net/fileadmin/user_upload/content/02-09_Coffee_SPO_EN.pdf

The concept of fair trade originally emerged as a way to help small scale farmers in developing countries. Today about 75\% of all Fairtrade producers, including coffee, are small-scale farmers\textsuperscript{16}. However, farmers need to be part of a producers’ organization in order to receive Fairtrade certification for their products. As of the end 2007, there were 255 producer organizations for certified coffee farmers.\textsuperscript{17}

The role of the producer organization is not only to collect the beans from producers, but to oversee and monitor the Fairtrade premium’s usage. To get Fairtrade certification farmers must start by forming a producers’ organization, and then begin the application and documentation procedures required for getting Fairtrade certification. Receiving certification usually requires several years. Even after receiving certification, there can be difficulties maintaining it. There have been cases in the past where certification was taken away due to problems in fund management, selection method for organization members, or when small scale producers did not fully understand the meaning of Fairtrade, and could not secure enough beans that fulfilled to requirements of the Fairtrade contract.

Also, in order for a product to be certified as Fairtrade coffee, not only the coffee producer, but also the local processor, exporter, importer, manufacturer, wholesaler, seller (licensee) and others involved the Fairtrade supply chain must be registered, screened, and licensed, resulting in further fees. It is a big burden for small-scale farmers and leads to the dilemma of very poor producers being unable to apply for Fairtrade certification. For example, for a producers’ organization with less than 50 members applying for Fairtrade certificate, the registration fee in the first year is 500 Euros, and for each product to be evaluated, there is an initial fee of 1400 Euros. However, after receiving certification there are annual audits to confirm compliance with Fairtrade standards at a rate of 1138 Euro per year – a huge sum for a small organization.

The costs that are required to secure the minimum price and Fairtrade Premium, and the ongoing expense costs for annual audits and administration are reflected in the higher price of Fairtrade-certified coffee compared to non-certified coffee.

\textsuperscript{15} Formerly the New York Board of Trade (NYBOT)\textsuperscript{16} Fairtrade Label Japan (FLJ)\textsuperscript{17} FLO Annual Report 2007/2008
However, Fairtrade coffee travels a long distance from producer to consumer and in each transaction stage, both in the producing country and the consuming country) costs are added or subtracted based on a complex number of factors including coffee origin, brand, quality and supply volume. It is difficult to determine whether the costs related to Fairtrade certification and compliance are always directly reflected in the selling price. For example, in Japan, Aeon, a major multi-purpose shopping center chain, has set the price for a FLO-certified Fairtrade coffee called “Roasted Fairtrade Blend” at the inexpensive retail price of 498 JPY for 300g.

In 2009, the global sales volume of Fairtrade certified coffee was 74,000 MT, increasing on average 25% a year since 2002. Fairtrade coffee takes up roughly 1% of the global coffee share, although in the UK, Fairtrade coffee accounted for 22% of the total coffee share in 2008, indicating that Fairtrade coffee has become a mainstream retail product in the UK. Nevertheless, FAO market research suggests that in the EU overall, Fairtrade is still only 1%. Another recent and growing trend is double certification - organic coffee that is also certified as Fairtrade coffee. According to FLO, of the world’s 74,000 MT of Fairtrade coffee, 32,000 MT or 42%, is also certified as organic coffee.

There are several reasons for this trend. Discussions with producer organizations in Ethiopia suggested that double certification gives producers more flexibility (if there is a lack of Fairtrade buyers, the coffee can still be sold as organic), it is sometimes felt to be necessary for staying competitive and, since globally organic is the most successful certification, it is becoming an expected standard for coffees that bill themselves as sustainable.

 organic Certified Coffee

In contrast to Fairtrade coffee, which aims to improve producers’ quality of life and promote sustainable trade, other certifications emphasize environmentally-friendly and sustainable production and management. Of these “sustainable coffee” certifications, organic is the best known.

Organic certification differs from other certifications in that the standard is set by the government of each country. The basic requirements for organic agriculture products include conservation of soil and the environment by avoiding agrochemicals or chemical fertilizers during production, compliance with good labor practices, and maintenance of an environmentally-friendly and hygienic infrastructure. In 1999, the Codex Alimentarius Commission (Joint FAO/WHO Expert
Committee on Food Standards) established guidelines for the production, processing, labeling, and sale of organically-produced products and currently International Federation of Organic Agriculture Movements (IFOAM), the international umbrella organization for national organic certification organizations, seeks to establish unified organic certification standards that would allow a single IFOAM logo to be used on products, indicating that the products are certified organic by IFOAM using a uniform international standard. However, so far there is no unified international standard for organic.

In Japan, products marketed as organic must carry the “JAS Organic” label. Under the 2001 revised “JAS Organic” standardization system, all agricultural or processed products sold domestically with organic labeling must be certified by organizations that are registered with Japan’s Ministry of Agriculture, Forestry and Fisheries (MAFF). Compared to other types of certifications given by private organizations, Japanese consumers tend to trust JAS certification more easily, since it is overseen by the government. The JAS Organic label is widely recognized by consumers. Japan’s JAS organic standards follow the Codex guidelines and some of the main points are summarized below:

- Maintain the natural cycles of agriculture by avoiding use of agrochemicals and synthetic fertilizers
- Choose cultivation methods that, as much as possible, reduce the burden on the environment
- Avoid using agrochemical and synthetic fertilizers for more than 2-3 years before seeding, and planting
- Avoid using genetically-modified seeds

The JAS organic standards lay out detailed requirement for the production, processing, distribution, storage and management of organic products. Registered certifying agencies inspect the farmers and producers at least once a year. Based on our interviews, due to these strict JAS standards, some coffee-producing countries are not interested in becoming certified in Japan, and for those that have become certified, some have ended up reducing their production of JAS Organic.

Organic-certified coffee holds the largest share in the world’s certified coffee market, and sales have increased 250% in the past decade. The increase has slowed in recent years, but even in

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18 Japanese Ministry of Agriculture, Forestry and Fisheries
the economically sluggish year 2008 - 2009, sales have been slowly increasing again. The world’s exporting volume for organic certified coffee in 2009 was 10,000 MT. As mentioned earlier, the share of Fairtrade-certified coffee that is also certified organic is increasing, making Fairtrade-organic the most popular double certification in recent years.

- Rainforest Alliance Certification

Rainforest Alliance Certification puts great emphasis on how farms should be managed in order to stay competitive in the market, such as how production and cost could be managed to increase product quality. Products certified by Rainforest Alliance include coffee, cocoa, cut flowers, ferns, fruit and tea.

The certification standards are set out by the Sustainable Agriculture Network (SAN), a coalition of environmental conservation groups based in South America. The standards are a combination of environmental standards, which include promoting efficient farm management and decreasing water pollution and soil erosion, and social standards such as guidelines on labor conditions and minimum guaranteed wages. Rainforest Alliance’s environmental standards differ from organic standards in that they allow the use of agrochemicals, and primarily focus on protecting natural resources and improving labor conditions.

Farms of any size can apply for Rainforest Alliance certification, but since the certifying cost is high for small producers, most applicants are larger farms. While most of the farms are in South America, recently the number of Rainforest Alliance-certified farms in Africa and Asia are increasing. As of January 2011, 591 farms across 23 countries (mostly countries from Central and South America such as Brazil Costa Rica and Columbia) are certified as Rainforest Alliance. In Tanzania, a coffee estate called Blue Mountain Coffee Farms19 is certified, and in Ethiopia as well, there are two certified farms certified.

The Rainforest Alliance logo appears on the packages of products that are certified. A product that uses 30% or more of ingredients from a certified farm can be recognized as Rainforest Alliance-certified. This is especially convenient for companies that produce or distribute coffee blends. In the case of a coffee blend, beside the certification logo, the package must also indicate the percentage of coffee that is from a Rainforest Alliance-certified farm.

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19 The term “Blue Mountain Coffee” is generally associated with Jamaican coffee, but in this case the farm is a coffee estate in northern Tanzania producing Tanzanian Mild Arabica.
The market for Rainforest Alliance-certified coffee market has been increasing rapidly in recent years. In 2009, the global market was estimated at about 88,000 MT and it has been increasing 50% each year since 2006.

- Good Inside/UTZ Certified

Good Inside (UTZ) is dedicated to increasing the transparency of coffee production and processing systems. It lowers some of Fairtrade’s strict standards and concentrates on traceability and responsible production, laying out production management standards, social standards, and environmental standards. Unlike Fairtrade, UTZ does not specifically focus on the economic development and poverty alleviation of coffee farmers and community. UTZ was started by coffee producers in Guatemala and a European roasting trader, but now the certification applies to products other than coffee, such as cocoa, tea, and palm oil.

Under the UTZ certifying system, producers must follow the UTZ “Code of Conduct”, which consists of 203 control points divided into 12 categories. These include management standards which specify how to keep records for plantation, production, and also how to maintain efficient production management. It also includes social and cultural standards concerning labor wage, health and safety, and environmental standards that cover environmental pollution, waste handling and the use of agrochemicals. Furthermore, Chain of Custody requirements have been established to ensure the traceability of the UTZ-certified products, from consuming countries where they are sold back to the certified producers.

The UTZ certification system does not set a minimum price. Prices are determined by international market prices, and the size of the UTZ premium then depends on direct negotiation between the buyer and seller. UTZ-certified producers are given market data on average premiums paid and volumes sold per country in order to help inform their negotiations. In 2004, the premium for UTZ certified products was between 1-9 cents per pound, and the estimated average was 4 cents per pound. UTZ seeks to increase the competitiveness of certified-producers in a very competitive market through its emphasis on environmental responsibility and traceability to product origin. However, the premium is not high compared to Fairtrade or organic-certified products.

Though this certification is aimed towards all sizes of producer farms and producer associations,
currently the main users are large farms in Central and South America. As of January 2011, there are 276 certified producers across 20 countries. South America, especially Brazil, has the highest number, but Africa is also increasing and there are 3 farms in Tanzania and 2 farms in Ethiopia with UTZ certification.

Large corporations such as Nestle, Heinz, and IKEA are distributing UTZ-certified coffee and in recent years the market has been expanding, with UTZ currently selling in 40-plus countries. The sales volume in 2009 was 86,000 MT, a 67% increase from 2005.

### Bird Friendly

Bird Friendly is a coffee certification administrated by the Smithsonian Migratory Bird Center in the United States. This certification has strict standards which promote forest diversification, the need for organic certification, and fairness and stable prices for the producers. One traditional method of coffee bean production is to plant coffee under the shade of tropical forest trees, producing “shade-grown” coffee. However an alarming trend has been that in order to increase productivity, forests have been torn down to make larger coffee farms with increased sunlight. Bird Friendly coffee certification aims to protect wild animals and bird species that rely on a tropical forest habitat by encouraging shade-grown coffee.

24 farms across 8 countries (mostly Central and South American countries such as Guatemala, Columbia and Mexico) are registered as Bird Friendly. Compared to other certifications, the Bird Friendly’s total production of about 3,000 MT is low.

### Debates Surrounding Fairtrade and Sustainable Coffee

There is much debate concerning the impact of Fairtrade and sustainable coffee certifications. In September 2009, the Natural Resources Institute in Greenwich, UK, released a 10-year review of the impact of Fairtrade, which included 25 case studies on coffee out of the total 33 Fairtrade case studies. It concluded that in most cases small-scale producers of Fairtrade coffee benefited from increased and more stable income thanks to that certification’s economic standards which include the guaranteed minimum price, Fairtrade premium, stable transactions and pre-financing. The benefits to the farmers are even more obvious when the international price drops; small-scale farmers are able to receive a guaranteed minimum price, which acts as a safety net.

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20 Pierrot and Giovannucci, 2010
21 Nelson and Pound, “The Last Ten Years: A comprehensive review of the literature on the impact of fair-trade”, Natural Resources Institute (NRI), University of Greenwich, 2009
In addition to the increase in income, Fairtrade certification had other significant positive influences on the economy; it improved market access, encouraged organic farming, developed better management among producer associations, and provided confidence to individual producer.

Other studies on have also showed measurable positive impact of sustainable coffee certifications on local economies and environment. In a 2005 Consumer International study, all of the 28 Brazilian farms the study looked at that were certified as Fairtrade, organic, Rainforest Alliance, Good Inside or another certification showed increase in income. Sales increased among both small-scale and large farms. The farms also improved their coffee quality, negotiation power and access to market information. The improvement in market access was also cited as an incentive for farmers to become certified.

Another 2010 study on coffee farms in Nicaragua looked at 315 farms that are certified under either Fairtrade, Rainforest Alliance, or Starbucks’ own certification - C.A.F.E Practices. It found that Fairtrade certification allowed farmers to sell their coffee at a higher price, but farms that are Rainforest Alliance or C.A.F.E Practices-certified had higher coffee quality and productivity, and the incentive to produce higher quality coffee was higher as well. Fairtrade certification does not include standards on quality, and, on top of that, product quality management is difficult since Fairtrade certification applies to producer associations consisting of many small-scale farms. On the other hand, it was concluded that since Rainforest Alliance sets standards for production processes, the production at each certified farm is more consistent, which makes it easier to implement quality improvement plans.

However not all producers are benefitting from the certifying systems. All the certifications require registration and auditing fees, as well as administration expenses to deal with the complicated standards. This makes it difficult for marginalized small-scale farmers to participate. In certification such as Fairtrade which is applied to producer associations, the farmers who are members of the association can share the certification cost (reducing the cost each farmer bears). However for Rainforest Alliance and Good Inside certification, each individual producer is responsible for the certifying costs, which are higher than the cost each farmer bears in Fairtrade certification. Nevertheless the point has been raised that since the Fairtrade framework is based on producer associations rather than directly to small-scale farmers, there is sometimes concern that the farmers who most need aid are not getting the full benefit of the certification. As it is, it is

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22 Consumer International, “From bean to cup: how consumer choice impacts upon coffee producers and the environment”, 2005
estimated that only about 20% of Fairtrade certified coffee is sold as Fairtrade with the Fairtrade premium because of an imbalance in supply and demand.

Having multiple certifying systems is also viewed as a problem. Most of the certifications include economical, social and environmental standards that are similar but with slightly different requirements or emphasis. This means that producers must start from zero with each new certification to understand the standards and determine how to meet the requirements, even though the standard may be very similar to a previous certification. In many cases, producers apply for a certain certification in response to the buyers’ demand, but the producers are then burdened with the administration and costs that registration and auditing require. There is some effort to address this however; FLO, for example, is reviewing the framework of its standards, to reduce the producers’ certification burden.

### 3.3.2 The Approach of Japan’s Main Coffee Companies

Since the 1980s, Japanese NPOs and organizations such as Third World Shop and Alter Trade Japan (AJT) have been involved in import businesses based on a fair trade model. These business models are “affiliated” style fair trade models, similar to those that were found in the EU and US at the beginning of the fair trade movement, where individual organizations “affiliate” with farmer groups in developing countries and enter into trade relationships and community development support. However, since 2000, large Japanese roasting companies, retailers and coffee chains have actively applied for Fairtrade and sustainable coffee certifications. Being certified under Fairtrade or one of the sustainable coffee certifications benefited these coffee companies - they could market their international and environmentally-friendly activities as evidence of their commitment to corporate social responsibility (CSR), while at the same time capitalizing on the secure traceability systems.

Starbucks sold its first Fairtrade coffee under the FLO Fairtrade label in 2002, followed by Aeon in 2004, and in 2006, large corporations such as Ryohin Keikaku also started selling Fairtrade coffee. These developments helped expand the Japanese Fairtrade coffee market at a rapid pace.

As for other certified coffees, UCC became first coffee company in Japan to sell Rainforest Alliance-certified coffee in 2004, and in 2007 Key Coffee received the Good Inside certification. Following this trend, other coffee companies also started selling certified coffees. Below is a list of the approaches each major company has taken.
Japanese Roasting Companies

**UCC**: Became the first Japanese coffee roaster to sell Rainforest Alliance-certified coffee in 2004. UCC created a partnership with Rainforest Alliance and worked on deepening and expanding demand in the Japan market for certified farm products. The company also sells JAS-certified organic coffee.

**Key Coffee**: In 2007, Key Coffee received Good Inside certification for coffee from Toraja, Indonesia, and in 2008, they became the first Japanese company to receive Good Inside certification for its processing and distribution management. The company also sells Rainforest Alliance-certified and JAS-certified organic coffee.

**Art Coffee**: Art Coffee uses coffee beans that are certified by both Rainforest Alliance and JAS organic, an example of a “double certified” coffee. Since October 2010, the company has been selling Good Inside-certified coffee as well.

**Ueshima Coffee**: Ueshima Coffee sells both Fairtrade and JAS-certified coffee.

**Ogawa Coffee**: Became the first company in Japan to sell Bird Friendly-certified coffee in 2005. They also sell Fairtrade and JAS-certified coffee under their “Organic Coffee Series.” All of Ogawa Coffee’s Bird Friendly and Fairtrade-certified coffee are double certified as JAS organic-certified coffee.

Retailers

**Aeon**: Aeon started selling Fairtrade coffee under their private brand “TOPVALU” in 2004. Since 2006, Aeon has been selling canned coffee that is Fairtrade-certified.

**Ryohin Keikaku**: Ryohin Keikaku has been selling Fairtrade coffee since 2006. Since September 2010, the coffee sold in the company’s cafés and restaurants has all been converted to Fairtrade coffee.

Coffee Shop Chains

**Starbucks**: Starbucks started selling Fairtrade coffee in Japan in 2002. In partnership with Conservation International, an international NGO that aims to resolve problems concerning
natural resources and environmental issues, Starbucks has been selling “Shade-Grown” coffee since 2003. Starbucks also has their own sustainable coffee certification, a supplier program called “C.A.F.E. Practices.” With Conservation International's assistance, Starbucks sets guidelines, which include environmental, social and economic standards, for Starbucks’ suppliers to follow when producing coffee for Starbucks. In 2009, 81% of Starbucks' coffee beans were from suppliers that had been certified under C.A.F.E. Practices.

**Tully's**: Tully's started selling Fairtrade-certified coffee in 2005. Since 2007, Tully's has been selling double-certified Rainforest Alliance and JAS organic-certified coffee.

<table>
<thead>
<tr>
<th>Year</th>
<th>Fair Trade Milestones</th>
<th>Sustainable Coffee Milestones</th>
</tr>
</thead>
<tbody>
<tr>
<td>1986</td>
<td>Opening of Third World Shop</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Alter Trade Japan (ATJ) established</td>
<td></td>
</tr>
<tr>
<td>1989</td>
<td>The International Fair Trade Association established</td>
<td></td>
</tr>
<tr>
<td>1991</td>
<td>Global Village established</td>
<td></td>
</tr>
<tr>
<td>1992</td>
<td>Nepali Bazaro established</td>
<td>Rainforest Alliance Certification was established</td>
</tr>
<tr>
<td></td>
<td>Opening of fair trade shop “Grassroots”</td>
<td></td>
</tr>
<tr>
<td>1993</td>
<td>TransFair Japan (TFJ) established</td>
<td></td>
</tr>
<tr>
<td>1995</td>
<td>Fairtrade Company established</td>
<td></td>
</tr>
<tr>
<td>1996</td>
<td>ATJ started selling Fairtrade coffee</td>
<td></td>
</tr>
<tr>
<td></td>
<td>IFAT (International Fair Trade Association) established</td>
<td></td>
</tr>
<tr>
<td>1997</td>
<td>FLO (Fairtrade Labelling Organizations International) established</td>
<td>Good Inside Certification was established</td>
</tr>
<tr>
<td>1999</td>
<td></td>
<td>Bird Friendly Certification was established at Smithsonian National Zoo</td>
</tr>
<tr>
<td>2000</td>
<td></td>
<td>Revised JAS standards implemented</td>
</tr>
<tr>
<td>2002</td>
<td>Began use of the International Fairtrade Label known today</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Starbucks started to sell Fairtrade certified coffee</td>
<td></td>
</tr>
<tr>
<td>2003</td>
<td></td>
<td>Starbucks started selling “Shade-grown” coffee</td>
</tr>
</tbody>
</table>
### Japanese Market for Fairtrade and Sustainable Coffee

Due to the market development by major Japanese coffee companies, Japan’s certified coffee market has been increasing significantly. The growth of certifications other than Fairtrade is especially apparent. Organic-certified coffee held the largest share of the sustainable coffee market until 2005, when it was overtaken by Rainforest Alliance-certified products. Organic coffee growth has been stagnant, while Rainforest Alliance has been growing steadily. UTZ/Good Inside-certified coffee has also been increasing in recent years. The share of Good Inside-certified coffee is now equal to organic-certified coffee.

While Japan’s Fairtrade coffee market is increasing, sales of Fairtrade-certified coffee are much smaller than the certified sustainable coffees. 70% of Fairtrade products sold in Japan are coffee, and coffee is an important product for Fairtrade because it leads to increases in sales of other Fairtrade-certified products, such as cocoa. The total quantity of Fairtrade-certified coffee sold in Japan was 330 m/t in 2009, a mere 0.12% of the 280,000 m/t roasted coffee sold in the same year. In comparison, organic is 1.64%, certification emphasizing forest conservation (mainly Rainforest Alliance and Bird Friendly) is 3.46%, and “code of conduct” coffee (mainly Good Inside) is 1.28%.\(^\text{24}\) Volumes are about 4,600 m/t for organic coffee, 9,700 m/t for forest conservation-related certified coffee and 3,600 m/t code of conduct coffee 3,600 m/t\(^\text{25}\).

The graph below illustrates trends in the volumes of the main certified coffees in Japan. The graph uses the global standard for fair trade coffee: Fairtrade-certified (using FLO standards)

\(^{24}\) Tsujimura, Hideyuki *The Economics of Great-Tasting Coffee - Kilimanjaro Coffee’s bitter reality*, 2009

\(^{25}\) The Pierrot & Giovannucci study’s estimates for 2008 are slightly different: organic coffee at 4,350 MT, Rainforest Alliance at 7,490 MT, and Good Inside 4,380 MT

<table>
<thead>
<tr>
<th>Year</th>
<th>Event</th>
<th>Event</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>2004</td>
<td>TFJ changed its name to Fairtrade Label Japan</td>
<td>UCC started selling Rainforest-certified coffee</td>
<td></td>
</tr>
<tr>
<td>2005</td>
<td>Ogawa coffee started selling Bird Friendly-certified coffee</td>
<td>Key Coffee received Good Inside certification</td>
<td></td>
</tr>
<tr>
<td>2007</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2009</td>
<td>IFAT changed its name to World Fair Trade Organization (WFTO)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2010</td>
<td>Art Coffee started selling UTZ/Good Inside-certified Coffee</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

---

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however because the Japanese market has several “affiliation”-style fair trade coffees in addition to the Fairtrade “certified” coffees, the overall Japanese fair trade coffee market is slightly larger than what the graph below displays.

Graph 21: Main Coffee Certifications in Japan by Volume

Source: Pierrot and Giovannucci 2010

- Consumer Awareness

According to a survey by the All Japan Coffee Association in 2006\textsuperscript{26}, the most recognizable Fairtrade-certified or sustainable coffee is organic-certified coffee; 32.5% of the people surveyed said they either “know the name/ have seen it before,” “know the product” or “have purchased before.” In contrast, less than 10% of the people surveyed recognize Fairtrade or other sustainable coffee certifications (Fairtrade 8.6%, Bird Friendly 8.4%, Rainforest 7.2%, Good Inside 5.2%).

Japanese consumers are very conscious about food safety, and that is the reason why sustainable coffee in Japan is expanding rapidly, despite little recognition of sustainable certification other than organic certification. According to a 2005-2006 survey\textsuperscript{27}, Japanese

\textsuperscript{26} All Japan Coffee Association “14\textsuperscript{th} Survey on trends in coffee demand, 2008”

\textsuperscript{27} Ikegami, Koichi, “Overcoming the fair trade dilemma - inward systemization of fair trade based on consumer social responsibility” in “Quarterly at”, 8\textsuperscript{th} ed., 2007
consumers value safety the most when it comes to food and drink, although when purchasing coffee or tea, the production area, producer, low price, premium packaging, and name value also play important factors in decision making. According to 2006 JETRO research[28] under the category of “Products or services that are environmentally and health-friendly,” a question was asked related to products that “I do not use now, but I would like to use in the future”, “Agrochemical-free/organic coffee, tea and herbs, and other teas” came in 9th. Over 50% of the people surveyed showed intention to purchase agrochemical-free or organic coffees, teas and herbs. Based on these results, certified sustainable coffee could be appealing to the Japanese market, which values food safety as well as “environmentally-friendly” “organic” and “chemical-free” products.

On the other hand, despite having a long history in the Japanese market, the low volume of fair trade products (including coffee) indicates that its recognition in the Japanese market is still low. According to Krier[29], per capita, Japanese consumers pay an average of 0.05 Euro on fair trade certified products annually. This is less than 1/4 of the United States (2.4 Euro), and only 1/40 (21.1 Euro) of Switzerland, country with the highest fair trade product purchase. The overall size of the market for fair trade products in Japan (8.1 billion JPY in 2008) is small compared to the United States and European countries.

However in recent years, as larger companies enter the market with Fairtrade certified products, Fairtrade is gaining increased recognition. According to consumer research on Fairtrade by Goo Research[30] in 2010, 43% of consumers were aware of Fairtrade, and of the people who were aware of Fairtrade, 49% had purchased a Fairtrade-certified product before. Some of the reasons that motivated these purchases include: I like the product (70%), it can benefit people in other countries (55%), it can help protect the environment (26%).

- Corporate Concerns

Not only are coffee companies increasingly expected to become more “environmentally” and “socially” responsible, they must also meet consumers’ demands on food safety. According to interviews with Japanese companies, there are corporations which began to sell sustainable coffee, such as organic-certified coffee, in order to meet these food safety needs.

Organic-certified coffee, in particular, was popularized during a period when Japanese consumers were extremely interested in food safety, and since organic-certified food products are perceived as safe by Japanese consumers, it was easier for corporations to market organic products as safe products. “Organic” became a proxy for “safe”.

Another key motivation for Japanese coffee companies to begin selling sustainable coffee was the idea of quality. Japanese consumers are known to be demanding when it comes to quality, especially for products like coffee in which personal taste is involved. One supervisor in a Japanese trading firm explained that their sale of Rainforest Alliance coffee first started with a search for high quality coffee, and they ended up selling sustainable coffee by chance. In cases like these, companies are buying certified coffee beans because the coffee farm management, which follows the standards of the sustainable coffee certification, produces high quality coffee beans. In Japan, because Rainforest Alliance and Good Inside certifications have low consumer recognition, the certification alone is not a big motivation for companies. It is the quality that makes the product attractive.

3.3.3 Challenges and Opportunities for Fairtrade and Sustainable Coffee in Japan

The Japanese fair trade and sustainable coffee market is expanding, with more safety-oriented, environment- and quality-conscious consumers as a backdrop. In particular, sustainable coffees other than “organic” are growing rapidly. However, there are some issues to be overcome in order for these certified coffees to become widely accepted in Japanese society and to form a solid market.

Stable Supply of Quality Coffee that Can Command a Premium Price

As previously described, quality is the most important issue when choosing coffee. For coffee companies and fair trade organizations, what is most important when procuring coffee beans is a stable supply of coffee at a quality that is high enough to be worth the premium price. According to interviews with Japanese coffee companies dealing with sustainable coffee, an important way to achieve a stable supply of coffee beans is by establishing partnerships with coffee farms and to purchase continuously from these farms. Coffee farms with Rainforest Alliance certification tend to have good production management programs and, as a result, are more likely to be able to produce the quality coffee the Japanese coffee companies need. Rainforest Alliance-certified farms also have superior traceability as they can track use of production equipment and the use of agrochemicals.
On the other hand, Fairtrade coffee lags behind sustainable coffee in terms of quality. As mentioned before, Fairtrade puts more emphasis on the improvement of producers’ livelihood while sustainable coffee tends to have stronger insistence on quality and incentives for quality improvement. As Fairtrade targets small farmers, there are limitations to how much it can control quality and as Fairtrade certification is awarded to producer organizations rather than the farmers, it is difficult to know the production status of each farm, causing potential problems in terms of traceability.

Fairtrade organizations themselves recognize the difficulties buyers have in stably purchasing Fairtrade coffee beans. In order for producers to reliably produce quality coffee, it is necessary that each producer understands the importance of Fairtrade itself and also the significance of reliably fulfilling the contract. However, when the international coffee price goes up, as it is now, some contracts may be left unfilled. When the commodity price becomes higher than the Fairtrade price, farmers may choose to sell to buyers for the commodity market price as cash-in-hand is often more important for producers than waiting several months for the Fairtrade dividends.

The Fairtrade framework revolves around a producer’s association; it is the association that is responsible for collecting an agreed quantity of coffee beans on a certain schedule. However, when international coffee prices increase, the relationship between producers and the associations can break down. For Fairtrade to work, it is necessary for the production and quality to be stable, but a big challenge for small-scale farmers who face a myriad of production issues from coffee plant pests and diseases to irregular weather and fluctuating prices.

**Price**

In the current Japanese market, companies are forced to keep the price low while working hard at product differentiation. The growth of organic coffee sales which has led the Japanese sustainable coffee market has slowed, making it harder to bring in new sustainable or Fairtrade products. Coffee companies considering selling Fairtrade or sustainable certified coffees must weigh the costs of the product, against the benefits of product differentiation. However, in the Japanese market, where certified coffee is still not that well-known, there are fewer benefits to this differentiation, while the premium price costs become a significant demerit.

According to interviews with Japanese coffee companies, Fairtrade coffee has a disadvantage in terms of cost. While the premiums for Rainforest Alliance and Good Inside certified coffees are
3~5 Yen/pound, Fairtrade coffee is about 8 Yen/pound and demand for Fairtrade is inadequate to compensate for the cost.

**Constraints in the Coffee Certification Systems**

For coffee companies, the accessibility and simplicity of coffee certification procedures are as important as quality and price of the coffee. For example, the total volume of Rainforest Alliance-certified coffee has increased as more countries participate in the Rainforest Alliance production system, which in turn makes it easier for coffee companies to source and purchase Rainforest Alliance-certified beans. In fact Rainforest Alliance-certified coffee is sometimes even sold as normal coffee without the Rainforest logo, because the supply of this coffee has become so abundant. In addition, companies can use the Rainforest Alliance certification mark on their products if they 30% of the product uses certified beans. On the other hand, for Good Inside and Fairtrade coffees, products labeled with the certification logo must contain 100% certified coffee. In addition, for Fairtrade certification, all the actors involved in the supply chain must be registered which poses a further institutional disincentive to certification.

**Awareness Raising**

In order for certified coffees to further increase their share in the Japanese market, it is necessary for Japanese consumers become more aware of the different certification systems. As mentioned above, Japanese consumers’ awareness toward certified coffees other than organic coffee is still very low. To raise awareness, it would be necessary to increase the number of certified products and to make them more visible to the consumers.

In addition, the purpose of coffee certification is not well-understood by Japanese consumers. The reason why fair trade coffee has not been well-recognized in the Japanese market despite its relatively long history is that the consumers are not attuned to the international system of trade itself. There is little awareness of what “unfair trade” refers to and therefore consumers have no basis for understanding what “fair” trade is. It has also been pointed out that the idea of socially responsible consumption is poorly understood in Japan. In a similar way, the term “sustainable” itself is relatively new and it is difficult for ordinary consumers to link the idea of coffee production with sustainable treatment of the environment.
Cooperation between “Certified” and “Affiliated” Fair Trade Schemes

Finally, in a problem peculiar to the Japanese market, lack of cooperation between “Certified” and “affiliated” fair trade frameworks is hurting the marketing of fair trade coffee. As mentioned earlier, the “affiliated” type of fair trade certification has been the mainstream in Japan and it is only recently that the FLO “Certified” type has emerged in the Japanese market. For organizations and companies which deal with the traditional “affiliated” type of fair trade, the mass marketing of fair trade products under the Fairtrade certified mark may diminish the significance of fair trade as an “alternative” trade, representing a different type of trade. Nevertheless, many “affiliated” type fair trade organizations do share the perception that it is important, especially in the Japanese market, to increase the number of fair trade products and to increase awareness among consumers and there has been movement towards cooperation between the “affiliated” and “certified” types of fair trade products.

Opportunities for the Future

The Japanese coffee market is becoming a mature market and it is important for coffee companies to offer a variety of options which match the wide-ranging requests and tastes of the consumers. Consumers tend to have more information on coffee production areas and producers’ lives and “fair trade” and “sustainable” can be tools for product differentiation through the added-value concept of “good for society and the environment”. As indicated previously, there are increasing numbers of double-certified organic and Fairtrade products and such further value-adding and differentiation through a combination of certifications can be an important marketing tool.

The idea of being sensitive to the socio-economic situation of the coffee producers is gradually gaining hold among Japanese consumers and synergies could be generated if both Fairtrade and sustainable coffees gained market share simultaneously. According to Fairtrade Label Japan, recently there is a move to incorporate the concept of fair trade into school curriculums in Japan and there is a possibility that through this, younger people may become more interested in fair trade.

As for market growth of sustainable coffees, it will be important to raise awareness about what sustainable coffee is and to facilitate understanding of the relationship between consumers’ buying behavior and the farming practices and environment of the production areas.
4 Coffee Production and Distribution in Tanzania

The following section will outline the current situation in the Tanzanian coffee industry, one of the two coffee industries we will look at closely in this study. In Tanzania, coffee production in the south has been increasing in recently years but production in north, while regarded as higher quality by the Japanese market, has been decreasing. Cooperatives’ have also been struggling in their attempts to sell higher-end, premium coffee, in large part because the Tanzanian coffee auction is dominated by a cartel of multinational companies, which limits the auction’s ability to function efficiently.

In this chapter we will look at the current coffee production systems and marketing chains as well as assess the challenges that the Tanzanian coffee industry faces, in order to identify what aid or support may be appropriate.

4.1 Economy and Agriculture in Tanzania

4.1.1 Overview of Tanzanian Economy

The United Republic of Tanzania has a population of 4.2 million with a GDP per capita of 482 USD, barely half the average of other Sub-Saharan countries. Agriculture is the main industry in Tanzania. About 70% of its citizens are engaged in agriculture and agriculture’s share of GDP is 46%, the largest of all its industries. 34% of Tanzania’s population suffers from malnutrition, a figure that is 8 percentage points above the Sub-Saharan African average. The World Bank regards Tanzania as a Least Developed Country (LDC).

Table 6: Comparison of Tanzania to the Avg of 47 Other Sub-Sahara African Countries (excl. S. Africa), 2008

<table>
<thead>
<tr>
<th></th>
<th>Tanzania</th>
<th>Sub-Saharan African Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>Population (2008)</td>
<td>42,000,000</td>
<td>16,000,000</td>
</tr>
<tr>
<td>Rural population % (2006)</td>
<td>74%</td>
<td>65%</td>
</tr>
<tr>
<td>Population involved in agriculture % (2006)</td>
<td>74%</td>
<td>59%</td>
</tr>
<tr>
<td>Malnourished population % (2007)*</td>
<td>34%</td>
<td>26%</td>
</tr>
<tr>
<td>GDP (2008)</td>
<td>21 Billion USD</td>
<td>16 Billion USD</td>
</tr>
<tr>
<td>Per capita GDP(2008)</td>
<td>482 USD</td>
<td>945 USD</td>
</tr>
<tr>
<td>% Agriculture in GDP (2005)</td>
<td>46%</td>
<td>17%</td>
</tr>
<tr>
<td>% Industry in GDP (2005)</td>
<td>17%</td>
<td>31%</td>
</tr>
<tr>
<td>% Service in GDP (2005)</td>
<td>37%</td>
<td>52%</td>
</tr>
</tbody>
</table>

Source: World Bank “World Databank” *Percentage of malnourished Sub-Saharan population includes South Africa
The Tanzanian economy fell into a deep recession in the early 1990s after the implementation of structural adjustment plans initiated by the World Bank and IMF. However, since 2000, GDP has shown 5% or more average growth each year, which suggests that a more sound macroeconomic situation is being maintained. Looking at growth by industry, in the early 1990s, the manufacturing and service sectors had negative growth. Since 1995, manufacturing has showed a high growth rate – around 10% in the 2000s - but is still less than 20% of the overall Tanzanian economy. Agriculture accounts for about 45% of GDP and still remains the core industry of the country, a situation that has not changed substantially since Tanzania’s independence.31

Graph 22: Nominal GDP and Real GDP Growth Rate in Tanzania

Source: World Bank

Graph 23: Real Growth Rate of Tanzania’s Agriculture, Manufacturing and Service Sectors

Source: World Bank

31 Ikeno, Jun, “Poverty and rural villages in Africa - areas that have experienced development in Tanzania”, 2010
4.1.2 Coffee Industry within Tanzanian Agriculture

The main staples in Tanzania are maize, cassava, rice, wheat, pearl millet, finger millet, sorghum, and plantain. Farmers do not rely on only one staple and usually grow several crops. Among staple foods, maize acreage is largest at 3.1 million ha, and cassava and rice are second largest, at around 700 thousands ha each\(^{32}\). Within the average production volume of staple crops from 1998 to 2008, cassava occupies 32%, maize 18%, and potatoes 17%.

The main cash crops are coffee, cotton, sugar cane, tea, cashew nut, tobacco, and sisal. Among these cash crops, cotton acreage is 400,000 ha, coffee is 110,000 ha, sisal 55,000 ha, sugar cane 23,000 ha, and tea 19,000 ha\(^{33}\). Out of average cash crop production volume from 1998 to 2008, coffee occupies 6% of production.

Over 90% of Tanzanian coffee is produced by small farms and 400,000 or more households receive direct income from coffee production. It is also estimated that, in addition, 2.4 million people indirectly rely on the coffee industry for their livelihood\(^{34}\).

Graph 24: Tanzanian Food Crops and Cash Crops by Production Share (Average of 1998 to 2008)

![Graph showing food and cash crops]


\(^{32}\) FAOSTAT
\(^{33}\) FAOSTAT
\(^{34}\) Tanzania Coffee Board and Tanzania Coffee Research Institute 2010 “Tanzania Coffee Industry Development Strategy 2011-2016”
4.1.3 Natural Environment of Tanzania and Coffee Production Areas

The Tanzanian climate is primarily tropical with some subtropical highlands. Looking at Tanzania’s ecological zones, the central area is the driest area, comprised of shrubland surrounded by tropical dry forests. Outside the Central Zone is mostly humid, with tropical moist deciduous forests and tropical rainforests. The Northern, Southern and eastern Lake Zone, which are the main coffee production areas, are mountainous or highland areas.

Map 2: Tanzania’s Ecological Zones

Source: FAO Ecological Zone

35 Ministry of Agriculture Food Security and Cooperatives 2009 “Investment Potential and Opportunities in Agriculture (Crop Sub-sector)”
Tanzania’s temperature ranges from 10°C to 35°C with fluctuations by altitude and season. Temperatures reach highs of 25°C to 30°C between November and February and lows of 15°C to 20°C between May and August. Areas around Lake Victoria, the Northern Highlands, and the Northeast coast have two rainy seasons; the big rainy season between March and May produces 300 to 600 mm of rainfall and the smaller rainy season between September and December delivers 200 to 500 mm of rain. Other areas have one rainy season per year of 500 to 1000 mm of rainfall between November and April. In the dry Central Zone there is 600 mm annual rainfall, while the surrounding areas including the coast, Southern regions, eastern Lake Zone and parts of the northern areas receive 1,000 mm or more of rain.

**Map 3: Annual Average precipitation in Tanzania (mm/year)**

Source: FAO Country Profile.

In the Kilimanjaro coffee production region, precipitation also fluctuates greatly. Between 1996 and 2005, rainfall in Moshi, the capital of Kilimanjaro, ranged widely from 1,200 mm to 330mm. However, the OECD has reported that in the area of the Coffee Research Institute in Lyamungu, Kilimanjaro Region 36, rainfall has been declining an average of 2.6 mm annually since 1935 due to the effects of climate change. Though it has been reported that development of traditional irrigation systems in the Kilimanjaro Region have alleviated the effects rainfall changes to some extent.

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36 OECD 2003 “Development and Climate Change in Tanzania: Focus on Mount Kilimanjaro”
degree, rainfall decreases are making coffee production of small farmers unstable, resulting in the decline of production and quality.

**Graph 26: Annual Rainfall in Moshi, Kilimanjaro Region**


10% of Tanzania’s land is used for farming and only 3% of the farms have irrigation facilities. Most farms are owned by small-scale farmers; the amount of land held by medium or large-scale farmers is only one-eighth of the size of land held by small-scale farmers. In addition, while about half of Tanzania’s land is viewed as cultivatable land, highly productive areas are only about 5% of Tanzania’s land area.

**Table 7: Land Utilization in Tanzania**

<table>
<thead>
<tr>
<th></th>
<th>Million ha</th>
<th>Share in Total Land (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total land</td>
<td>94.5</td>
<td>100</td>
</tr>
<tr>
<td>Arable land</td>
<td>44</td>
<td>47</td>
</tr>
<tr>
<td>Cultivated land</td>
<td>9.5</td>
<td>10</td>
</tr>
<tr>
<td>Area suitable for irrigation</td>
<td>29.4</td>
<td>31</td>
</tr>
<tr>
<td>Planted area under irrigation</td>
<td>0.27</td>
<td>0.3</td>
</tr>
<tr>
<td>Area of high development potential</td>
<td>2.3</td>
<td>2</td>
</tr>
<tr>
<td>Area of medium development potential</td>
<td>4.8</td>
<td>5</td>
</tr>
<tr>
<td>Land under medium and large-scale farming</td>
<td>1.5</td>
<td>2</td>
</tr>
<tr>
<td>Total land allocated to small holders</td>
<td>11.9</td>
<td>13</td>
</tr>
</tbody>
</table>

Source: Ministry of Agriculture Food Security and Cooperatives 2009 "Investment Potential and Opportunities in Agriculture (Crop Sub-sector)"
Tanzania’s soil types and their characteristics are summarized in the table below.

<table>
<thead>
<tr>
<th>Region</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Northern Zone <em>(Arusha, Kilimanjaro, Manyara)</em></td>
<td>In the northern area, on volcanic hills in high altitude and slopes, there is soil that includes volcanic ash, volcanic sediment, and clay made from lava. Most soil is rich.</td>
</tr>
<tr>
<td>Southern Zone <em>(Mtwa, Lindi, Tunduru District in Ruvuma Region)</em></td>
<td>The southern area has different types of soil; the coastal area has more sandy soil while lowlands and valleys have fragile or hard clay. Soil fertility is medium to low.</td>
</tr>
<tr>
<td>Southern Highlands <em>(Iringa, Mbeya, Rukwa, Ruvuma)</em></td>
<td>Southern highlands have various kinds of soil. Fragile clay is not very fertile but hard lacustrine alluvial soil (the result of fresh water lake deposits) and the soil mixed with volcanic ash in the highlands has high fertility.</td>
</tr>
<tr>
<td>Central Zone <em>(Dodoma and Singida)</em></td>
<td>The Central Zone is comprised of mainly sandy and loamy soil. Loamy soil is made of clay carried by seasonal floods and its fertility is low.</td>
</tr>
<tr>
<td>Western Zone <em>(Tabora, Kigoma)</em></td>
<td>The Western region has different soil in the highlands and lowlands. The highlands have sandy and loamy soil while the lowlands’ alluvial soil is composed of soil that includes clay brought by floods.</td>
</tr>
<tr>
<td>Lake Zone <em>(Mwanza, Kagera)</em></td>
<td>The soil in the area around Lake Victoria is composed of sandy soil and loamy soil with areas of clay, inconsistent soil, hardpan, and high fertility soil.</td>
</tr>
<tr>
<td>Eastern Zone <em>(Tanga, Morogoro, Coastal area, Dar es Salaam)</em></td>
<td>The Eastern region is composed mainly of sandy soil and hard clay soil. The tropical highlands have more clay-heavy soil. Soil fertility is medium to high.</td>
</tr>
</tbody>
</table>

*Source: Ministry of Agriculture, Food Security and Cooperatives 2009 “Investment Potential and Opportunities in Agriculture (Crop Sub-sector)”*

There are three main coffee production areas in Tanzania: the northern highlands consisting of the Kilimanjaro Region (6 districts in total) and the Arusha Region (Arumeru District); the southern highlands centered on the Mbeya Region (Mbosi and Rungwe Districts) and Ruvuma Region (Mbinga District); and the Western Lake Zone in the Kagera Region (Bukoba, Karaguwe and Muleba Districts). The northern and southern highlands produce mostly washed Arabica beans. The western Lake Zone mostly produces unwashed Robusta. Other regions such as Tanga, Iringa, Morogoro, Kigoma, Manyara, Mwanza, Rukwa and Mara regions also produce coffee\(^{37}\).

\(^{37}\) “Tanzania Coffee Industry Development Strategy 2011-2016”, TCB and TaCRI 2010
The main coffee production area and the homeland of Tanzania’s famous “Kilimanjaro” coffee is the area around Mt. Kilimanjaro in the far north of the country. Coffee there is mainly produced by the Chagga people. Coffee was originally introduced to Tanzania for cultivation in the 1870s by missionaries and settlers. In 1893, coffee trees were first planted near Mt. Kilimanjaro when the settlers recognized the mountain area as an ideal climate for planting coffee. The Chagga who lived on the mountain quickly realized that coffee is a good cash crop and started planting coffee themselves. It is estimated that more than 14,000 Chagga households had planted coffee by 1932. However, because of frequent coffee price drops since the 1980s, many farmers are abandoning their coffee farms and replanting with other crops.

Mbinga District in the southern highlands is also a main coffee production area and produces some of the highest quality Arabica beans in Tanzania. It is said that coffee was first introduced in Mbinga District in 1927 and the first coffee cherry harvest was in 1933. Currently Mbinga produces 10,000 to 14,000 tons of coffee annually, all of which is produced by small-scale

farmers. It is estimated that Mbinga has over 42,000 of small-scale farmers.

Kagera Region is the main production area of the Eastern Lake Zone and the only production area for Robusta in Tanzania. Kagera also produces hard Arabica (un-washed Arabica). Robusta coffee is indigenous to the Lake Victoria area and has been grown in Kagera from long before the colonial era. Traditionally wild coffee beans were chewed in rituals rather than being consumed as a drink. In Kagera today, a high percentage of farmers choose to plant Robusta breed over Arabica because Robusta is easier to cultivate, has higher yield than Arabica, and the price difference between Robusta and dry-processed Arabica is negligible.

There are three big issues facing Kagera's coffee production. The first is that since Kagera is a low altitude area, it is not ideal for cultivating Arabica. The second issue is that Kagera is an inland area, far from the big cities and coastal areas, which makes communication more difficult, shipping costs more expensive, and discourages international buyers from visiting. The third is occurrence of coffee wilt disease on Robusta coffee. Currently, the only preventive action is burning the diseased trees, which is having a huge impact on production.39

4.1.4 Coffee Production, Quality, and Price Trends

Production Trends by Type and Region

Depending on the year, Tanzania's coffee green bean production fluctuates dramatically. For example, the production volume in 2008/09 was nearly 70,000 tons but it decreased to 36,000 tons in 2009/10. This is due in part to the fact that coffee trees are naturally biennial bearing, having a heavy crop one year and then a light one the next year. However, in addition to biennial bearing, Tanzania suffers from a lack of irrigation systems, an excess of old trees, and fluctuating prices, which make the production fluctuation even more extreme.

Tanzania mainly produces mild Arabica, Robusta and a small amount of hard Arabica. The production of mild Arabica has been decreasing, particularly in the Kilimanjaro Region. While an increase in production in south has compensated for the decrease in the north to some extent, overall production in Tanzania has been shrinking.

The production of mild Arabica in the Kilimanjaro Region, once the country’s largest production area, decreased from 20,000 tons in 1981/82 to 3,700 tons in 2009/10, leading to a steady decrease in total coffee production from the 1990s through the early 2000s. However, in the late 2000s, two regions in south (Ruvuma and Mbeya) increased to around 20,000 tons and this halted the downward spiral of Tanzania’s overall coffee production.

In contrast to mild Arabica, the production of Robusta has increased since the mid 1990s and has now reached 20,000 tons, over 30% of total Tanzanian coffee production. The production growth can be attributed to the Kagera Region, as 99% of Robusta is produced in Kagera.
Quality and Price Trends

The quality of Tanzanian mild-Arabica did not change significantly from the early 1990s through 2003. Top quality Grade 1-4 was rare and always accounted for less than 1%, while the percentage of Grade 5-8 stayed around 30-40%.

However, from the 2003/2004 season some changes become apparent, especially when looking separately at coffee from the North or the South. In the South, the percentage of larger mild Arabica beans (AA and A size) increased between 2003/2004 and 2005/2006, while smaller beans (B and smaller) decreased, albeit only slightly. The percentage of larger bean of AA and A was consistently over 50%. However, in the North, the percentage of large beans (AA and A size) decreased after 2007/08 and smaller beans (B and below) increased. The percentage of large beans (AA and A) was always under 50%. However, according to Coles and Mhando⁴⁰, the percentage of Grade 1-7 Kilimanjaro coffee increased from a little over 30% in 2001/02 to more than 80% in 2007/08; this suggest that although the mild Arabica produced in the North may be poorer in physical quality, in terms of flavor quality it may have improved.

⁴⁰ Christopher Coles and David Mhando 2010 “Kilimanjaro Coffee Value Chain Case Study: Producer Benefits from Fairtrade and Free Market Channels”
Through the quality loss of Northern coffee and the quality improvement of Southern coffee, Southern coffee is now purchased at the same price or, in some production years, even higher prices than Northern coffee.

**Graph 30: Mild-Arabica Coffee in the Auction System by Grade**

![Graph showing the distribution of Mild-Arabica coffee grades from 1991-94 to 2003.]

Source: Sokoine University of Agriculture, Bureau for Agricultural Consultancy and Advisory Service, 2005 "Final Report on Coffee Baseline Report".

**Graph 31: Northern (Kilimanjaro and Arusha Regions) Mild-Arabica Coffee by Grade**

![Graph showing the distribution of coffee grades by region from 2003/04 to 2009/10.]

Note: Northern coffee has been defined as coffee shipped out from Moshi. According to interviews with TCB, coffee bean shipped out from Moshi is from Kilimanjaro Region or Arusha Region.

Source: TCB Production Statistics
Note: Southern coffee has been defined as coffee shipped out from Makanbako or Muboshi. According to interviews with TCB, coffee beans shipped out from Makanbako is from Ruvuma Region and those shipped out from Muboshi is from Mbeya.

Source: TCB Production Statistics

| Table 9: Average Producer Price of Mild-Arabica Coffee by Area of Production (Tsh/kg) |
|-----------------------------------|----------------|----------------|----------------|----------------|----------------|----------------|
|                                  | 2004/05 | 2005/06 | 2006/07 | 2007/08 | 2008/09 | 2009/10 |
| Produced in the North             | 850     | 1,200   | 1,500   | 1,500   | 1,800   | 1,600   |
| Produced in the South             | 850     | 1,200   | 1,500   | 1,700   | 1,700   | 1,800   |

Source: TCB Internal Document

4.2 Coffee Export

Tanzania’s total exports by value rose gradually through the mid-1990s but, after a dip in the late-90s, exports quintupled between 1999 and 2008, expanding from 560 million USD to 3 billion USD due to a dramatic increase in mineral resources exports. In the meantime, exports of agricultural products fluctuated until 2006 and then rose to 1 billion USD. However, the value of agricultural exports dropped as a share of all exports, from 75% in 1985 to 31% in 2008.
Tanzania’s main agricultural exports are coffee, cotton, cashew nuts, tobacco, tea and sisal. Coffee, which used to provide 43% of agricultural exports by value and 32% of total export value, now holds only 11% of agricultural exportation value and 3% of overall export value.

Graph 33: Value of Total Export and Agricultural Export in Tanzania

Source: FAOSTAT

Graph 34: Share of the Main Cash Crops in Value of Agricultural Exports in Tanzania

Source: FAOSTAT

Over 90% of coffee produced in Tanzania is exported. The largest volume goes to Japan.
followed by the USA and European countries such as Italy, Germany, and Belgium. Though the volume of exports has fluctuated between 30 and 70 thousand tons, the value has been relatively stable at 100 to 120 million USD, due to price fluctuation of coffee green beans.

Graph 35: Value of Tanzanian Coffee Exports, 2001-2010

Source: ITC, International Trade Statistics

Graph 36: Volume of Coffee Exports from Tanzania, 2000-2009

Source: International Coffee Organization, Trade Statistics

Japan and Germany compete as the top two export destinations of Tanzanian mild Arabica coffee. When exports to Japan increase, exports to Germany decrease and vice versa. The two countries accounted for 70% of mild Arabica coffee exports until 2005/06 but then dropped to 60% in 2006/07 because of the expansion of exports to such new markets as USA, Italy, and Belgium. Exports to these new markets have not declined, suggesting that Tanzanian mild Arabica has successfully established market share there.
Because, of the economic recession in recent years, Japan could not keep up with the increasing international price and switched from importing high-priced beans to average-priced beans. In contrast, the USA and European countries switched from beans of below average price to beans of above average price. It appears that since Japan switched to lower-priced beans, the high-priced beans which Japan used to import in the past have gone to countries such as the US and Italy.

Graph 37: Export Destination of Mild-Arabica Coffee

Graph 38: Average Price and Export Price Difference of Mild-Arabica by Country
(3-year moving average)

Source: TCB Export Statistics
4.3 Domestic Coffee Consumption in Tanzania

Annual per capita coffee consumption in Tanzania is 0.06 kg and 4.2% of total coffee production is consumed domestically.

The Tanzania government’s 2001-2006 coffee sector strategy aimed at the expansion of domestic consumption because export bargaining power would be strengthened if the domestic market expands as a substitute for export markets. Establishing coffee shops was one of the concrete recommendations. However, this goal of expanding domestic consumption was not put forward in the new 2011-2016 coffee strategy. As explained in the strategy document itself, an increase in coffee consumption is generally proportional to GDP growth. Therefore, it is most realistic for Tanzania to wait for coffee consumption to increase naturally along with economic growth. Nevertheless, the Kilimanjaro Native Cooperative Union (KNCU), one of the main cooperatives in Kilimanjaro, has opened a café in Moshi and is aiming at expanding domestic consumption, initially targeting foreign visitors. There is roasting equipment inside the café and freshly-roasted coffee is served, as well as roasted beans sold for 3,500Tsh/250g (about 2.3 USD/250g) and 10,000Tsh/1kg (about 6.6 USD /1kg).

Graph 39: Correlation between GDP and Coffee Consumption (2008)

4.4 Tanzanian Government Policy and the Position of Coffee

4.4.1 National Development Policy

The United Republic of Tanzania was formed in 1964 by uniting two sovereign states: the Republic of Tanganyika which had gained independence in 1961 and the Republic of Zanzibar which gained independence in 1963. The first president Julius Nyerere introduced an original type of socialism, often called African socialism, that the emphasized the connectedness of the traditional rural extended family - *Ujamaa* in Swahili. However despite Nyerere's confidence in the power of the rural villages, agricultural production decreased. A long drought, war with Uganda’s Idi Amin and the effects of the global oil crisis in 1980s only exacerbated the economic problems. As a result, Tanzania adopted structural adjustment measures imposed by the IMF in 1986 with the idea of ushering in opportunities based on free market principles. In the early 2000s, amid a wave of international attention on poverty issues, the World Bank and IMF granted Tanzania debt relief. In order to obtain foreign aid, Tanzania developed a Poverty Reduction Strategy Paper (PRSP), putting emphasis on achieving numerical targets such as a reduction of in the number of people living in poverty.\(^1\)

In 1998, Tanzania issued a “Local Government Reformation Policy Paper” which outlined the government reforms aimed at improving the performance and accountability of local government and improving access to services, especially for the poor. Tanzania’s governmental structure begins with the central government, and under that is organized in decreasing size into regions, districts, divisions, wards, villages and sub-villages. Currently district governments take a central role in planning and executing development policies. Because the district governments are positioned squarely between the central government that sets the framework for national development policy and the villages which benefit from the policy, the idea is that district governments are in the best position to provide appropriate and finely-tuned services. However, district governments do not have their own budgets and depend heavily on the central government for funding. District government offices are also under-staffed and therefore independently planning and implementing policy is currently difficult for district administrations.

4.4.2 Agricultural Policy

Tanzanian agricultural policy was set in the 2001 Agricultural Sector Development Strategy (ASDS).

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\(^1\) Ikeno, Jun, “Poverty and rural villages in Africa”, 2010
The ASDS has six main policies:

- Achieve consistent annual 5% growth in the agricultural sector through a shift from subsistence agriculture to commercial agriculture, a policy which is a central focus of the poverty eradication strategy;
- Clear barriers to entry for the private sector and create an environment that will support agricultural profitability and productivity to promote transformation to private sector-led commercial agriculture;
- Promote public-private partnerships to facilitate development. This includes clarifying the roles of the government and private sector and increasing contract farming (vertical integration);
- Use the District Agricultural Development Plan (DADP) framework that is a part of the District Development Plans (DDP) and focus on participatory planning and the execution of these plans;
- Promoting movement of governmental services to rural areas
- Integrate cross-cutting issues into the main issues during development plan implementation

Based on the Agricultural Sector Development Strategy (ASDS), in 2003 the Agricultural Sector Development Programme (ASDP) was created to guide implementation of concrete development plans. The ASDP is a 7-year plan (2006/7 through 2012/2013) with a budget of 250 million Tsh (about 2 billion USD)\(^2\). The Tanzanian government provided 76% of the budget, an additional 12% came from a basket fund from donor organizations and the remaining 12% comes from fees related to the specific programs that are paid by farmers. The ASDP Basket Fund was established by the Japan International Cooperation Agency (JICA), Danish International Development Agency (DANIDA), EU, Irish Aid, the International Fund for Agricultural Development (IFAD) and the International Development Association (IDA). As previously mentioned, Tanzanian development policy is currently concentrated at the district government level and 75% of the Agriculture Sector Development Programme budget was allocated to district-level development.

The Agricultural Sector Development Programme designed programs based on 5 main principles which are listed below along with details of the implementation plans.

- Expansion of Resource Management Rights for Beneficiaries: The ASDP lays great

\(^2\) at 1,230 Tsh/USD
importance on the expansion of resource management rights for farmers when designing local development plans, investing, and planning and implementing other necessary services. The ASDP aims to empower farmers by giving local communities more authority in relation to resource allocation.

- **Diversification of Service Suppliers:** The ASDP aims to develop a greater variety of service providers to provide competition and improve cost-effectiveness of service delivery. It encourages an environment that enables competition for service delivery contracts.

- **Resource allocation based on results:** The ASDP aims at more transparency and fairness in resource allocation for local governments. Also it gives more incentives to promote efficient use of funds by local governments through annual evaluations. For under-performing governments, the ASDP also provides support for capacity building in key areas.

- **Integration of governmental agencies:** Through governmental integration, the current schemes for fundraising and budgeting for government plans become viable. Integration also strengthens cooperation related to priority issues and helps avoid redundancy and misalignment in projects.

- **Expand Nationwide:** The ASDP Basket Fund has nationwide reach. Once a local government shows appropriate capacity and outputs, it is entitled to receive funds for additional development or management skill capacity building.

<table>
<thead>
<tr>
<th>Support at District Level</th>
<th>Agricultural Investment</th>
<th>Infrastructure, small-scale irrigation, community investment in innovative equipment</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Agricultural Service</td>
<td>Agricultural extension services and technology dissemination</td>
</tr>
<tr>
<td></td>
<td>Agriculture-related Capacity Building and Reform</td>
<td>Capacity building for improved district agricultural planning, agricultural investment appraisal, and agricultural services</td>
</tr>
<tr>
<td>Support at National Level</td>
<td>Agricultural Service</td>
<td>Agricultural research and extension services</td>
</tr>
<tr>
<td></td>
<td>Irrigation Development</td>
<td>Investment in irrigation infrastructure at the national level and technical support for irrigation investment at district level</td>
</tr>
<tr>
<td></td>
<td>Marketing and Private Sector Development</td>
<td>Development of private marketing system; farmer empowerment</td>
</tr>
<tr>
<td></td>
<td>Food Security</td>
<td>Improvement of agricultural policy, regulations, framework</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Identification of vulnerable people and strengthening of food</td>
</tr>
</tbody>
</table>

**Table 10: Outline of ASDP**
In 2009, the Tanzania National Business Council (TNBC) with Tanzanian President Kikwete as its Chairman debated a new agricultural policy known as Kilimo Kwanza, Swahili for “Agriculture First”. Since the plans for its implementation were announced on August 3, 2009, Kilimo Kwanza has been regarded as Tanzania’s “Green Revolution” and it focuses on transformation to more modern and commercial agriculture. Kilimo Kwanza encourages government agencies, in addition to the Ministry of Agriculture, Food Security and Co-operatives, to participate in its plans and it promotes active investment by private entities. There are many areas where the Kilimo Kwanza overlaps with the ADSP. Kilimo Kwanza aims to implement “10 pillars”, outlined below.

1. National political vision for agricultural innovation
2. Financing Kilimo Kwanza and supporting agricultural investment
3. Institutional reorganization for management of Kilimo Kwanza
4. Paradigm shift to strategic framework for agricultural priorities
5. Land reform
6. Creating incentives for Kilimo Kwanza, including fiscal, trade and legal incentives
7. Industrialization for agricultural reform
8. Effective use of science, technology and human resource for agricultural reform
9. Infrastructure development for agricultural reform
10. Mobilization of government, private sector and citizens for support and participation in Kilimo Kwanza

**4.4.3 Coffee Policy**

The development strategy for the coffee sector has been laid out in the 2011-2016 Tanzania Coffee Industry Development Strategy, which is aligned with the ASDS, ASDP, and Kilimo Kwanza. According to an official of the Ministry of Agriculture, Food Security and Cooperatives, the focus of the government’s coffee policy has shifted to the south and the government wants to expand southern coffee production. In the north horticulture crops such as flowers for export to Netherlands and avocados are widely produced and farmers will produce what there is a market for. Therefore the government does not intend to promote only coffee production in the northern
areas. On the contrary, there is no other cash crop in the south and there is abundant land, so coffee production expansion is planned through dissemination of new coffee varieties and quality improvement through establishment of more washing stations.

The Tanzania Coffee Industry Development Strategy 2011-2016 focuses on the following 5 points:

- Increase production
- Improve quality
- Improve business environment and policy framework
- Increase farmer incomes and price premiums
- Increase value addition throughout the value chain

**Increase production**

Production targets are to increase from the current 50,000 ton to 80,000 tons by 2016, and then 100,000 tons by 2020. Concrete actions towards this goal include planting new coffee varieties (production of 200 million seedlings by 2020), expansion of farm land (expansion by 10,000 ha by 2016), organizational reform, increase in fertilizer usage and control of coffee diseases and pests. Through the combination of these measures, crop yield is expected to increase from the current 250kg/ha (200g/tree) to 600kg/ha (450g/tree).

**Improve Quality**

Quality improvement requires strict adherence to good agricultural practices by farmers as well as the establishment of more central pulpy units (CPU) for washing cherries and removing the pulp. The Coffee Industry Development Strategy aims to install 300 CPUs and have 46,000 of the total 100,000 tons of national production coming from these new CPUs. To realize this goal of increased CPU processing, farmers will need improved access to loans for the initial investment and operating costs.

**Improve business environment and policy framework**

To promote private sector participation and adapt to changes in the business environment, regulations and market strategies need regular reviews. Monitoring and strengthening of regulations must be made a focus in order to create an environment of fair market competition. Also, to facilitate further investment in the coffee industry, reform is needed in the areas of
taxation, customs clearance and land ownership as well as improvements in infrastructure such as ports, roads, electricity, water and rural medical services.

**Increase farmer incomes and price premiums**

To increase farmer incomes, it is necessary to increase the transparency of producer associations and improve business management capabilities. In addition, streamlining and shortening the value chain will enable farmers to access better markets. Other important areas are the facilitation of loans through the Warehouse Receipt System (WRS) and microfinance loans, replacing coffee trees with disease-resistant varieties, and reducing costs through increased processing efficiency.

**Increase value addition throughout the value chain**

One potential opportunity for high value addition is certified coffee production. Support for coffee marketing helps farmers directly export high quality coffee to markets offering premium prices. These marketing activities contribute to boosting brand recognition of Tanzanian coffee. Furthermore, production of processed products like roasted beans, roasted powders and instant coffee will increase value addition.

In line with the Tanzania Coffee Industry Development Strategy’s 5 main goals, the set of interventions and activities summarized in the following chart was developed. More than 90% of the total budget is allocated to increasing production, which means that meeting target figures such as the production increase to 100,000 tons by 2020 is the priority for Tanzanian coffee policy. Of the 5 main goals of the development strategy, "Increase of farmer’s income and price premium", appears to have not been established as its own program, though the issue is included in some of the other programs. Since over 90% coffee is produced by small-scale farmers it is somewhat questionable whether achieving the expanded production goals are possible without providing incentives for farmers to produce in the form of securing price premiums.

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43 Through the WRS, farmers can receive loans by offering green coffee beans as loan collateral when they arrive at the warehouse of a processing station.
## Table 11: Outline of Tanzania Coffee Industry Development Strategy 2011-2016

<table>
<thead>
<tr>
<th>Intervention</th>
<th>Activities</th>
<th>Budget (000s USD / year)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Production and Productivity</td>
<td>Strengthen capacity for dissemination of coffee production best practices</td>
<td>1,000</td>
</tr>
<tr>
<td></td>
<td>Scale up production of improved high-yield variety seedlings (produce 20 million seedlings / year)</td>
<td>8,000</td>
</tr>
<tr>
<td></td>
<td>Facilitate availability of appropriate inputs through supply and financing systems (120 thousand ha to be fertilized by 2020)</td>
<td>4,300</td>
</tr>
<tr>
<td></td>
<td>Expand land for new growing areas (additional 2.6 million seedlings over 2,000 ha)</td>
<td>1,000</td>
</tr>
<tr>
<td>Quality and Standards</td>
<td>Scale up investment in CPU facilities (300 CPUs in 10 years)</td>
<td>450</td>
</tr>
<tr>
<td></td>
<td>Increase capacity of cupping facilities in producing regions (20 additional cupping labs / year)</td>
<td>250</td>
</tr>
<tr>
<td></td>
<td>Establish loan guarantee scheme for working capital</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Promote adherence to environmental and social sustainability standards</td>
<td>6</td>
</tr>
<tr>
<td>Business Environment and Policy Framework</td>
<td>Build industry information base</td>
<td>25</td>
</tr>
<tr>
<td></td>
<td>Build additional capacity to regulate and coordinate the sector effectively</td>
<td>100</td>
</tr>
<tr>
<td></td>
<td>Create a regulatory environment that stimulates public-private partnerships</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Improve coffee industry transparency and improve governance within producer associations</td>
<td>50</td>
</tr>
<tr>
<td></td>
<td>Conduct periodic review of coffee regulations to improve conditions for doing business</td>
<td>-</td>
</tr>
<tr>
<td>Marketing, Promotion, and Value Addition</td>
<td>Develop the Tanzania brand and promote Tanzanian coffee locally and internationally (0.5% of coffee revenue to be used for branding and marketing)</td>
<td>500</td>
</tr>
<tr>
<td></td>
<td>Organize and participate in coffee contests and exhibitions locally and internationally (4 contests / year)</td>
<td>40</td>
</tr>
<tr>
<td></td>
<td>Improve competitiveness of direct export and auction markets</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>Encourage value addition through local roasting and packaging facilities</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Promote local coffee consumption</td>
<td>-</td>
</tr>
</tbody>
</table>


*Note: No budget listed for an activity indicates that it is expected that this an ongoing activity for the agency involved.*

The largest amount of the budget is allocated to dissemination of improved varieties. The Tanzania Coffee Research Institute is already working on distributing disease-resistant,
high-yielding varieties and according to interviews with the Institute, a drought-resistant breed is under development. 18 million plants were already distributed throughout the country as of 2008/09. An additional 70 million plants are expected to be grown and distributed between 2009/10 and 2012/13. Out of these total 90 million plants, 28 million plants (32%) will be distributed for replacing old trees in the North, while 42 million plants (48%) will be distributed for expanding coffee production in new areas in the South. The remainder will go to the west and other areas.

### Table 12: Production and Distribution of Improved Coffee Varieties 2002-2009

(Unit: 1000 Trees)

<table>
<thead>
<tr>
<th></th>
<th>2002-2005/06</th>
<th>2006/07</th>
<th>2007/08</th>
<th>2008/09</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lyamungu (Kilimanjaro Region)</td>
<td>668</td>
<td>917</td>
<td>2,514</td>
<td>2,900</td>
<td>6,998</td>
</tr>
<tr>
<td>Ugano (Ruvuma Region)</td>
<td>260</td>
<td>400</td>
<td>1,376</td>
<td>3,297</td>
<td>5,333</td>
</tr>
<tr>
<td>Mbimba (Mbeya Region)</td>
<td>126</td>
<td>467</td>
<td>383</td>
<td>1,898</td>
<td>2,874</td>
</tr>
<tr>
<td>Maruku (Kagera Region)</td>
<td>150</td>
<td>300</td>
<td>677</td>
<td>1,291</td>
<td>2,418</td>
</tr>
<tr>
<td>Mwayay (Kigoma Region)</td>
<td>-</td>
<td>440</td>
<td>29</td>
<td>186</td>
<td>655</td>
</tr>
<tr>
<td>Sirari (Mara Region)</td>
<td>-</td>
<td>150</td>
<td>7</td>
<td>55</td>
<td>212</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>1,204</strong></td>
<td><strong>2,674</strong></td>
<td><strong>4,986</strong></td>
<td><strong>9,627</strong></td>
<td><strong>18,491</strong></td>
</tr>
</tbody>
</table>

Source: Tanzania Coffee Research Institute “Annual Report 2009”

### Table 13: Production and Distribution of Improved Coffee Varieties 2009-2013

(Unit: 1000 Trees)

<table>
<thead>
<tr>
<th></th>
<th>2009/10</th>
<th>2010/11</th>
<th>2011/12</th>
<th>2012/13</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lyamungu (Kilimanjaro Region)</td>
<td>4,500</td>
<td>5,000</td>
<td>5,500</td>
<td>6,100</td>
<td>21,100</td>
</tr>
<tr>
<td>Ugano (Ruvuma Region)</td>
<td>4,550</td>
<td>5,000</td>
<td>7,000</td>
<td>7,000</td>
<td>23,550</td>
</tr>
<tr>
<td>Mbimba (Mbeya Region)</td>
<td>2,130</td>
<td>2,500</td>
<td>2,800</td>
<td>3,000</td>
<td>10,430</td>
</tr>
<tr>
<td>Maruku (Kagera Region)</td>
<td>2,500</td>
<td>2,800</td>
<td>2,900</td>
<td>3,000</td>
<td>11,200</td>
</tr>
<tr>
<td>Mwayay (Kigoma Region)</td>
<td>500</td>
<td>500</td>
<td>600</td>
<td>600</td>
<td>2,200</td>
</tr>
<tr>
<td>Sirari (Mara Region)</td>
<td>300</td>
<td>300</td>
<td>300</td>
<td>400</td>
<td>1,300</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>15,000</strong></td>
<td><strong>16,100</strong></td>
<td><strong>19,100</strong></td>
<td><strong>20,100</strong></td>
<td><strong>70,300</strong></td>
</tr>
</tbody>
</table>

Source: Tanzania Coffee Research Institute “Annual Report 2009”
4.5 Coffee Production, Process and Distribution in Tanzania and Kilimanjaro

The following section will outline coffee production, processing, and distribution in the Kilimanjaro Region and give supplementary information about the south where Arabica coffee is also produced. The Kagera Region will not be included because it is a Robusta production area and is not closely related to the Japanese market.

4.5.1 Coffee Production

Coffee cultivation in Kilimanjaro and the Chagga people’s land inheritance system

The Chagga people who live on the slopes of Mt. Kilimanjaro commonly grow coffee trees under the shade of the banana trees that produce their staple food. A small-scale farmer typically owns about 300 coffee trees on a 0.5 to 1 ha farm. In the Kilimanjaro region, farmers harvest coffee crops during the rainy season from August to December.

Table 14: Coffee Growing Period in the Kilimanjaro Region

<table>
<thead>
<tr>
<th></th>
<th>Jan</th>
<th>Feb</th>
<th>Mar</th>
<th>Apr</th>
<th>May</th>
<th>Jun</th>
<th>Jul</th>
<th>Aug</th>
<th>Sep</th>
<th>Oct</th>
<th>Nov</th>
<th>Dec</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pruning</td>
<td></td>
<td></td>
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<tr>
<td>Fertilizing</td>
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<tr>
<td>Weeding</td>
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</tr>
<tr>
<td>Harvesting</td>
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</tbody>
</table>

*Source: Christopher Coles and David Mhando “Kilimanjaro Coffee Value Chain Case Study: Producer Benefits from Fairtrade and Free Market Channels”*

In Chagga families, land is passed down from the head of the family to the sons. As a result, coffee farms have been broken into increasingly small plots as each family splits its land equally among several sons and land for cultivation is becoming scarce. In the northern highlands, the size of the average coffee farm is now 0.81 ha, the smallest among the main coffee production areas. About half the households own plots less than 1 ha.

Additionally, as the Chagga people are traditionally education-minded and proactive in starting new businesses, young people tend to leave the Chagga villages and get jobs in areas other than agriculture. It is not uncommon for these young people to build a house on their inherited land (it is essential to be buried on one’s own ancestral land) which they use only over the
Christmas holidays and abandon coffee production completely. Furthermore, Kilimanjaro coffee producers are aging and as young people leave the village, it is difficult for elderly producers to do both harvesting and primary processing in the same day, leading to a decline in quality.

**The Matengo People and Coffee Cultivation in the South**

The southern district of Mbinga is dominated by the Matengo people, and almost all the Matengo households grow coffee. Like the Chagga people, the Matengo people grow coffee under plantain trees. The Matengo people also have a patrilineal social structure. Sons inherit land from their father and grow coffee trees on the land. As population increases and sons are unable to secure enough land, they move out of the village in search of new land. There is open land in the south and it is possible for coffee farms to expand. The average size of coffee farms is 1.13 ha, which is 1.5 times larger than those in the northern highlands. More than 90% of the southern coffee-growing households own more than 1 hectare of land and 20% of households have more than 5 hectares.

**Table 15: Avg Coffee Farm Size and Total Land Owned per Household in the Main Production Areas (2004)**

<table>
<thead>
<tr>
<th></th>
<th>Northern Highlands</th>
<th>Northern Lowlands</th>
<th>South</th>
<th>West</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average size of coffee farm (ha)</td>
<td>0.81</td>
<td>0.82</td>
<td>1.13</td>
<td>1.43</td>
</tr>
<tr>
<td>Average size of owned land (ha)</td>
<td>2.6</td>
<td>2.1</td>
<td>4.1</td>
<td>2.5</td>
</tr>
<tr>
<td>No land (%)</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>Less than 0.5ha (%)</td>
<td>9</td>
<td>11</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td>0.5-1ha (%)</td>
<td>40</td>
<td>34</td>
<td>8</td>
<td>22</td>
</tr>
<tr>
<td>1-2ha (%)</td>
<td>30</td>
<td>31</td>
<td>23</td>
<td>38</td>
</tr>
<tr>
<td>2-3ha (%)</td>
<td>12</td>
<td>11</td>
<td>21</td>
<td>9</td>
</tr>
<tr>
<td>3-5ha (%)</td>
<td>5</td>
<td>8</td>
<td>26</td>
<td>15</td>
</tr>
<tr>
<td>More than 5ha (%)</td>
<td>5</td>
<td>5</td>
<td>21</td>
<td>10</td>
</tr>
</tbody>
</table>

Source: Sokoine University of Agriculture, Bureau for Agricultural Consultancy and Advisory Service 2005 "Final Report on Coffee Baseline Report"

**Coffee Tree Aging Most Severe in the North**

In the Kilimanjaro region, many coffee trees planted during the colonial period still remain and the average tree in the northern highlands is 40 years old. The coffee yield peaks between 10 and 15 years and the economic life span (the span during which productivity and quality is
maintained) is 20~30 years. The productivity and quality falls dramatically after 40~50 years\textsuperscript{44}. In the northern highlands, producers continue to harvest trees that have already past their economic life span, and average yield per coffee tree in the north is 380g, lowest among all major production areas. Moreover, due to low planting density, the per-hectare yield is also extremely low at 330kg/ha.

In contrast, in the south, the average age of coffee trees is 22 years, youngest among all major production areas, and yield per coffee tree is high because coffee cultivation expansion is relatively recent. In addition, due to high planting density, the per-hectare yield is extremely high at 938kg/ha.

\textbf{Table 16: Average Coffee Tree Age and Yield in the Main Production Areas (2004)}

<table>
<thead>
<tr>
<th></th>
<th>Northern Highlands</th>
<th>Northern Lowlands</th>
<th>South</th>
<th>West</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average tree age</td>
<td>40</td>
<td>34</td>
<td>22</td>
<td>23</td>
</tr>
<tr>
<td>(years)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yield per hectare</td>
<td>330</td>
<td>434</td>
<td>938</td>
<td>667</td>
</tr>
<tr>
<td>(kg/ha)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yield per tree</td>
<td>0.38</td>
<td>0.49</td>
<td>0.48</td>
<td>1.72</td>
</tr>
<tr>
<td>(kg/tree)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Planting density</td>
<td>873</td>
<td>886</td>
<td>1962</td>
<td>389</td>
</tr>
<tr>
<td>(tree/ha)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>


\section*{Agricultural Inputs and Extension Services}

When the price for agrochemicals and fertilizer increased after the structural adjustments of the 1980s, small-scale farmers reduced their use of agricultural inputs. Whenever coffee prices declined, farmers were unable to purchase even those agricultural inputs that were essential and this resulted in even lower yield.

The number of agricultural extension workers who specialize in coffee production is decreasing and, particularly in the north, countermeasures against pests and diseases are not sufficient. On the district-level there is a lack of extension workers specializing in coffee, and in recent years

\textsuperscript{44} Tsujimura Hideyuki, “Coffee and the North-South Problem—The Food System of Kilimanjaro”, 2004
the task of instructing on coffee cultivation has been left to ward-level extension workers\textsuperscript{45}, the majority of whom have only general knowledge of agriculture. As a result, dissemination of coffee cultivation technology is not sufficient. According to the Tanzania Coffee Research Institute, almost no measures are taken to avoid the uneven production of biennial bearing and to equalize the production over the two year cycle. A 2005 Sokoine University satisfaction survey\textsuperscript{46} on agricultural extension services showed that farmers in the northern highlands tend to have the highest dissatisfaction, with about 40\% of farmers saying they are not satisfied with the extension instruction. Farmers in the south have the highest satisfaction with the percentage of unsatisfied farmers below 30\%.

\textbf{Graph 40: Satisfaction with Agricultural Extension Services by Production Area, 2003}

\begin{center}
\includegraphics[width=\textwidth]{satisfaction_graph.png}
\end{center}


\section*{Abandonment of Coffee Cultivation in the North}

In Kilimanjaro Region, the long-standing low coffee prices have led some farmers to begin abandoning their coffee trees. While the price has finally risen in recent years, many farmers have long experience with price fluctuation and are turning their backs on coffee cultivation. The Regional government has acknowledged this trend and in 2004 the deputy secretary of Kilimanjaro Region communicated to 5 provincial administrative chiefs within the Region indicated that vanilla production should be encouraged as a substitute for coffee production\textsuperscript{47}.

\begin{footnotesize}
\textsuperscript{45} Sokoine University of Agriculture, Bureau for Agricultural Consultancy and Advisory Service 2005 “Final Report on Coffee Baseline Report”
\textsuperscript{46} Ibid
\textsuperscript{47} Ikeno, “Poverty and African villages”, 2010
\end{footnotesize}
In addition, Tanzania continues to import one of its stable foods - maize - and has chronic food shortages. In 2003-2004, due to the effects of drought, producer prices for maize increased threefold\(^48\). This was one of the lowest years for producer prices for coffee, due to the decline in the New York Mercantile Exchange’s futures price. Because the increase in the maize price and decline in the coffee price occurred simultaneously, conversion from coffee cultivation to maize cultivation accelerated.

In the north producers have several other cash crop alternatives to coffee. For example, cooking banana is consumed as staple food in the north and is also sold at the local market, making cooking banana both a subsistence crop and a cash crop. In addition, Kilimanjaro and Arusha Regions border Kenya, the largest economy in East Africa, and cash crops such as tea, sisal hemp, vegetable, and flowers have also become major cash crops in the region\(^49\). As such, the north has a wide range of choices in terms of cash crops and incentives to grow coffee diminish when the producer price of coffee is not high. As a result, in the northern highlands, coffee accounts for only 6% of the agricultural income while banana and other crops are more important cash crops. As a result, it is reported that only banana trees are fertilized directly and coffee trees only get indirect fertilization\(^50\).

In the south, however, there are few substitutable cash crops. As farmers expect that coffee prices will inevitably rise again, almost no farmers have abandoned their coffee trees even when prices are low. Coffee cultivation is part of the culture of the Matengo people, passed down through generations. Coffee trees play an important role in obtaining social credit, such as being used as collateral for a loan, so Matengo farmers are reluctant to give up growing coffee trees. In the south, coffee brings in the largest share of income among cash crops.

\(^{48}\) Tsujimura, “Economics of Great-tasting Coffee”, 2009

\(^{49}\) Ministry of Agriculture Food Security and Cooperatives 2009 “Investment Potential and Opportunities in Agriculture (Crop Sub-sector)”

\(^{50}\) Christopher Coles and David Mhando 2010 “Kilimanjaro Coffee Value Chain Case Study: Producer Benefits from Fairtrade and Free Market Channels”
Coffee Estates

There are 10 to 12 large coffee estates in the Kilimanjaro Region. On these large estates, coffee trees tend to be of the same age. They are planted uniformly and irrigated, resulting in coffee beans of a higher quality than those of small-scale farmers. While only 40-50% of the coffee from cooperatives and private companies who collect beans from farmers is Grade 5-8, more than 75% of estate coffee is Grade 5-8.

The following photographs show aspects of coffee production at villages in the Kilimanjaro Region.
Estate

Large coffee estate (shade trees are planted intermittently)

Small Farms owned by Chagga Farmers

Above: Coffee trees intercropped between banana trees
Above: Red coffee cherries

(Left) A farm where the coffee trees have been cut down and only banana trees remain
(Right) Maize farm

Above: A Chagga farmer harvesting coffee beans
4.5.2 Primary Processing in Villages

For primary processing in the farming villages, 75% of farmers in both the north and south do wet processing and more than 90% of these use their own hand-pulping machines. It is estimated that less than 10% of farmers have access to Central Pulping Units (CPUs). With hand pulpers, it is difficult to control quality, but it is virtually impossible for a small farmer to own their own CPU. However, more and more cooperatives in northern areas have gradually been setting up CPUs. Establishment of CPU facilities is costly and therefore many cooperatives are installing CPUs with support from NGOs.

Additionally, while nearly 60% of the farmers in the Northern highlands use tap water for coffee washing, more than 20% still use water from rivers or ponds. In the South, more than 60% of farmers use river or pond water for primary processing. Using river and pond water is far from ideal because it becomes become muddy and brown during the rainy season – exactly when coffee is harvested - causing the coffee flavor to deteriorate.

For the drying process, there is currently no significant problem as more than 80% of the farmers in both the North and South use wire mesh racks for drying after wet processing.

Graph 43: Processing Methods in Main Production Areas, 2004

![Graph showing processing methods in main production areas](Source: Sokoine University, "Final Report on Coffee Baseline Report")
Graph 44: Machinery used for Wet Processing by Main Production Area, 2004

Graph 45: Water Source used for Wet Processing by Main Production Area (2004)

Graph 46: Drying Method used in Wet Processing by Main Production Area (2004)

Source: Sokoine University, "Final Report on Coffee Baseline Report"
The following photographs illustrate primary processing at villages and cooperatives in the Kilimanjaro Region.

**Wet processing using a hand-pulper at a farmer’s home**

Above: Hand pulper set above cement tanks

Above: A rotating cylinder strips the pulp and pushes it out the back of the machine

Above: The wet green beans are pushed out the front of the machine.

Above: Green beans put in a bucket of water; light weight beans (“floaters”) and other foreign materials are removed before fermentation and washing
Primary Processing at a Cooperative

Left: Removing unripe or rotten cherries and then (right) weighing good cherries on the cooperative’s scale

Left: After weighing, the beans are poured into a hopper; they are then pushed into the CPU where the pulp is removed
Above: Upon removal of the pulp, parchment beans flow to a water tank for fermentation

Above: After fermenting, water from the reservoir is used for washing the coffee beans

Above: Parchment beans drying on tarps over wire mesh nets
4.5.3 Purchase at Villages and Secondary Processing

Distribution routes after purchase at villages

Before the liberalization of coffee bean distribution in 1993, all the coffee beans passed through cooperatives to the coffee auctions run by the Tanzanian Coffee Board (TCB). Therefore, there was a single coffee distribution route which went from small farmers → primary cooperatives → cooperative unions → TCB → exporters.

Upon liberalization of coffee distribution in 1994, private buyers began to purchase coffee beans directly at the village level. However, these private buyers were actually agents or affiliates of the multinational corporations that had already been exporting before liberalization. With liberalization, these multinationals were now able to obtained licenses not only for exporting but also for buying at the village level and processing.

Currently small-scale farmers have possible sales channels, one through cooperatives and the other through private companies. The distribution map below illustrates these options.
Primary cooperatives’ attempt to develop own distribution route

In the Kilimanjaro Region, a number of primary cooperatives have banded together to form a new group known as G32 and developed their own distribution route as an alternative to the dominant cooperative Kilimanjaro Native Cooperative Union (KNCU). KNCU’s long running management inefficiencies had led to banks refusing loans to KNCU due to excessive debt. As a result, KNCU became increasingly unable to compete with private buyers and the coffee price KNCU could offer to its members also dropped. Therefore, a group of primary cooperatives set out to develop their own distribution route in an attempt to capture a higher purchase price.

The major criticism of KNCU is the compulsory deductions taken from farmers’ payments to
cover costs and overheads. According to a recent survey\(^5\), of the green beans sold at the auction by KNCU and bought at 2,163Tsh/kg (about 1.6USD/kg), about half (1,078Tsh/kg) was subtracted for expenses and producers received 1,085Tsh/kg. Shipping and transportation costs accounted for the largest portion (47%) of the expenses and 23% was deducted as a levy to cover the costs of the primary cooperatives and KNCU. The 2001 Cooperative Act stipulates that not more than 20% of the coffee price can go towards operational costs and so the 23% going to cover cooperative and cooperative union overheads clearly exceeds this limit. The implication is that with more efficient transportation, processing and cooperative administration the coffee producers would be able to enjoy a greater percentage of the purchase price.

The graph below illustrates a fuller breakdown of the amount deducted for expenses.

Graph 47: Deduction Structure of the 1,078Tsh/kg Deducted by KNCU

![Graph showing deduction structure](image)

Source: Coles and Mhando based on KNCU data

Due to dissatisfaction with KNCU management, in 2001 32 primary cooperatives came together and formed a new cooperative marketing group called G32 that aims to pay producers 75-80% of the market price. As members of G32, individual primary cooperatives each have their own credit accounts at Kilimanjaro Community Bank, facilitated by the G32 executive, and use these funds as working capital. In this way G32 is hoping to encourage individual responsibility, efficiency and ultimately growth on the primary cooperative level.

When selling beans through the auction or through direct exporting, each G32 cooperative sends samples under its own name in order to establish its own brand. In addition, G32 is actively introducing CPUs and obtaining Fairtrade and organic certifications for cooperatives. Already 3

\(^5\) Coles and Mhando 2010
cooperatives have set up CPUs and one of the cooperatives has won second prize in the Cup of Excellence coffee contest. Fairtrade coffee accounts for 3-5% of the total trade. G32 is also trying to obtain certification for organic coffee.

In this way, G32 has achieved a higher producer price than those of cooperative unions and private companies. However, 8 of the cooperatives in G32 have already rejoined the KNCU and now there are only 24 members in the G32. One reason is that KNCU reduced the annual fee for cooperatives who had joined G32\textsuperscript{52}. The decision to return to using KNCU for marketing was not directly made by farmers, by leaders of the primary cooperative.

In reality, visits to farmers in the Kilimanjaro revealed that there is often little understanding of coffee marketing mechanisms among producers. For example, even in primary cooperatives where members have coffee certifications such as organic or Fairtrade and are benefitting from the price premiums, some producers did not necessarily understand how they became certified, or what ongoing activities were associated with this certification. The interviews with the farmers conducted during the research also revealed that some do not understand the contents or meaning of the audit conducted three times a year for organic certification, but just try to follow what KNCU has told them to do.

**Purchase of parchment coffee and the price**

When a small-scale farmer sells parchment beans, the primary cooperative buyer or private collector inspects the beans visually and evaluates them by standards such as color (especially to judge how clean or dry they are), density and weight (especially to judge ripeness), and shape (especially looking for deformation) and assigns a visual grade from Special (beans with no defects), to Parchment 1 (20% or fewer beans have defects), Parchment 2 (more than 20% have defects), Parchment 3 (Beans which floated during washing or beans that were not thoroughly washed and have become black or discolored).

However, in reality, private collectors do not do this grading and offer only one price for all beans. Primary cooperatives also tend to offer only one price or sometimes two - Special and Parchment 1.\textsuperscript{53}

Private collectors make a single payment to coffee farmers at the time of purchase. Cooperatives

\textsuperscript{52} David Gongwe Mhando and Gimbage Mbeyale, “An Analysis of the Coffee Value Chain in the Kilimanjaro Region, Tanzania”, 2010

\textsuperscript{53} During field research in Tanzania in November 2011, both of these systems were observed
however make several payments. At purchase, a payment is made based on the current market rate. If the market rate increases, farmers are given an additional payment. After sale at the auction, the cooperatives may make further payments. How much of a payment is made after the auction may depend on the quality of the beans sold to the cooperative. For example, a cooperative visited during this research study graded beans into Special and Parchment 1, but paid a flat 2,200 Tsh/kg (1.60 USD/kg)\(^{54}\) for both grades as the first payment and made identical adjustment payments for price fluctuation throughout the season. However, after the coffee was sold at auction, farmers who had provided Special grade received an additional final payment of 300Tsh/kg (0.224USD /kg) and those who had provided Parchment 1 received a payment of 288Tsh/kg (0.215 USD /kg). This indicates that Special did receive a small premium for its higher quality.

All private collectors including the multinational corporations have formed a price cartel that has agreed to offer a price that is 200 Tsh to 300 Tsh (0.15-0.22 USD/kg) higher than the cooperatives’ first payment price, thereby suppressing price competition among private collectors.\(^{55}\) A recent survey\(^{56}\) in the Kilimanjaro Region reflects this, with the first payment given by cooperatives at about 1.05 to 1.13 USD/kg while a private collector pays 1.13 to 1.28 USD/kg. Although the private collectors’ price is slightly higher than the cooperative’s first payment, because private companies pay the same price regardless of quality, the quality of private collectors’ coffee tends to be worse, with higher numbers of defective beans or foreign matter like pebbles.

**Graph 48 : Average Producer Price by Purchasing Entity 2006/07**

![Graph showing average producer price by purchasing entity](source: Tanzania Coffee Industry Development Strategy, 2010)

**Farmers’ Choice of Buyers**

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54 At a rate of 1.340 Tsh/USD
55 Tsujimura, 2009
56 Coles and Mhando 2010 “Kilimanjaro Coffee Value Chain Case Study”
In the Northern highlands, about two thirds of the farmers sell to KNCU and 30% of them sell to private collectors. KNCU and private collectors are the two main sales options for small-scale farmers. Many farmers sell to the private collectors when they need immediate cash. Otherwise, they prefer to sell to the cooperative union because the total payment, including price fluctuation adjustments and secondary payments, is ultimately larger than the private collectors’. The graph below shows the shares of the actual sales destinations in comparison with the destinations farmers would prefer to sell to, as of 2004. At that time the percentage of farmers selling to cooperative groups such as G32 was small, but it has increased in recent years.

**Graph 49: Comparison of Farmers’ Actual Sales Destination (Left) and Preferred Sales Destination (right) in Main Tanzanian Production Areas (2004)**

![Graph showing sales destinations](image)


**Coffee Curing – secondary coffee processing**

After being sold by the producers to a cooperative or private collector, parchment beans are brought to a curing factory for hulling (secondary processing). At the curing factory the parchment and silverskin are removed and the beans become raw, green beans. At the curing factory the beans are also graded by size. The size of the beans is measured using a standard set of screens; for example beans that do not fall through the holes of Screen 18 (7.14mm diameter) are graded as AA; A, B and C grades are the next bean grades in order of decreasing diameter (Screen 17, 16, and 15). The peaberries (round beans that develop from cherries that had only one seed fertilized - PB) and elephant beans (large beans formed when the two coffee seeds are fused together in the cherry - E) are removed from the four standard grades. Beans less than C (Screen 14 or less, meaning less than 5.56mm diameter) are initially graded as T.
After this grading by size and shape, weight (density) grading takes place. This is done by machine using air blowing over the beans. Among the four main bean grades (AA, A, B, C), light beans that can be blown away by the weakest wind pressure become F grade. Among AA and A grade beans (which are already larger and heavier than B and C beans) beans that can be moved by strong wind pressure become AF grade. Similarly, among B beans, light beans that can be moved by strong wind pressure become TT grade, and light C beans become T grade. In the end, all T graded beans are combined and get the grade name TEX, both those beans originally called T due to small size, as well as the C beans determined to be too light. Heavy beans resistant to heavy wind blown over them remain their original grade from AA to C, indicating that they are sufficiently dense for their size. Thus, the Tanzanian mild Arabica green beans are categorized into ten grades: AA, A, B, C, PB, E, AF, TT, TEX and F. In addition, many processing factories have machines to do color sorting of beans and also remove defective beans (fermented beans, black beans, etc.) by hand upon exporters’ requests. The flawed beans or discolored beans become UG grade.

4.5.4 From Auction to Exportation

The Moshi Coffee Auction

In Tanzania, all coffee beans in principal must be sold at the coffee auction in Moshi. Cooperative unions, primary cooperatives, or private companies all do secondary processing of their parchment beans at a curing factory, and then sell the green beans to export companies through the auction.

Auctions take place every Thursday during coffee harvesting period. Bidding is anonymous and conducted electronically. 0.75% of the purchase price is taken to fund research at the Coffee Research Institute, and 1% is taken by the Tanzania Coffee Board (TCB).

Before selling coffee beans at the auction, sellers must submit samples of the beans to TCB where the beans will undergo confirmation of their grading and will be evaluated through cupping. Mild Arabica grading looks at three forms of a coffee sample: the green beans, the roasted beans and the liquid coffee. First, the green beans are judged on physical characteristics like color and size. Then the roasted beans are evaluated on surface color and color consistency, as well as the center-cut color. Lastly, expert cuppers evaluate the liquid coffee on factors such as aroma, flavor and acidity. The cupping results are sent to producers to help them in their quality improvement. Color and tasting tests will allow further classification. For example, AA and A
green beans are then categorized by quality into Fine, Good, Fair/Good, FAQ+, FAQ, FAQ-, Poor Fair, Poor and Very Poor. The matrix showing the possible combinations of size and quality grading can be seen on page 115. This final grading is the one that goes into the auction catalogues. The catalogues, as well as samples, are distributed to the exporters two weeks before the auction takes place. Exporters can then do their own cupping evaluation before the auction.

**Multinational companies' buy-back system**

4 major multinational coffee companies (Taylor Winch, Dorman, Tchibo, Mazao) dominate the Tanzania coffee market, controlling 70% of the purchase volume of mild Arabica. Their typical method of operation is to buy beans at the villages, process them, place them up for auction and then buy back their own beans the auction. The multinationals have formed a cartel and so there is essentially no bidding on each other’s beans. As a result, there is no real price competition, and producer prices cannot easily increase. To prevent such buy-back schemes and promote competition, the 2001 Coffee Industry Law banned companies from owning multiple licenses for purchasing at villages, processing and exportation. In other words, a company could either be a coffee bean purchaser, a processor or an exporter, but not all three. However, the private companies simply established various subsidiary companies which each held a different license. Before long, the buy-back systems were functioning again.

The chart below shows the names of multinational exporter and their coffee purchasing subsidiary.

### Table 17: Relationships between Multinational Companies' Subsidiaries in Tanzania

<table>
<thead>
<tr>
<th>Village Buyer</th>
<th>Tchibo</th>
<th>Gourmet</th>
<th>City</th>
<th>Rafiki</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exporter</td>
<td>Tchibo</td>
<td>Dorman</td>
<td>Mazao</td>
<td>Taylor Winch</td>
</tr>
</tbody>
</table>

Source: David Gongwe Mhando and Gimbage Mbeyale 2010 “An Analysis of the Coffee Value Chain in the Kilimanjaro Region, Tanzania
Graph 50: Multinational Corporations’ Share of Total Sales of Mild-Arabica Coffee within the Auction System

Source: TCB Auction Statistics

Note: The 2003/04 Tchibo value includes both Tchibo Estate and Tchibo Trading. After 2004/05, it is consolidated as Tchibo Trading.

Direct export by producers’ organization

Since 2003, direct sales to overseas importers has been allowed, making it possible for producer organizations to avoid the auction. Bypassing the auction system is only available to producer organizations offering high quality or certified organic beans and, under coffee regulations established in 2003, direct importation licenses can be issued upon meeting the below conditions:57

- The minimum lot is 100 bags (60kg per bag) and the maximum is 300 bags;
- Coffee for direct export must be grade AA, A, PB, AB or C. Samples must be sent to both Tanzania Coffee Board and the buyer for cupping.
- Sellers using direct export must retain the contract document made with the buyer; and
- Price proposed by the buyer must exceed the average of the selling prices of the last three auctions.

To tackle the loss of functional auction system caused by multinational companies’ cartel,

57 Tsujimura, 2009
producer organizations such as cooperatives and large farms been trying direct export. In 2009/10, 20% of total coffee sales was from direct exporting. The selling price through direct exporting has been consistently higher than the average auction price by as much as 20 USD/50kg. This is related to the fact that direct export is only available for high-quality beans and also that direct export can reduce the margins taken by intermediaries.

The graphs below illustrate the percentages of sales and comparison of prices between the auction and direct export.

**Graph 51: Percentage of Sales Through Auction and Direct Export**

![Graph 51: Percentage of Sales Through Auction and Direct Export](image1)

*Source: TCB Auction Statistics and Direct Export Statistics*

**Graph 52: Average Price of Mild-Arabica Through Auction and Direct Export**

![Graph 52: Average Price of Mild-Arabica Through Auction and Direct Export](image2)

*Source: TCB Auction Statistics and Direct Export Statistics*

The following set of photos illustrates the coffee grading process at the Tanzania Coffee Board in Moshi.
A stack of screens, from Screen size 18 down to much finer screen sizes. The larger the screen number, the larger the holes in the screen mesh.

Green beans are sifted through each screen; larger beans stay on the top while smaller beans fall through to lower screens. Analyzing what share of the beans end up in different screens helps determine coffee grades from AA to TEX.
Discussions with the Tanganyika Coffee Curing Company suggested that there is also sometimes a “C” grade.
Above is a page from the catalogue of the coffee auction held on December 10, 2010. Reading from the left, it indicates the lot number, seller, grade, number of 60kg bags, number of kilos less than 60, total weight, and the processing factory name. Under "Noted" is the bidding price offered when the minimum purchase price was not met. Under "Sold" is the bidding price of deals that were made, and under "Buyer" is the name of bidder who won the beans.
4.6 Challenges Facing the Kilimanjaro Coffee Industry

In Tanzania, over 400,000 farmers receive direct income from coffee production and 2.4 million people indirectly benefit from the coffee industry for their livelihood. But, in the Kilimanjaro Region, both quantity and quality (particularly physical quality such as size and weight) are declining and this has led to a decrease in farmer income. Below is a summary of the major issues the Kilimanjaro coffee industry faces, including the causes of the quantity and quality decline. The issues facing the coffee industry in the south are briefly summarized at the end.

Issues in the Kilimanjaro Region

Production

- The main cause of the decline in production is abandonment of coffee production due to the price decline of coffee. Many small farmers have switched from coffee to other crops like plantain or maize.

- Segmentation of coffee farms resulting from the land inheritance system of the Chagga people makes coffee production unprofitable, resulting in young people moving out of villages and finding employment in areas other than agriculture. The aging of producers leads to a decline in quality because of the longer time between harvesting and processing.

- Aging coffee trees have decreased yield and quality.

- Due to a decrease in coffee prices and increase in agricultural input prices, farmers use little agrochemicals or chemical fertilizer. This results in a decline in quantity and quality.

- Decrease in the number of extension workers specialized in coffee production causes decline in cultivation technology.

- Decreasing and unpredictable rainfall causes decrease in production volume and deterioration of quality.

Primary processing

- Most small-scale farmers use hand-pulping machines which can damage the quality of the beans. Some farmers also use dirty water from ponds or rivers for processing and which can affect the flavor of the beans.
From village-level purchase to sale at the auction

- The producer price has remained low due to the cartel formed by multinationals and by the inefficient operation of the cooperative union KNCU.

- Because of the cartel of multinational businesses who own multiple licenses and can control coffee through each stage of the supply chain, the auction cannot function as a platform for price competition based on quality of the beans.

- Many small farmers are ignorant of the coffee distribution system and even if their coffee is certified (organic, Fairtrade etc) they do not necessarily know how the certification system works.

Export to Japan

- High quality beans have increasingly going to the USA or Italy and exports of high quality bean to Japan have decreased.

Issues Facing Southern Tanzania

- Over 60% of farmers use unclean water from ponds or rivers for processing at villages.

- Most farmers use hand-pulping machines.

4.7 Foreign Aid and Investment for Tanzanian Coffee Industry

This section looks at the assistance given to the Tanzanian coffee industry by TechnoServe, an American NGO\(^\text{58}\) as an example of a current foreign aid project supporting the Kilimanjaro coffee industry.

TechnoServe provides assistance to KILICAFE, a coffee producer’s group based near Kilimanjaro mountain. As previous sections have outlined, Tanzanian coffee production faces not only the vicious circle which stems from low coffee price (low price (low income) → low inputs → low production → low income) but also the following challenges:

- More than 90% of small-scale coffee farmers lack opportunities to learn the latest

\(^{58}\) Realizing Rights and TechnoServe 2006 “Case Study on Coffee in Tanzania”
http://www.bdsknowledge.org/dyn/bds/docs/519/AidForTradeCoffeeCaseMay06.pdf

TechnoServe “TechnoServe Coffee Initiative”
processing techniques and obtain market information. As a result, coffee beans are sold at a uniform price at the commodity market despite the high quality of the coffee.

• Although coffee bean distribution was liberalized in 1994, investment in the coffee industry is minimal.

• The specialty coffee buyers from the US, Japan and Europe rank Tanzanian coffee as a premium brand. However, according to these buyers, it is difficult to purchase sufficient volumes from Tanzania to match the growing demand.

Against this background, TechnoServe has provided KILICAFE and its 9,000 small farmers with technical support. The purpose of the support is to increase producers’ income by enhancing the production and processing of high-quality specialty coffee and to improve access to foreign and domestic markets. TechnoServe, together with KILICAFE, has achieved the following by through improved marketing and financing:

• KILICAFE pays each farmer group according to the auction price or the price of direct export. As a result, those producers with prospects for producing high-quality coffee can maximize their income.

• The possibility of KILICAFE buying coffee beans at a higher price provides producers with greater incentives to produce coffee with better quality. With marketing assistance, high-quality KILICAFE coffee has achieved prices 70% higher than the average price.

• In 2005, KILICAFE provided 12 members and their affiliated groups with more than 700,000 USD to establish a CPU.

• In 2005, KILICAFE sold more than 3 million USD worth of coffee, and established a partnership with Peet’s Coffee & Tea to sell KILICAFE’s coffee as “Tanzania / Kilimanjaro” brand in the US.

Additionally, TechnoServe received 47 million USD from the Bill & Melinda Gates Foundation and has started providing assistance for coffee quality improvement, targeting small farmers in Tanzania, Ethiopia, Kenya and Rwanda. The program started in 2008 and plans to provide support to 180,000 farmers over 4 years. So far 67,000 farmers have received support. TechnoServe dispatches technical and management professionals and provides guidance about production of quality coffee through the effective use of wet processing facilities as well as advising on appropriate planting and cultivation management.
5 Ethiopian Coffee Production and Distribution

The following section will outline the current Ethiopian coffee market. Now is an ideal time to evaluate the Ethiopian market in light of several important events that occurred in 2008 and to understand how these events have been impacting the industry. These key events are:

- The Ethiopian coffee crash of 2008
- The launch of the new Ethiopian Commodities Exchange (ECX) for coffee trading, replacing the auction system
- The discovery of agrochemical residues on Japan-bound coffee exceeding Japanese maximum residue limits which resulted in a dramatic drop in coffee exports to Japan, a key destination

We will look at the current production systems, marketing chains and obstacles that the Ethiopian industry faces in the hope of identifying areas where strengthening the Ethiopian coffee industry can both contribute to poverty alleviation and can support increased food security.

5.1 Role of the Coffee Industry in Ethiopian politics, economics and society

To understand the role of coffee production in Ethiopia today, and to understand its unique importance in the Ethiopian economy, it is worth stepping back to the beginning of the story.

Ethiopia is the birthplace of Arabica coffee, a fact of which Ethiopians are understandably proud. *Coffea Arabica* originates in the southwest and southeastern areas of Ethiopia. Today it still grows wild under rainforest shade in areas 1000 to 2000 m above sea level. It is likely that Ethiopia’s coffee was introduced to the Arab world through a successful invasion of what is now modern-day Saudi Arabia at some point in history. In the 18th century, when Latin classifications were being assigned to plants, the Ethiopian-origin coffee growing in modern day Yemen was called *Arabica*, apparently mistaking its origins to have been from the Arabian Peninsula. The term *moka* coffee, a term used to describe a particular type of coffee native to southeastern Ethiopia in the Harrar area, is named for an important trading port in Yemen. However, some have argued that it would have been more accurate to refer to *moka* coffee as *Coffea Abyssinia*, in reference to the name of the ancient Ethiopian kingdom.
The high genetic diversity of native Ethiopian coffees is of great national and international value because of the potential to develop new breeds of coffee with particular strengths – from unique flavors to higher disease tolerance, higher yields or low caffeine. This genetic diversity is essential for replacing coffee plants after damage by disease or natural disaster. There are currently hundreds of types of coffee under cultivation, each with varying aromas, tastes or colors. In the past Ethiopian coffee research centers have shared genetic resources with other countries. However the coffee plants themselves are highly sensitive to soil, shade, rainfall, temperature and other climate factors which make it virtually impossible for a coffee tree from one ecosystem to produce exactly the same results when grown in a different environment. As a result, preserving the unique Ethiopian ecology is essential to preserving the unique characteristics of Ethiopian coffees.

According to Ethiopian trade statistics, coffee today is not only Ethiopia’s top export crop, it is also Ethiopia’s top export product in value overall. Coffee brings valuable foreign currency to a government that is revenue poor and coffee has been referred to as Ethiopia’s “Black Gold”. But unlike most coffee producing countries, Ethiopia is also a coffee consuming country, with a long tradition of coffee preparation. Ethiopians farmers may prepare coffee several times a day and the Ethiopian coffee ceremony is a traditional way to welcome guests. Over 50% of Ethiopian coffee production is consumed domestically, more than any other coffee producing country, including Brazil.

As the Ethiopian government designs policies to strengthen and support the coffee industry, it is faced with several, sometimes conflicting, issues.

- How to improve both the quality and quantity of coffee produced, especially for export
- How to both conserve and to capitalize on the valuable bio-diversity in Ethiopia, including coffee, which has potential for commercialization
- How to strengthen the entire coffee distribution chain to prevent problems, especially with coffee destined for export
- How the government can collect revenue from the sale of coffee
- How to ensure that selling price increases will benefit the coffee producers

Ethiopia remains one of the poorest countries in the world, with the 11th lowest GDP per capita as of 2010. Its agriculture-based economy suffers from frequent droughts and low productivity. Nevertheless Ethiopia is one of the world’s fastest growing economies. It averaged 8.4% GDP growth between 2001-2010. The IMF forecasts that Ethiopia will have the third fastest growing
economy in the world for 2011-2015, behind only China and India.

5.2 Role of Coffee Production within Ethiopian Agriculture

Agriculture provides 45% of Ethiopia’s GDP and 85% of total employment. Agriculture is therefore unsurprisingly deeply related to political, economic and social stability.

While coffee is Ethiopia's most valuable export crop, Ethiopia's primary agriculture is subsistence crops, with the main crops grown throughout the entire country. The majority are grain crops which include cereal crops like maize and teff, which is used to make the ubiquitous Ethiopian staple bread *enjera*. Other major crops include pulses like faba beans, and oilseeds such as niger seed and linseed. Agricultural production can be generally categorized into cereals, pulses, oilseeds, vegetables, root crops, stimulant crops, sugar cane, and fruit crops. The stimulant crops are chat, coffee and hops.

As the following graph shows, coffee held 3% of Ethiopia's planting area in the 2009-2010 season, or 395,003 hectares. The chart below shows the other major Ethiopian crops by planting area.

**Graph 53: Area Under Production by Crop Type, 2009-2010 Meher Season**

Source: Ethiopian Central Statistics Agency

*Other includes fruit crops, sugarcane and hops.

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59 2010 CIA World Factbook
Total coffee production has been increasing fairly steadily over the past decade. Statistics reported to the International Coffee Organization by Ethiopia show a peak production year in 2007 of 273,000 MT. The volume of coffee produced in Ethiopia is estimated through yearly Ministry of Agriculture and Rural Development sampling surveys and can be somewhat inexact, especially since a large amount of the coffee produced in Ethiopia is consumed directly on the farm. Nevertheless, the graph shows how, after at the end of 2008, the volume of coffee exported dropped sharply. This is the result of several factors that will be explained further: issues related to the launch of ECX, the import restrictions by Japan due to discovery of chemical residues and poor weather that severely damaged crops planted during 2008 (and harvested in late 2008-2009).

Graph 54: Ethiopian Coffee Production and Export, 2000-2009

As the Ethiopian Coffee Exchange (ECX) launched in late 2008, some wholesalers held on to their coffee supplies waiting to see whether ECX would really work, as well as to wait for better prices. In addition, the discovery of chemical residue on Japan-bound coffee in April 2008 also affected the export level from early 2008 through 2009.

The vast majority of Ethiopia’s coffee is grown within two large areas – Oromia and the SSNP (Southern Nations, Nationalities and People’s Region) with the ratios shown in the chart below.
These areas are centered in the Southwest and Southern areas of Ethiopia in Oromia and the SSNP region as seen in the following map.

Within the general areas above, the main types of coffee and their growing areas are identified in the next map.
For the small-scale farmers who grow the vast majority of coffee, coffee is one of the only cash crop options. It is important to note that the other common cash crop is another stimulant, khat. Khat leaf has properties similar to amphetamines and chewing khat results in heightened
awareness and alertness. Ethiopia itself consumes khat, and neighboring countries including Somalia and Yemen have high demand; khat trade can bring needed foreign currency into Ethiopia. However, khat trade is banned in many developed countries and there is sometimes an effort in Ethiopia to downplay its khat industry. Ethiopia has no official domestic promotion or agriculture extension work related to khat growing, but the Ministry of Trade says that when there is a trade issue related to khat, they support the resolution of the issue. Khat remains Ethiopia's 4th biggest export in value according to Ethiopian trade statistics and it is possible that the values and volumes are even more, in part because not all of the cross border trade is captured in trade statistics and also possibly because the Ethiopian government, as mentioned earlier, feels a need to deemphasize the size of its khat industry to the donor community.

For garden coffee farmers, especially in eastern areas such as Harrar which is in closer proximity to Somalia and Yemen, if the price of khat becomes higher than the price of coffee, there is a temptation to switch to khat, which can be harvested as many as four times a year. While a switch to khat is not something seen in forest coffee or province plantations, garden coffee farmers may uproot or neglect coffee trees in order to concentrate on khat, a product that may have prices higher than coffee only temporarily. Planting new coffee seedlings is not only an expense but it will take 5 years before the first fruit appear and another 5 years until a coffee tree can be fully harvested, if the farmer decides to switch back. While coffee and khat are not necessarily direct cash crop substitutes, it is often reported that the prices of the two products can have a large effect on where farmers invest their energy.

5.3 Coffee Export

Coffee has long been Ethiopia's most valuable export. As is typical in less developed countries, the majority of Ethiopia's exports are commodities. Nevertheless, while total coffee export value remains strong, other products such as oilseeds, pulses and flowers are increasing in value and volume, resulting in coffee having a decreasing share in overall exports. This reflects the country's goal of both supporting an increase in earnings from coffee through increased production and quality and trying to reduce coffee's relative share of exports by diversifying its range of export products. Now Ethiopia has five main non-coffee exports: oilseeds, gold, khat, flowers and pulses, with live animals and hides a growing sector. In 2010 for the first time, the country topped 2 billion US$ in exports. In 2010 coffee exports reached their highest value level ever and at the same time, its share was at a historic low (27%).

This trend can be seen in the chart below.
As closer look at the data for FY 2009/2010 shows below, coffee and the other top 6 exports hold 88% of Ethiopia’s exports by value.

Graph 57: Share of Major Exports by USD Value, 2010

Source: International Trade Center (ITC)

As coffee is such an important source of foreign currency for Ethiopia, law requires that all top
quality coffee (Grade 1-5) be exported. The Prime Minister himself inspects coffee exports on a monthly basis.

Coffee export volumes over the last 5 years have ranged from a low of 134,000 MT in 2009 to 176,000 MT in 2007.

Graph 58: Total Coffee Export Volume

Source: Ethiopian Ministry of Trade and Industry

However, except for the notorious 2008-2009 season, which suffered from the global financial crisis, the crash of the Ethiopian coffee market and the Japanese pesticide residue issue, the export value of Ethiopian coffee has been steadily increasing, with 2010 the highest export value in history.

Graph 59: Value of Ethiopian Coffee Exports, 2005-2010

Source: Ethiopian Ministry of Trade and Industry
Germany is currently the top destination for coffee exports, followed by Saudi Arabia and the United States. Japan used to be the second biggest market for Ethiopian coffee behind Germany but lost this spot due to the restriction on imports due to chemical residue detection on some imported beans in 2008, a situation that will be discussed in more detail below. Japan dropped to 6th place in 2010. Because the Japan market is willing to pay high prices for high quality coffee, Ethiopia considers Japan to be a price fixer that other countries will follow. For this reason, Ethiopia considers its relationship with Japan to be a priority. The current top export markets for Ethiopian coffee are listed below.

Table 18: 2010 Coffee Export Destinations by Value

<table>
<thead>
<tr>
<th>COUNTRY</th>
<th>VALUE (USD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Germany</td>
<td>174,751,642</td>
</tr>
<tr>
<td>Saudi Arabia</td>
<td>92,022,168</td>
</tr>
<tr>
<td>United States</td>
<td>47,117,583</td>
</tr>
<tr>
<td>Belgium</td>
<td>38,470,157</td>
</tr>
<tr>
<td>Italy</td>
<td>31,755,082</td>
</tr>
<tr>
<td>Japan</td>
<td>21,080,971</td>
</tr>
<tr>
<td>France</td>
<td>20,928,505</td>
</tr>
<tr>
<td>Sudan</td>
<td>17,667,542</td>
</tr>
<tr>
<td>Sweden</td>
<td>13,968,421</td>
</tr>
<tr>
<td>Switzerland</td>
<td>11,391,135</td>
</tr>
<tr>
<td>Other</td>
<td>59,153,745</td>
</tr>
<tr>
<td>TOTAL</td>
<td>528,306,952</td>
</tr>
</tbody>
</table>

Source: Ethiopia Ministry of Trade and Industry

According to Ministry of Trade and Industry data, 90% of the coffee exported from Ethiopia is of 10 types, as the chart below shows. Jimma (Djimmah) Grade 5, Lekampti Grade 5 and Sidamo Grade 2 are the major exports. Of these types, the highest prices per kilo were for Sidamo Grade 3 (Average US$4.09/kg) and Yirgacheffe Grade 2 (Average US$4.35/kg), while the lowest was Jimma UG at Average US$1.91.

The highest prices last year overall (though volumes were small) were Yirgacheffe Grade 1 (Average US$5.28/kg), Limmu grade 3 (Average US$5.00) and certain fair trade coffees (Average US$5.18).

Table 19: Ethiopian Coffee Type by Volume
The Japanese ban on coffee Ethiopian coffee imports and the subsequent strict testing for agrochemicals reduced coffee exports to Japan from nearly 30,000 MT worth 86 million USD to nearly zero in the fiscal year ending 2009. However there were signs of a slight recovery in 2010 and Ethiopian Ministry of Trade and Industry officials were optimistic that Japan’s share would continue to increase due to the efforts being made to overcome the agrochemical residue issue and the longstanding relationships between Ethiopian and Japanese traders.

**Graph 60: Coffee Exports to Japan in Volume and Value, 2005-2010**

<table>
<thead>
<tr>
<th>Year</th>
<th>Volume MT</th>
<th>Value ‘000USD</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005</td>
<td>22,579.60</td>
<td>49,392</td>
</tr>
<tr>
<td>2006</td>
<td>32,607.90</td>
<td>76,331</td>
</tr>
<tr>
<td>2007</td>
<td>30,059.10</td>
<td>68,720</td>
</tr>
<tr>
<td>2008</td>
<td>29,460.00</td>
<td>86,353</td>
</tr>
<tr>
<td>2009</td>
<td>943.6</td>
<td>3,170</td>
</tr>
<tr>
<td>2010</td>
<td>5672</td>
<td>21,075</td>
</tr>
</tbody>
</table>

Source: Ethiopian Ministry of Trade and Industry
Currently Ethiopia’s exports are virtually all green beans with only a tiny amount of roasted beans. This means that Ethiopia does not have the opportunity of capturing the value-added that comes with roasting and packing their coffee. Because of the strict Ethiopian government policy of requiring that no export quality bean be sold to the domestic market, there is currently only one company in Ethiopia that is licensed to domestically roast export quality beans (some of which are exported and some sold in their specialty domestic retail shops).

However there is unanimous hope that Ethiopia could develop its own domestic roasting-for-export industry as a way to benefit from the value added by roasting. Not only could Ethiopia roast its own beans, but also buy from other African producers to create unique regional blends. Ethiopian roasters, exporters, cooperatives and government alike cited regional African markets as emerging priorities. Sudan is already a major destination, other northern African countries were considered to have good potential, as well as Russia. South Africa too, which currently imports significant amounts of instant British-branded coffee was also a possibility. Others pointed to the potential in China. Currently China imports large amounts of Colombian beans, but were said to already be investing in Ethiopian coffee industry with an eye to future trading potential.

Already there has been at least one experiment in exports of roasted Ethiopian coffee to Japan. In 2007, Ethiopian company Alfoz signed a deal with Hanamasa to export to Japan, from a coffee roasting, grinding and packing plant purpose-made for the Japan exports of Yirgacheffe coffee

5.3.1 Ethiopian Coffee Pesticide Residue Issues and Measures Taken in Response

Because of the dramatic impact of the pesticide detection on exports to Japan and because of the continued threat this issue has on Ethiopian exports to Japan, the pesticide residue issue is important to understand in detail. Significant efforts have been made to try to identify the source of the pesticide contamination found on Japan-bound beans and measures to reduce contamination potential have already had an impact on the coffee industry, including new regulations regarding use of jute bags during coffee transport and the establishment of a new testing laboratory in Ethiopia for pre-shipment testing for pesticide residues.

The problems began in April 2008 when some shipments of Ethiopian beans arriving in Japan were determined to have pesticide residue above the limits allowed set by the Japanese Ministry of Health, Labor and Welfare. The pesticides detected were Chlordane, Heptachlor,
y-BHC (Lindane) and a slight amount of DDT. All of these pesticides were banned in Japan in the 1960s-1970's.60

The exact source of the coffee contamination by these chemicals is still unclear. y-BHC (Lindane) has had the largest number of detection cases on Japan-bound coffee beans. Lindane has been reported to be used in Ethiopia as an insecticide for wood preservation, to be a component in shampoos against lice and ticks61 and, while not legally registered for such use, is reported to be used by grain (tef, barley, millet, sorghum, etc.) growers as a soil insecticide and seed treatment. Likewise, DDT has been reported to be used on khat62. Coffee farmers could have used one of these chemicals on or near coffee inadvertently.

However, there is also a possibility that the problems associated with Lindane, for example, may have little to do with any recent applications, authorized or unauthorized, of the chemical. The organochlorine group in general, and Lindane in particular, are characterized by their broad spectrum insecticidal activity, long persistence in the environment, and their tendency to bio-accumulate along food chains. Lindane is a highly volatile compound with a lengthy residual life and is extremely persistent in soils, water supplies and the atmosphere. Even in countries like the U.K., where it has been banned in agriculture since the early 1990s, unacceptable levels have periodically alarmed food residue analysts and water authorities.

Ethiopia has also previously been identified as a hot spot for “obsolete pesticide stockpiles” which the FAO and other organizations have been recently helping the country dispose of.63 However obsolete and banned chemicals are not always to dispose of. Ethiopia has in the past accepted chemicals from countries wanting to dispose of them; the chemicals often ended up buried or in deteriorating tin drums in rotting warehouses. There is always fear that these chemicals can leak into the water or soil, or perhaps in some cases already have.

There is also the speculation that because DDT is still sprayed on the walls of homes in Ethiopia as an anti-malarial measure, coffee that may be stored in the homes of small holders can be vulnerable to DDT contamination.

The trouble for Ethiopian coffee began in April 2008. That month the first four coffee containers tested positive in Japan for excessive levels of pesticides and through May, June and July the

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60 http://www.maff.go.jp/nouyaku/n_point/kinsi_noyaku.html (In Japanese)
61 Ethiopian Drug Administration and Control Authority 2004 “Standard Treatment Guideline”
63 FAO Africa Stockpiles Programme http://www.africastockpiles.net/
number of positive containers increased. (54 in total).

In the initial weeks, tests were positive primarily for Heptachlor and Lindane with some Chlordane. By June the problem had become primarily Lindane.

Today these three chemicals, plus DTT, are still a focus of concern. The Japanese maximum allowable levels of these pesticides on coffee are shown below. The Japanese limits for Lindane in particular are much stricter than other markets, such as the EU. The EU limit is currently 0.1 ppm.

**Table 20: Maximum Pesticide Residue Limits for Coffee Beans Imported into Japan**

<table>
<thead>
<tr>
<th>Pesticide Name</th>
<th>Maximum Residue Limit</th>
</tr>
</thead>
<tbody>
<tr>
<td>γ-BHC (Lindane)</td>
<td>0.002 ppm</td>
</tr>
<tr>
<td>Chlordane</td>
<td>0.01 ppm</td>
</tr>
<tr>
<td>Heptachlor</td>
<td>0.01 ppm</td>
</tr>
<tr>
<td>DDT</td>
<td>0.01 ppm</td>
</tr>
</tbody>
</table>

*Source: Japanese Ministry of Health, Labor and Welfare (MHLW)*

However the 2008 Lindane detections were not simply high by Japan standards. 14% of the detections would have been in violation even by the EU’s less strict limit. The chart below shows the amount of Lindane detected during the peak detection period in April – June 2008.

**Graph 61: Lindane Residue Detected on Ethiopian Coffee in Japan, April – June 2008**

*Source: Promar calculations based on MHLW data*
On May 9, 2008 the Japanese Ministry of Health, Labour and Welfare issued an Inspection Order for Ethiopian coffee beans, meaning that every bag in every Ethiopian coffee shipment would be inspected and the testing cost would be borne by the importer. In addition, MHLW also asked the Ethiopian government to look into the problem and report the results of their findings to MHLW.

5.3.2 Ethiopian Government Response

The Ethiopian government responded by making various efforts to investigate and identify the source of the contamination. This included field investigations, sampling, sending samples out of the country for testing and undergoing training to build capacity in sampling and testing. Some of the key actions are outlined here:

**Official directive on jute bags**

Initial Ethiopian speculation focused on jute bags as the main cause of pesticide residue contamination. It was thought that bags that had been used for other agricultural products might have traces of pesticides that end up on the green beans. In response, directive Ref.No. 13/28/47/164 was issued on June 17th 2008 decreeing that only new jute bags stamped with the current year could be used for coffee. Orders were given to destroy all old jute bags in the country and to ban old jute bags from the coffee industry. Over 2.5 million old jute bags were incinerated, a significant cost to the country. Farmers and traders were not compensated and have been expected to purchase new jute bags as needed.

New jute bags needed to come from a reputable source and be stamped with the approved logo and year; currently there is only one factory for these new jute bags, run by a company called G-Seven. Because of the factory’s inability to provide the volume of jute bags demanded, the Ethiopian government has had to relax some of its rules. Currently some jute bags are allowed to be reused domestically as long as they are only used for coffee. In addition, some traders are buying jute bags from Bangladesh, although they are much more expensive than the local bags (which are also made from Bangladeshi jute fiber). For export the beans must be packed in new bags. The Ministry of Trade and Industry is also interested in promoting the use of bulk containers for coffee export as a way to further reduce use of jute bags.

The Ethiopian government position is still that jute bags were the culprit in the contamination, though Japanese traders are not sure that this ever was or is the cause.
Compliance with the jute bag regulations is said to be improving, but still is less than 100%.

Establishment of a testing laboratory
The Ethiopian government decided to begin testing all coffee beans before shipment, and in February 2009 a Quality Monitoring and Pesticide Testing laboratory was established. JICA supported the training of some of the technicians and other donor countries have supplied various technology and training.

Ethiopian government officials mentioned that the pesticide residue contamination in coffee was actually an opportunity for them to improve their capacity for residue testing, not only for coffee but for sesame and other agricultural commodities. Improvement of the lab technology and human capacity is ongoing.

Currently coffee samples are tested both in the Ethiopian lab and also sent to Japan for testing before approval is given to export to Japan. Sample preparation procedures have been established, in which exporters must inform the Plant and Animal Health Quarantine and Quality Control Directorate of MoARD when they have a shipment to send to Japan. MoARD inspectors will go to the warehouses and take a prescribed representative sample which is sent to laboratories in both Ethiopia and Japan.

Pesticide Risk Reduction
The Ethiopian government has been outlining various provisions related to registration and control of pesticides. This includes bans on persistent organic pollutants (POPs) and other potentially dangerous agro-chemicals from the agricultural production chain. In addition, because there was concern that household use of DDT for malaria vector control was a potential source of contamination of green coffee beans, the Ethiopian government has decided to begin replacing DDT with delthametherin (a widely-used synthetic chemical often used in manufacture of insecticide-treated bednets.) At this time, however, DDT is still in use.

In addition, MoARD conducted several pesticide disposal initiatives and by the end of 2010, around 400 tons of pesticides had been inventoried and were to be disposed of. (With the support of FAO, several thousand additional tons had already been disposed of between 2001-2008).

Establishment of ECX and Primary Coffee Transaction centers (PCTCs)
The establishment of the Ethiopian Commodity Exchange (ECX) was considered a chance to
improve coffee quality by giving MoARD and the Ethiopian Commodity Exchange Authority (ECXA) more control and access to coffee at the ECX warehouses or along the transportation routes, where they could more effectively oversee quality control.

To better control coffee quality before it arrives at ECX warehouses, a system of Primary Coffee Transaction centers (PCTCs) was set up at the village (kebele) level. Farmers bring their beans to the PCTCs and negotiate their selling price. At this point, jute bags, transport vehicles and the beans themselves can be inspected.

Supervision and monitoring of the PCTCs has been a government responsibility under MoARD, ECX and regional governments.

**Preparation “Coffee Production, Quality Management and Marketing” Manuals**

In December 2008 MoARD published a manual that detailed the appropriate way to handle coffee beans along the entire supply chain. It was distributed to the coffee producing areas where in turn it was given to producers and other stakeholders in the coffee production industry. Pesticide-related measures include directions on jute bag use, coffee storage and warehouse maintenance.

**Establishment of Ethio-Japan Coffee Taskforce**

In Dec 2009 the Ethio-Japan Coffee Taskforce was established with stakeholders from both countries. From the Japan side it included representatives from JICA, JETRO, the Japanese Embassy in Ethiopia and the All-Japan Coffee Association (AJCA), which represents the Japanese coffee industry. Ethiopian stakeholders included various departments of the Ministry of Agriculture and Rural Development, Ministry of Trade and Industry, as well as the Ethiopian Coffee Exporters’ Association, Ethiopian Commodity Exchange (ECX) and the Ethiopian Commodity Exchange Authority. (ECXA) The purpose of the taskforce is to share information and propose recommendations and solutions to the pesticide residue issue. An interim report was released in late 2010.

**5.3.3 Conclusions**

There have only been 2 cases of pesticide detection on Ethiopian beans in 2010; this decrease could be due to the use of new jute bags, the rigorous testing procedures or simply the lower volumes being imported. If this continues, the Ethiopian government is optimistic that the Inspection Order will be lifted.
However, there is still no conclusive resolution as to the cause of the pesticide residue, and there is still worry among traders that the real cause is pesticides in the water or soil – which will ultimately be far more difficult problem to solve. It is also not clear if the different pesticides are contaminating beans through the same methods.

For Ethiopian exports of coffee to regain share in Japan, however, continuous improvement in the monitoring for pesticide contamination detection and quality control throughout the entire value chain is essential. This means not only the beans, jute bags and storage facilities, but also soil, water, milling facilities, warehouse dust, farmer homes, the PCTCs and all form of transportation from all growing and processing areas. This quality control includes not only coffee bean sampling and overall pesticide management policies but also education and capacity building of farmers and other coffee stakeholders on proper pesticide usage.

In addition, it is clear that that, even if they are not the only or primary vector of contamination, use of new jute bags are an important part of the quality control system. Currently there is only the one company, G-Seven, producing bags. Its production capability however has not been enough to match demand and production has been hampered by power outages and scarcity of inexpensive raw materials. There is also fear that the imported raw materials themselves may be contaminated. Therefore, the potential of using a Ethiopia produced raw material, especially enset (false banana) fiber, as well as sisal or kenaf is being explored and should be a priority as it would not only allow control of jute bag raw material quality control, but also provide a market for Ethiopian producers of the fiber.

Japanese coffee traders maintain that the importance of Ethiopia maintaining strict control and vigilance of coffee quality control cannot be overemphasized. Large-scale Japanese coffee importers simply cannot take the risk of importing Ethiopian coffee that may be turned away at the port at the importer’s expense. As much as Japanese consumers like Ethiopian coffees, the market will find substitutes if there is risk. Ethiopia must make quality control an ongoing priority.

5.4 Economic Development Policy

5.4.1 Overview of Ethiopian Development Policy and the Position of Coffee within it

In the last decade, Ethiopia developed both its first and second generation Poverty Reduction
Strategy Papers (PRSP). The first, the Sustainable Development and Poverty Reduction Programme (SDPRP) covered the period 2000-2005. After that, for the period 2006-2010 the Plan for Accelerated and Sustained Development to End Poverty (PASDEP) was developed.

One of the main features of these PRSPs is the strategy of “Agricultural Development Led Industrialization” (ADLI) which has been followed by the Ethiopian government ever since the market liberalization of 1991. The philosophy of ADLI is that agriculture is to be developed in order to support industrialization.

The ADLI’s distinctive features include:

- commercialization of smallholder agriculture through product diversification;
- a shift to higher-valued crops;
- promotion of niche high-value export crops;
- support for the development of large-scale commercial agriculture;
- effective integration of farmers with domestic and external markets; and
- tailoring interventions to address the specific needs of the country’s varied agro-ecological zones.

ADLI aims to support development of agriculture for the purpose of becoming a source of raw materials for industrial production, just as industry is to become a market for raw materials and a source of income generation for both the agricultural and industrial sectors. In addition, ADLI recognizes the importance of exports as a source of foreign currency and income for the country.

However, although coffee has been a significant source of export income, the Ethiopian development plans do not specifically focus on coffee. In fact, the focus is on agricultural diversification, a strategy that was repeated by Ministry of Trade officials during this study’s field visits in late 2010. For example, although Jimma was famous for coffee, the officials stressed that they were also interested in developing the eastern part of Jimma for maize, for which it is also well-suited. They described a policy of “specialization AND diversification”, meaning that crops that are particularly well-suited to an area, like coffee in Yirgacheffe or Jimma, must be supported, while at the same time sesame, livestock and pulses need to supported to promote diversification. Other growing areas are flowers and leather. The aim of the strategy, the officials stated, is to ensure both food security and income diversification. Ethiopia does not want to be so dependent on coffee as an export commodity.
The development of the coffee industry itself is hardly mentioned in the Ethiopian development strategies. This may be in part because of the emphasis by donor governments and agencies since the late 1990s to move away from agricultural commodities and push for higher-value and value-added agricultural products. However, in the ADLI and interviews with Ethiopian researchers and government officials, several specific government policies towards coffee itself became clear. These policies are summarized in the next section.

5.4.2 Improved Production, Processing and the Shift to Washed Coffee

As part of the development and marketing plans laid out in the ADLI for many crops, coffee included, there is a call for improved productivity and processing. In the case of coffee, this means a push towards washed coffee which brings higher international prices. Although Ethiopia is drought-prone in areas and has poor infrastructure for providing clean drinking water or water waste disposal in many areas, Ministry of Trade officials maintained that despite the country's water issues, increasing the quality and quantity of washed coffee was a priority.

On the production side, the Ethiopia government was prioritizing replacing old coffee plants, pruning old trees and taking action against CBD with the support of the research institutes.

5.4.3 Increased Marketing of Ethiopian Image

There is interest in expanding coffee export within the African region, in improving Ethiopia's coffee image overseas and improving marketing capability. However, at the same time, Ministry of Trade officials acknowledged that Ethiopia does not currently have the capacity to successfully implement most of these marketing strategies. They lack the infrastructure to do local roasting, packing and marketing, and are faced with budget and language constraints when considering marketing campaigns overseas.

In addition, since the launch of the Ethiopian Commodity Exchange (ECX), the Ethiopian government is emphasizing the sale of commodity coffee and is not currently considering government support of organic certification or other certifications.

However, in an effort to regain some control over its image and the marketing of positive characteristics of its coffee, the Ethiopian Ministry of Technology has begun an effort to trademark the origin names of Ethiopian coffee in major coffee consuming markets, including

In Japan, for example, coffee from Ethiopia is often referred to as “moka”, a general word for the type of coffees found in Ethiopia, especially in the southeast. However, few overseas consumers realize that “moka” coffee is Ethiopian, or know what area of the country it comes from. Whenever Ethiopia wins these trademark suits in the courts, overseas retailers are required to label Ethiopian coffee by origin name: “Yirgacheffe”, “Sidamo” etc. Certainly Japanese retailers are still able to use the word “moka” in marketing, but would need to label the coffee, for example, as “Moka Sidamo”.

5.4.4 Benefits Sharing

Government stakeholders outlined a policy of benefits sharing, which means that any commercial benefits from scientific research on coffee plants, coffee ecosystems or secondary commercial development such as jute bags made from Ethiopian raw materials, would be shared with coffee farmers and other stakeholders in the coffee industry.

Successful benefits sharing will require the close cooperation between the scientific research institutes, the research and development institutes that create commercially viable products and the government’s extension services that can train farmers and other coffee chain stakeholders how to benefit from the commercial developments. Good coordination between these three actors is essential, but this was acknowledged to unfortunately still be a challenge. However, head researchers at the Institute of Biodiversity Conservation (IBC) expressed optimism that the communication and coordination related to this policy was improving.

In fact, the Ethiopian and Japanese governments have ratified the Convention on Biological Diversity (CBD), which sets out fair and equitable sharing of the benefit that arise out of the utilization of genetic resources (article 15 Access and Benefit-Sharing: ABS) 65. Article 15 stipulates the sovereign right of States over their natural resources, fair and equitable sharing of the benefits coming from the use of genetic resources, and prior informed consent of the countries of origin of such resources when accessing the resources. In other words, the CBD restricts free access to genetic resources.

In addition, the “Bonn Guidelines on Access to Genetic Resources and Fair and Equitable Sharing of the Benefits Arising out of their Utilization” have also been adopted. The Bonn Guidelines set out guidelines for governments and other parties to draw up mutually agreed

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contracts and covers benefits arising from all genetic resources, related traditional knowledge and the utilization of these resources and knowledge. Also, the Bonn Guidelines stipulate that, based on prior information, users of genetic resources should obtain consent of the countries of origin of such resources and that users and the countries of origin should make contracts or another form of common consent based on mutual agreement in order to decide profit allocation.

When accessing genetic resources overseas, users must comply with the domestic legislation and administrative measures of the countries of origin of the genetic resources. However, if the country does not have such legislation or measures, rules recommended in the CBD and the Bonn Guidelines become critical. In Ethiopia, it is possible that local communities, research institutes and government agencies are benefiting greatly from proactively maintaining and utilizing the genetic resources of forest coffee, based on the CBD. On the other hand, for industrialized countries that have been utilizing the genetic resources up until this point, there is a fear that they may experience an increased burden through benefit sharing and a stagnation in research and development.

### 5.4.5 Food Safety and Quality Control Throughout the Supply chain

As will be discussed in more detail in the section on Ethiopia’s response to the detection of pesticide contamination on coffee beans, the Ethiopian government has expressed that improving quality control along the entire supply chain is a priority. Within this policy, farmers are only one element of the coffee industry. Manuals, training and monitoring at all levels, from collectors and processors to transport, warehouse storage and export packing are all essential.

In addition, Ethiopian officials expressed several times how the Japanese pesticide contamination incident has actually been a blessing in disguise, allowing Ethiopia to establish coffee testing labs, improve secondary industries like jute bag production (still undersupplied) and, overall, improve the food safety and quality control of the whole coffee chain, which is a policy goal.
5.5 Ethiopian Coffee Production, Processing and Distribution

5.5.1 Production

Ethiopia has two production seasons, the Belg season (planting in January to March, harvesting by August) and the Meher season (harvested between September and February). About 90% of Ethiopia’s harvest is during the Meher season, including 100% of coffee.

Ethiopian coffee grows in diverse production systems which can be characterized as forest coffee, semi-forest coffee, garden coffee and plantation coffee; this section will discuss these methods and the issues related to each production system.

While statistics are not kept on how much coffee is yielded from each production style, it is estimated that semi-forest is roughly 35% of production, followed by garden coffee (35%), plantations and modern smallholdings (20%) and forest (10%). Ethiopian producers themselves do not necessarily recognize all these distinctions between production systems, but for research and data collection purposes, Ethiopian coffee production is usually discussed in terms of these 4 types. However, field interviews showed that even Ethiopians working closely with the coffee industry may use these terms slightly differently.

Graph 62: Ethiopian Coffee by Production System

Source: Wiersum et al

Ethiopian coffee is often said to be “95% organic” because smallholders do not use chemical fertilizers, primarily because they cannot afford it. Very little Ethiopian coffee is actually certified organic, but the province plantations are the only production system that regularly have access to and use chemical fertilizers, making the rest “default” organic.

The next sections will discuss each of the production systems in more detail.

**Forest Coffee**

Coffee forests are what remain of the wild coffee as it originated in Ethiopia. Only 3% of the country’s forests remain. The coffee trees are valuable not only for the coffee they produce, but for their great genetic diversity, which has been considered a valuable global natural resource. Coffee forests can be defined as a collection of coffee trees in open access areas of deep rainforest that is largely undisturbed; these forests are now found within the last remaining rain forests of Ethiopia, in the south and southwestern part of the country. Forest coffee trees are found below the shade of towering overstory trees and the shade is much denser than in other countries with rainforest coffee such as Brazil.

The collection of forest coffee can be an important part of household income (estimated at 20-50%) in coffee forest regions and collection often requires a long trek deep into the forest. There is hope that the high economic value of forest coffee will remain an incentive for conservation of both the rainforest and the genetic diversity within them.

On the conservation side, Institute of Biodiversity Conservation (IBC) as well as regional research centers such as the Jimma Agricultural Research Center, are working to categorize and preserve samples of the diverse coffee genotypes found. Through their work they have found coffee with a huge variety of characteristics include some of which, such as low and no caffeine types, that may have potential for commercialization either in or out of the forest. Already three coffee gene banks have been established and are to be managed through participatory forest management (PFM) schemes directed by the community. PFM schemes involve the community and other stakeholders in managing the use, protection and profits that come from forest resources in a sustainable way.

While forest coffee is considered wild and largely unmanaged, collectors do sometimes encourage higher productivity of the trees by thinning the overstory shade trees, removing other plants growing around the trees or even transplanting seedlings. Nevertheless productivity is

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67 K.F Wiersum et all, 2008
low due to the heavy shade and limited forest management, with an average yield of 50-150 kg/ha.

It is here that the uneasy balance between forest conservation and the increasing value of forest coffee can be seen. While maintaining the economic value of forest coffee is an important incentive for communities to preserve and protect the Ethiopian forest resources, at the same time the increasing value of the forest coffee can encourage communities to try to increase productivity, something that can only be done by more intensive tree management or transplanting – actions that put the original wild forest ecosystem at risk.

Finding the appropriate incentives to both conserve the forest and bring economic benefit from forest resources is an issue that is still highly debated. Organizations such as the Ethiopia Forest Coffee Forum (EFCF) are involved in research on these issues and Japan’s foreign aid agency JICA has been involved in a model participatory forest management (PFM) project in the Belete-Gera forest in southwestern Ethiopia. This JICA project will be highlighted in further detail in Section 5.8. In addition there have been efforts to use the identity as “forest coffee” to market the coffee overseas as a niche specialty coffee, an initiative that will also be elaborated on in Section 5.8

Semi-Forest Coffee

The dividing lines between forest coffee and semi-forest are not necessarily clear and even local experts do not all agree where the wild coffee ends and coffee cultivation begins. Semi-forest is the forest area that is generally more easily accessible, nearer to villages and cropland. Semi-forest coffee is still found beneath the shade of rainforest trees but is likely to be more intensively managed, including clearing ground vegetation, removing some of the canopy trees to increase sunlight or transplanting of seedling from the deep forest or from gardens. While the untrained eye may see no markers to indicate which family has claim to what area of semi-forest, local communities know which family has usage rights over which area.

Semi forest coffee tends to be more productive than forest coffee (100-200 kg/ha) due to the increased management, but it also has lower diversity of genotypes with true wild genotypes being rare. Most semi-forest coffees are landraces – cultivated genotypes that have not been specifically bred and selected by breeders. They are traditional varieties that do not have the productivity, for example, of those cultivars developed by the coffee research centers.
Garden Coffee

Garden coffee is generally grown near villages and communities. In some cases the coffee plants were wild coffee types that remained as the forest around them disappeared and small-scale farmers began to grow crops. In other cases the coffee trees have been grown from wild seedlings transplanted from the forest or from cultivars developed by research center nurseries. These garden coffee trees have little traditional shade, and are usually grown together with fruit trees, enset (false banana) and other crops on the small-scale farmers’ plots. Producer plots average 0.5 hectares and thanks to the intensive management garden coffee can yield 400-500 kg/hectare.

The picture above shows garden coffee growing in full sunlight on a mountainside behind a family house. Fruit trees and other crops are intermingled, and further off more coffee grows under semi-forest shade, where the cultivated area becomes more heavily forested. While coffee is traditionally a man's crop, women were also seen picking and returning from forests with bags of cherries.

Plantations and Modern Smallholders

While plantation coffee is the smallest source of coffee overall, plantation coffee is Ethiopia's most productive per hectare (450-570 kg/ha) and is highly managed. Most plantations are state-owned, though they are increasingly becoming privatized. The level of control plantations are able to maintain over the coffee from planting through picking and processing makes plantation coffee an attractive option for buyers who need a high degree of traceability. State plantations are allowed to export directly, which has encouraged buyers, including big name Japanese trading companies, to maintain good business relations with the plantation. These buyers can easily
visit the plantations, take their own soil samples and survey the processing system.

Goma 2 plantation, pictured above, is an example of this large scale, state-supported coffee production. This plantation has not only coffee production but also its own wet processing facilities so that the final product from Goma 2 is ready-to-ship green coffee.

The Goma 2 Plantation is one of several plantations under the umbrella of the Coffee Plantation Development Enterprise. It has 1150 hectares of coffee and 30 hectares for processing factories, worker residences and grazing. It is 1650-1750 meters altitude. With 2210 coffee trees per hectare, Goma 2 has a total of 2,542,419 coffee trees. All of its coffee is exported and, as a state plantation, it is allowed to export directly.

Goma 2 employs 1783 workers, which points to the important function of coffee plantations as an employer. 1300 of the workers are seasonal, casual wage workers. The coffee pickers and workers at the drying stations are primarily women. An average worker can pick 40-50 kg of cherries per day, but top pickers can do double that. All are paid monthly based on the number of kilos picked.

The Goma 2 plantation does use chemical fertilizers and pesticides in addition to mulch and manure. Weeds were reported by Goma 2 management to be the biggest problem. Fertilizer is used on seedlings (all ten types of coffee grown at Goma 2 are varieties developed by the Jimma Research Center) and mature trees are treated about twice a year.

Because plantation systems are able to control the coffee production from seedling to parchment to export-ready bags, Goma Two has a long relationship with Japanese buyers and other traders who prioritize traceability. Japanese companies have visited Goma Two to do their own soil testing.

While the Goma Two staff does not know all the export destinations of their beans, they do want to compete among not only commodity coffee but specialty if possible. For this reason they have gotten certified by UTZ (Good Inside), they hold Starbucks certification, they have a section of the plantation that is organic and they were due to be audited for Rainforest Alliance certification in November 2010. While they are hopeful that these certifications will provide opportunities for higher prices, Goma Two admitted that so far they have not gotten any premium from UTZ and were not sure what the result of Rainforest Alliance certification would be either. The thick sheet of documentation that Goma managers had prepared for the
upcoming Rainforest Alliance audit was evidence of the significant costs of reporting and updating certification documentation, a task that is only worthwhile if there is a price incentive. Nevertheless Goma Two felt that holding this variety of certifications put them in a better position to take advantage of market opportunities.

5.5.2 Processing

As a Ministry of Trade and Industry official commented, Ethiopia’s coffee is just perfect...until human hands get involved. He was referring to the reality that once processing begins, humans and the level of their skill have a huge impact on the ultimate quality of coffee.

Ethiopia coffee is currently 70-80% unwashed or sundried and 20-30% washed coffee. While unwashed coffee commands a lower price in many markets, including the US, several of Ethiopia's best known coffees – Harrar 5, Sidamo 4 and Jimma 5 coffees - are famous as unwashed, while Sidamo 2 and Yirgacheffe 2 and Limu 2 are usually washed. The perception that unwashed coffee is lower quality seems to be changing somewhat. The image of washed coffee being somehow “cleaner” is still strong in the US for example, while the Japanese market specifically requires unwashed for some types because of the richer taste.

Nevertheless, Ethiopia’s government policy position is to increase the percentage of washed coffee, despite the fact that washing requires significant amounts of water. Because processing is so critical to coffee quality, the Ethiopian government has taken action to improve processing quality and educate producers on picking, handling and storage. For example, the Ethiopian government has advised on picking only red, ripe cherries, collecting in bamboo baskets and never picking off the ground.

Another key problem identified was the fact that farmers were storing coffee in old polythene bags that seeped chemicals or in jute bags originally used for other purposes. This heightens the risk for contamination of coffee with chemical residues. As a result, the government has implemented strict regulations against the reuse of jute bags, as mentioned in the discussion of agrochemical residues detected by Japanese laboratories. In addition, coffee could only be stored in jute bags with the current year stamped on it. However as the one jute bag factory has not been able to produce a sufficient number of bags, the government has slightly relaxed the regulations, to allow some reuse of bags, as long as they have only ever been used for coffee. The Ministry of Trade reported that compliance is still not 100%, but the situation is getting much better.
Once the coffee has been picked by the smallholders it is either dried in sunlight, usually at the farmers’ homes, or it is brought to a wet processing center, either by farmers or by collectors. Because of the large number of people involved in processing, from drying at homes, to operating processing machines to truck drivers and packers, training and education of people all along the value chain is an ongoing process. The Ministry of Agriculture (and its Department of Extension Services), Ministry of Trade and ECX are all tools used for training and it is considered a government priority to raise awareness along the entire value chain of the importance of food safety and sustainable quality.

Some specific issues mentioned included the need for trucks to be disinfected before loading with coffee (which does not always happen) and the fact that suppliers blend beans of different qualities. They may do this out of hope that adding some higher quality beans to lower quality coffee will improve the lower quality's price. The government's position is to not mix qualities in order to get the highest price possible on the high quality beans.

The government officials met during this field investigation all expressed that the quality improvement measures being implemented for coffee were overall good practice for other value chain such as sesame and grains. The measures that were taken largely in response to the issues of agrochemical residue in coffee bound for Japan were described as a “good opportunity” for Ethiopia to update technology (such establishing a coffee testing lab) and to do a careful audit of the whole coffee value chain.

The Federal government's actions for coffee system improvement included the development of a manual that explained the guidelines for picking, sun drying on raised tables with a cover, the importance of sending beans to market soon after processing, how to use jute bags and other good practices. The Department of Extension Services held trainings on these topics with farmers. The extension workers then worked with suppliers to discourage the mixing of coffee quality levels and the use of old or used jute bags. This initial training was then followed up by regional specialists and ongoing checks that the guidelines are being followed.

The following photos illustrate the coffee processing system from picking, through wet processing to dry parchment.
Below: The photo on the right shows a Goma Two worker picking red cherries in November 2010. The photo on the right shows the Goma Two Processing Center. The buildings on the left have the pulping and fermenting areas. In the middle is a hillside of drying tables. On the right is the warehouse for storing bagged parchment coffee ready to be sent to hulling factories and the buyers for export.

Below: A worker prepares one of the wet pulping machines. The beans are separated from the pulp with the force of water and the grinding action of the pulper. While the clean beans are pushed down one channel, the pulp flows down a different channel until it eventually is collected into concrete bins. From there the pulp is used as mulch on the plantation.
Below: The pulping machine sends beans down into concrete fermentation tanks. After fermenting for 24 hours, the sugars in the mucilage that coats the beans will begin to break down and the mucilage will be able to be removed easily by the force of water.

Below: Beans are released from the fermentation tanks and are pushed down channels by a strong flow of water. The Goma Two washing station uses the force of gravity to move the water. Workers push and stir the moving beans with tools to help release the mucilage.

Below, the green beans are still wet, but no longer sticky with mucilage. The wet beans are laid out under covered tables for drying and initial sorting for defects.
Below: Beans that are broken, discolored, damaged by insects or by the pulping machines are removed. The beans are then left on long drying tables to dry to 11.5% moisture. The beans are covered by tarps during the hottest time of the day, when the direct sun can damage them.

Below: The dry beans still have their parchment skin and the silverskin under the parchment. On the right, workers are putting a sample of the dry beans into a device that measures moisture content. If the beans are dry enough, they will be bagged and stored in the warehouse until they can be transported to a hulling factory to remove the parchment and prepare for export.

Below: Bags of green coffee stacked in the plantation warehouse. On the right, the date stamp on the jute bags (Feb 2010) is visible, marking them as produced in 2010 and for use only in 2010.
Dry Processing (Natural/Sundried)
Below we see the area dedicated to dry processing at the same plantation. (Left) Bamboo drying tables; (Right) the large space for dozens of additional drying tables when needed.

Below: On the left we see dried coffee cherries with the dried pulp still around the bean. On the right is the plantation’s Brazilian-made dry processing machine to remove the dried cherry pulp.

The next section will outline in more detail how coffee outside the plantation system moves through the supply chain as well as the grading and testing for export.
5.5.3 Coffee Distribution, Grading and ECX Trading

As 95% of Ethiopia’s coffee is produced by smallholders, the distribution system involves a huge number of people, not only as producers, but at the washing stations, hulling stations and for packing and transport of coffee.

The launch of the Ethiopian Commodity Exchange in 2008 has changed the distribution chain to some extent, as it intended to. Before EXC began, Ethiopia had an auction system with auction centers in Addis Ababa and Dire Dawa. All coffee had to be physically brought to one of these centers, where it was graded and then sold either domestically or for export, depending on the grade.

According to current ECX staff, one of the main reasons for establishing ECX was to begin to eliminate the huge number of middlemen involved in coffee distribution, and get more of the direct benefit back to the producers. Smallholder producers would often sell to whatever collector came to the village or even give their coffee to a collector who might bring them the money from the sale of the coffee as much as a year later, if ever.

Nevertheless, even now, after the establishment of ECX, there are still many players in the coffee distribution chain. This section will describe the two main patterns – through cooperatives or through the conventional route.

Distribution through cooperative unions is fairly straightforward. It also has the advantage of being a system that can potentially bring increased premiums from certified coffees, such as organic, Fair Trade or other socially or environmentally friendly certifications that it can sell directly to buyers who value these certifications. As noted in the previous section, some plantation coffee also has certifications, including organic, UTZ and Rainforest Alliance, which the plantations can export directly.

Coffee sold through ECX, however, is considered commodity coffee and will not get the producer premiums that certification can bring nor the dividends of being a cooperative member, although ECX is making efforts to support the differentiation of specialty coffees, as will be discussed later.
The distribution map below shows how coffee moves through the cooperative distribution system.

**Map 9: Coffee Distribution and Dividend System through Cooperatives, 2010**

Source: Promar interviews
In the cooperative pattern, the smallholders will bring either red cherries or dry cherries to the primary society, who will pay the producer the going farmgate price. Depending on the size of the primary society it may have wet or dry processing facilities of its own. At this stage of the value chain, primary societies are competing against private coffee collectors. The primary society will either pay the farmers immediately or soon after, depending on the financial strength of the primary society.

The primary society will then sell the bean either as parchment or hulled green bean to their Cooperative Union who pays a price that is similar to the going ECX rate for the type of coffee provided. Cooperative Unions may refuse to buy coffee that is far below grade. The largest and best known Cooperative Union is the Oromia Coffee farmers Cooperative Union (OCFCU) and this is the Cooperative Union that will be used as an example in this section. Until this year, the OCFCU had rented government hulling facilities to process the beans they received from the primary societies. However the Union has just completed building its own hulling factory, laboratory and workers quarters which will have the capacity to operate 24 hours a day. Oromia Cooperative Union General Manager Tadesse Meskale reported that he felt having their own factory and laboratory will allow them even better quality control.

Cooperative Unions have the right to export coffee directly and are not obliged to sell through ECX. However, all coffee must be graded by ECX. Luckily this initial grading can be done as the coffee moves from the primary societies’ warehouses to OCFCU. ECX staff take samples from the trucks and do an initial grading, giving coffee a visual grading of 1-9, based only on number of defects only, not on cup quality. Grades 1-5 are export quality. When the coffee arrives at OCFCU, the Cooperative too will do its own grading. Under OCFCU's own standards they expect all washed coffee to be at least grade 3 or above, and unwashed at grade 4 or above. 75% of the coffee they receive is unwashed and 25% is washed.

At this point, the Cooperative Union has two choices. Ideally they sell directly to foreign buyers at an agreed upon price. The profits from that sale are then returned to the producers. In the case of the Oromia Cooperative Union, that is 70% of the export margin. However if they do not have a buyer for all their stock, the Unions will sell through ECX. There will also be a proportion of coffee that is not high enough grade for export that will be sold to the domestic market. (It should be noted that coffee sold on the domestic Ethiopian market may still have very high cup quality but has a low quality grade due to defects and irregularities in appearance.) OCFCU currently sells 80% direct, outside ECX, and 20% through ECX.
If the Cooperative Union sells directly to a foreign buyer, they must only pack the coffee and contact the Ministry of Agriculture and Rural Development who will send an official out to certify that the coffee is export quality. In addition, any amount of coffee NOT accounted for in the order must be shown to have been defect beans that were removed or poor quality beans that will be sold domestically. This is because export quality beans cannot be sold domestically.

In case there are not enough buyers for the volume of coffee held by the Union, they will sell through ECX. Like any other commodity coffee, their coffee will be taken to an ECX warehouse and graded, both by visual grading and cup quality. It will be sold at ECX within one of the coffee categories (Origin and Grade) that it recognizes. It will not be sold as Fairtrade or any other specialty coffee type and the profit made the Cooperative Union is likely to be smaller than if it had been able to find a buyer willing to buy it as Fairtrade certified. Oromia Cooperative Union mentioned that since most Fairtrade certified coffee is also organic certified, if a Fairtrade buyer cannot be found, they can often then sell it as organic, which still has a higher price than non-organic certified. After that, ECX may be the next option. In reality there are not enough buyers for the current volume of Fairtrade, organic or other certified coffees produced in Ethiopia and while Cooperative Unions are constantly looking for more buyers, not all Fairtrade producers actually get Fairtrade benefits on all coffee sales.

Nevertheless, for the producer, belonging to the cooperative has the advantage of getting two additional payments above the farmgate price they are originally paid by their primary society. When the primary society sells their coffee to the Union, the producers receive their first dividend, based on the number of kilograms they sold to the primary society. When the Union sells then to a foreign buyer, once again the profit from that sale is shared with the producers. In the case that the coffee is sold as Fairtrade certified coffee, there is the then potential (though not always realized) to also receive the social premium that is part of the Fairtrade model. This social premium is a percentage of the sales price that is given to producer groups for investments in economic development, such as school buildings or a health clinic. In some cases this social premium arrives later, after the coffee has been sold in retail in the buying country; this results in what is essentially a third dividend for producers.

However, not all producers are part of a primary society or they need cash now, and are not able to wait for the dividends. In other cases the Unions themselves advise primary societies to sell to ECX instead of to the Union if the Union knows that ECX is currently selling the producers’ type of coffee at higher prices than the Union is able to get from its direct buyers, or if the quality of the primary society’s coffee is not high enough to meet Union standards. In
addition, there may be greater volume from producers than Unions can sell. In these cases, coffee will flow through the conventional route.

The distribution map below illustrates this conventional distribution system.

Map 10: Conventional Coffee Distribution System, 2010

Source: Promar interviews
A key element that is different between the cooperative marketing system and the conventional chain is that the conventional chain includes the private collectors (sebsabies) who are required to be licensed (though unlicensed also operate in some areas), and the suppliers or wholesalers (akrabies). Coffee can move through several layers of middlemen as it moves between the farm and ECX. However, before ECX, during the auction system, there were only two warehouses – in Addis (80% of coffee) and Dire Dawa, which could mean that for villages far from one of these two locations, it could take several middlemen to transport the coffee to the warehouses.

Under the ECX system there are more warehouses, closer to the production area and suppliers’ warehouses. The hope is that this system will eliminate the need for so many middlemen and bring farmers a larger share of the profits.

 Establishment of ECX
ECX was established, in its own words, “to revolutionize Ethiopia’s tradition-bound agriculture through a new marketplace that would serve all market actors in the commodity chain – farmers, traders, processors, exporters and institutional buyers”. It is a public private partnership between the government of Ethiopia and the private traders who buy licenses to trade commodities. ECX appears to be originally envisioned as primarily a grains exchange, with the intention that more efficient and transparent grain trading would help increase food security in the country. ECX started operation in April 2008 with sale of maize.

However, barely seven months after its establishment, ECX took on the task of being the trader of all Ethiopian coffee, a huge responsibility that opened ECX up to much criticism. According to Dr Eleni Gabre-Madhin, the founder and CEO of ECX, the decision was made in consultation with the Ethiopian government, in the face of the collapsing coffee market in 2008. The idea was raised that perhaps ECX, which ideally is a free market with transparent pricing, could help avoid the looming disaster. Dr Eleni reports in the 2009 PBS documentary “The Market Maker”, how the Deputy Prime Minster turned to her after hours of meetings and asked if she would be able to handle it if ECX was given the responsibility for all coffee. She admits that at the time, she accepted the responsibility but was scared. “Coffee is just an overwhelming situation; doing too much with too little staff, too little equipment, too little time.”

This government decision to force all coffee sales through ECX raised immediate criticism and fundamentally changed the Ethiopian market, especially for specialty coffee. Concern was raised that this was a political decision - essentially nationalization of the coffee market, with the
government wanting to have more control over this lucrative export, despite the fact that ECX was not prepared to handle it. ECX’s Board of Directors was criticized for being stacked with directors with direct government interests and few private sector interests. The decision to funnel all coffee through ECX meant that as of autumn 2008, all Ethiopian coffee would essentially become commodity coffee, because private sellers who dealt in specialty coffee would no longer be able to sell outside ECX. Previously, licensed private dealers could buy coffee from specific origins or even specific farms to sell to exporters. This had allowed a level of traceability greatly valued by many overseas specialty buyers. Other criticized ECX for the minimum price that it imposes on each lot of coffee, causing distortion in the market.

A Rough Start
Trading opened in late 2008 with its share of controversy and skepticism. Coffee prices were still falling and some leading traders waited to see how ECX would function before bringing their coffee to the trading floor, leading to charges by ECX and the Ethiopian government that traders were “hoarding” coffee in ECX warehouses, waiting for higher prices. Around the same time 10,000 tons of coffee (worth over 21 million US) mysteriously disappeared, with no one held accountable. By January 2009, the Ethiopian government showed its frustration in a meeting between Prime Minister Meles and coffee traders, in which Meles strongly warned traders to participate in ECX. In March 2009, the government confiscated as much as 17,000 tons of coffee, ostensibly being hoarded, and suspended the trading licenses of the six largest private coffee traders.

ECX and the Specialty Coffee Problem
Among all controversies, the effective end of direct specialty coffee trade was the most contentious.

The focus of ECX, even now, is on commodity coffee prices. The ECX philosophy is that since 96% of Ethiopian coffee is commodity coffee, it is therefore best to focus efforts on raising the overall price of coffee rather than protecting or promoting the small but extremely high quality specialty coffee sector. As of autumn 2008, there was no specialty coffee at ECX and no way to trace coffee back to a particular farm or village. One lot of Yirgacheffe Grade 4 was interchangeable with another lot of Yirgacheffe 4. All coffee was bulked in to one of 9 broad origins and then graded 1-9 for quality. This meant that coffee of various quality levels could be mixed together, potentially losing the uniqueness of coffee grown in a particular region. With no “single origin” specialty market, there became no incentive for farmers to produce extremely high quality or preserve the characteristics of aroma or flavor that made the coffee
valuable. Direct relationships between growing areas and their overseas buyers were broken. For example, there were cases of some overseas buyers who preferred a particular coffee from a particular area and had invested in training or improved processing facilities for the growers. With the advent of ECX, the coffee from these areas simply went to the regional warehouse and became anonymous, mixing with bags coming from other parts of the region.

Critics maintained that while Ethiopia had little chance of effecting global commodity coffee prices, it did have control of supporting and expanding the niche market for Ethiopian single origin coffees.

ECX appears to have been caught off guard by the specialty coffee issue and initially unprepared for the issues raised by specialty coffee buyers and traders. Due to pressure from the specialty coffee industry, ECX, the Specialty Coffee Association of America (SCAA) and other specialty stakeholders began meeting in 2009 and created a working group to decide how best to incorporate specialty coffee trading into the ECX system.

However, in reality, while ECX did not provide traceability, most “traceable” Ethiopian coffee had previously come from Cooperative Unions or plantations. Small holder farmers did not directly have access to foreign markets and had used Cooperative Unions to connect with buyers, even under the auction system. Under the ECX system, both plantations, with their strong government ties, and Cooperative Unions were allowed to export directly. Plantations could still provide the same level of traceability they had before, because the plantations are allowed to export directly (though using ECX grades) and are essentially a single origin, traceable coffee. Buyers can certainly visit the plantation to judge quality and production methods, although Ethiopia’s best coffees are not plantation grown.

Cooperative Unions too can export directly, although the coffee is still exported under one of the ECX grades. Cooperative Unions with strong market credibility and long relationships with buyers such as the Oromia Farmers Cooperative Union, can privately assure customers that the shipment is from a particular area, but there is no market infrastructure that guarantees this. One major Ethiopian roaster and green bean supplier to the Japanese and German market complained how ECX had taken away their ability to provide traceable beans, for example from small cooperatives where there had been investment from NGOs to improve production facilities or local livelihoods. This socially responsible coffee had a niche market, but when the roaster tried to buy directly from the small producer cooperative in order to export, they were told by ECX that this was not allowed. Cooperatives could only export directly or go through
ECX - not sell to another domestic company.

The fundamental problem was that ECX was not designed with specialty coffee in mind and was not set up in a way that promoted or protected the specialty market. Throughout 2009-2010 ECX took steps to address this issue, without the changing its philosophy that the focus should be commodity coffee. The two major efforts were the introduction of Q Specialty grading certificates and the introduction of the Direct Specialty Trade platform (DTS).

In June 2010 ECX and the American Coffee Quality Institution (CQI) signed a partnership agreement to allow ECX to issue quality standard certificates to specialty coffees. The “Q certification” uses standards developed by the Specialty Coffee Association of America (SCAA) and is an internationally recognized certification for specialty coffee. Q certification can only be conducted by licensed Q graders, and in late 2009 37 Ethiopian coffee tasters were accredited as Q graders, giving Ethiopia the largest number of Q graders in Africa.

To address the issue of direct trading space for specialty coffee, ECX proposed the Direct Specialty Trade platform (DTS). This would be a platform for suppliers of specialty lots to meet directly with buyers. The intention was to make DST a monthly bidding session in which smaller cooperatives or commercial growers could bring specialty coffees to the ECX warehouses and provide samples to pre-registered foreign buyers who could test the coffee before bidding. A stated condition was that farmers would receive at least 85% of the export price. ECX reported that the first DST event in February 2010 was well attended and there was great success in matching the suppliers with buyers. However, the second DST event was less successful, because the suppliers and buyers had already identified each other in the first DST event and no longer had a need for the platform. As of Nov 2010, ECX was still considering how to continue or modify the DTS platform.

However, one of the key elements of success in coffee sales comes from longstanding relationships with buyers and marketing efforts made on the part of sellers and buyers. Unfortunately, this is not an area where ECX can be of much help. When Oromia Cooperative Union has more Fairtrade coffee to sell than it has buyers or when the Ministry of Trade and Industry expresses hope that Ethiopia can build a roasting industry that can serve regional trade and roast unique regional blends, they are speaking of coffee marketing and industry power that is not directly related to ECX.

Today, after just over a year of trading, ECX officials stress the positive effects ECX has had on
the coffee trade. They note the problems with the old auction system that ECX has addressed including:

- Inconvenient warehouses
- The abundance of middlemen
- Lack of transparency in pricing
- Delays in payment

**Warehouse system**

ECX has established 8 (soon to be 9) warehouses for coffee, many of which are leased from private owners. In February 2011, ECX announced its plans to open an additional 7 warehouses. There has been criticism that some of these warehouses are old, but an advantage is that they are closer to production areas and closer to suppliers own warehouses, cutting down on some of the middlemen and transportation costs. Still, there are issues to be worked out. ECX staff expressed how the Jimma warehouse and coffees gave the staff problems in 2010 because there was excessive mud on the roads in the region and trucks were getting stuck on their ware to and from the warehouse. Since the time of the auction system, there were already several warehouses in the Addis Ababa and Dire Dawa areas.

**Existing Warehouses**

- Addis Ababa
- Dire Dawa *(Harrar coffees)*

**New ECX Warehouses**

- Hawassa *(Sidamo A and B)*
- Dila *(Yirgacheffe)*
- Soddo *(Sidamo C)*
- Jimma *(Jimma, Teppe and Limu coffees)*
- Bedele *(Jimma B)*
- Gimbi *(Lekampti)*
- Bonga (expected to open soon and specialize in forest coffee from Jimma that currently goes to the Jimma warehouse)

**Grading at ECX**

Coffee grading is conducted by analyzing two aspects of the bean – first the raw green beans are visually evaluated for defects, and there are cup tests (also known as liquoring) which test
the sensory aspects of the roasted beans, including the aroma, the taste, the acidity and other flavors. Cup test criteria will be adjusted for the region the beans are from, as each region has certain special characteristics that are held as the standard against which to determine the quality of beans from this region. Because the distinct flavors and characteristics of coffees from different production areas of Ethiopia are among the most valuable assets of the beans, the separate regional warehouses that are a feature of the new ECX system have the potential to be a very positive development.

**Bidding System**

The ECX bidding system is an “open cry out” system, where the sellers and buyers meet in an open trading floor to negotiate and finalize sales. An electronic ticker displays the lot names as well as the minimum price based on the last time this type of coffee was traded. When a coffee lot is called, the sellers and buyers file onto the floor, showing their color coded registration badges to the official calling the lots. When bidding begins, the buyers and sellers move within a tight group, crying out their bids. When a sale has been made, a seller and buyer give each other a “high five” indicating that a sale has been made.

5.6 **Foreign Aid and Investment into the Coffee Industry**

International and bilateral donors have conducted a variety of projects in Ethiopia that have supported the coffee industry, both directly and indirectly. Aid from the EU, US and Japan has been particularly apparent in several areas:

- Capacity building and technical assistance in biodiversity research, including donations of technological equipment, database creation and staff training, including at the Jimma Research Center which has a large coffee focus
- Support for the development of ECX and its warehouse receipt system, including technical assistance and capacity building, as well as ongoing financial support for ECX management, such as UNDP-funded senior ECX managers
- Support for formation and expansion of farmer cooperatives and associations
- Support for the establishment of a pesticide residue testing and quality control laboratory; after the pesticide residue issues related of shipments to Japan, Japan and other donors provided capacity building as well as donations of equipment
- Support for improved coffee processing and marketing; for example, the American NGO Technoserve has helped build washing stations in the Jimma area to allow producers to
receive the higher prices that washed coffees generally bring over unwashed

Below two examples of aid and investment are highlighted – one funded by Japan and the other by Germany. These two examples have been chosen because they related directly to coffee marketing and show examples of partnerships between aid providers and private sector business.

5.6.1 Participatory Forest Management Project in Belete-Gera Regional Forest Priority Area (Belete-Gera PFMP)

JICA's project in the Belete-Gera forest region focuses on participatory management of the forest, with support for coffee production as one of the elements of the project. The project was initially in two phases, lasting from October 1, 2006 to September 30, 2010 and has been extended now an additional 18 months until March of 2012.

Ethiopia's forest is now only 3% of the country, though once it covered as much as 35% of Ethiopia's land. 70% of this remaining forest is in the Belete-Gera region. JICA's project aims to help protect 150,000 acres of the forest in southwest Belete-Gera by setting up a participatory forest management (PFM) model that involves a variety of administrative and agricultural measures. The cooperation and participation of local villagers is considered essential; if villagers benefit from management of forest resources, they have an incentive to safeguard and preserve the forests. Encouragement of grassroots support for JICA projects has been part of JICA's philosophy in recent years as it is considered the only way for projects to remain sustainable long-term.

In the Belete-Gera forests, local people have traditionally gathered non-timber forest products such as coffee, honey and spices and it seemed that a main reason the Belete-Gera forests were in better shape compared to other areas was because the local communities benefitted from preservation of the forest and the products growing within it. In other words, collection of wild forest products including coffee in Belete-Gera was generating better income than cutting down the trees for timber or converting the land into agricultural land.

JICA's project helped to establish Forest Management Associations ("Waldaa Bulchiinsa Bosonaa" (WaBub) in the local Oromo language) which are legally recognized by the Oromia government. They are primarily made up of heads of households who have forest usage rights as recognized by the communities. The legally recognized associations are a platform for
drafting and implementing of forest management plans and getting community input on forest usage.

Among the livelihood support benefits for WaBub members are coffee production and marketing support. This includes organic or fair trade certification in some cases, and support for business partnerships with Japanese traders.

JICA project managers have successfully linked the Belete-Gera forest coffee farmers with a large Japanese importer which commenced imports in 2010. From February 2011, major Japanese roaster UCC was expected to retail the Belete-Gera coffee as “Wild Belete Gera” specialty coffee.

While the export volumes are not huge, it is an interesting example of the private sector providing a channel for donor-project supported forest coffee farmers to access a major coffee market. Market incentives are crucial to providing a continued incentive to protect and preserve the forest resources, which is the ultimate goal of JICA’s model forest management system.

Nevertheless, this example also illustrates the difficulties in evaluating and managing incentives within Ethiopia’s forest coffee industry, as there was concern from some JICA staff that too much emphasis on coffee production for a lucrative Japanese market, could actually hurt the Belete-Gera forest, if more farmers wanted access to the forest for coffee picking or they began to use management methods such as cutting down canopy trees in order to allow more sunlight to the coffee trees.

There are no easy answers to incentive management but as far as the incomes of the coffee farmers and the production of a specialty forest coffee product, the cooperation between JICA and the private sector is benefitting the Belete Gera villagers. Whether this benefit can continue past JICA’s project mandate remains to be seen.

5.6.2 German Coffee Aid and Investment: Exploring the Idea of a “Wild Forest Coffee” certification scheme

Germany is the top destination for Ethiopian coffee and the German government together with the EU and the privately operated aid enterprise GIZ (formally GTZ) through which much German aid is channeled, have done several projects in Ethiopia that affect the coffee industry.
For example, Germany has provided technical assistance to the Institute of Biodiversity Conservation (IBC) to build a database to catalogue and organize accessions of plant samples and the results of categorization.

However, this section will focus on an example of German aid for coffee marketing support and the difficulties that were faced when trying to create a certification system for a niche coffee, in this case, forest coffee. This case can be seen in comparison to the JICA Belete-Gera project, which also looked at forest coffee in relation to environmental protection.

While a solid market already existed in Germany for Ethiopian coffee, with accepted quality standards, an initiative first started in 2003 to market Ethiopian “wild” forest coffee as a new environmentally friendly and socially responsible specialty coffee. Certifying forest coffee under a scheme that would allow the coffee to be sold at a premium in Germany seemed to potentially be a way to raise the incomes of small-scale forest coffee farmers as well as create an incentive for forest conservation.

However criteria for certifying Ethiopian forest coffee did not fall under existing certification schemes, such as organic or fair-trade.

In general certification schemes for non-timber forest products revolve around one of the following pillars:

- Certification based on organic crop production
- Certification based on fair trade criteria
- Certification based on sustainable forest management criteria
- Certification based on local origin schemes

The idea of marketing coffee as “wild” and forest-friendly seemed like a product with a potential market in Germany.

The first problem in creating or choosing a certification scheme was that “forest coffee” was a difficult thing to define. There is no clear dividing line between forest coffee, semi-forest and even the edges of gardens where forest genotypes may remain after the forest has been cut away around it. The idea of certifying the coffee as “forest coffee” was also as a means to

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indicate that there was little human interference in the “wild” forest genotypes that produced the coffee. But levels of human interference were also difficult to define. Therefore, two German development organizations (GEO Schutz den Regenwald and the Amber Foundation) who aimed to import and market wild forest coffee to Germany decided to define the coffee on the basis of “socially responsibly and environmentally friendly production systems” – rather than defining the geographic space of “wild forest”.

The two organizations worked with local government and coffee farmer cooperatives in the Kaffa area to begin this business, but realized they would face competition from the many other certifications which are based on “socially responsibly and environmentally friendly production systems” and can offer inexpensive and quick certification. Forest coffee as a specialty coffee still needed to stand out further than simply begin an environmentally friendly product. The German organizations had to stay focused on market-oriented solutions, in this case, by assuring that the coffee was not only socially responsible and environmentally friendly, but also processed well, to insure high quality and taste.

In the end, the German organizations decided to partner with well-established, existing certification schemes – Utz Kapeh certification (socially responsible trade) and organic certification, rather than try to create a new certification based on Ethiopian forest origin or forest conservation, due to the difficulty in defining or monitoring these aspects.

This result is in line with other experts’ suggestions that specialty coffee success almost always needs organic as a basic certification to ensure specialty marketing potential. On top of that, “double” certification of socially or environmentally responsible production can potentially be an additional advantage. However on top of all the certifications, due to the increasing commonness of certifications, the specialty coffee itself needs to meet international standards for taste and quality or it will not be able to sustain a market. Niche coffees face tight competition – a certification alone, especially a new, unrecognized or unclearly defined one, will not bring market success.

This lesson of the German organizations’ exploration of a new certification scheme is important to remember when considering aid or investment to support the development and expansion of specialty coffee market in Ethiopia. Specialty coffees are often suggested as a potential means for farmers to get higher premiums and escape from the commodity coffee chain. However, while certifications, especially organic, may be important to specialty coffee marketing, support

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for high quality processing and improved marketing are also essential for sustained marketability of specialty coffee. Specialty coffee, as defined by specialty Q grading at ECX, demands high prices primarily because of its excellent specialty grade, not its certifications alone.

The example raised by the previously discussed JICA example confirms this. While JICA’s Japanese importer partners are said to be using the “wild forest coffee” image as a marketing tool, they are not relying on certifications to sell the coffee. Its long term success, after the JICA project ends, will depend on whether the forest coffee farmers produce coffee that is high enough quality for the Japanese importers to continuing shipping.

5.7 Issues Facing the Ethiopian Coffee Industry (Summary)

Despite Ethiopia’s rapid economic growth in recent years and its positive trends towards export diversification, coffee remains Ethiopia’s top earning export and coffee production, processing and distribution remain a vital industry for the livelihoods of a large segment of the Ethiopian population.

Supporting the development of the coffee industry is deeply linked to Ethiopian efforts towards poverty alleviation: through improved agriculture and agribusiness, sustainable management and use of coffee genetic resources, as well as development of coffee-related value-added industries and overall increased trade in coffee.

Both the Ethiopian and Japanese governments are determined to support Ethiopia’s goals to increase food security, and again the coffee industry is a critical factor. For subsistence farmers, coffee is often the main cash crop, and allows household budgets to weather changes in food prices and food availability throughout the year.

Below are outlined the major issues currently facing the Ethiopian coffee industry.

5.7.1 Environmental Resources

- Ethiopia lacks sufficient capacity to catalogue and preserve its natural genetic coffee resources, which are both a world heritage and a resource with potential for commercialization in the form of new coffees with unique characteristics. Continued
production of forest and semi-forest coffee (45% of national production), requires conservation of the forest ecosystem.

- Appropriate incentives for stakeholders are essential elements for conserving natural coffee resources and sharing their benefits among stakeholders.

5.7.2 Production

- The Ethiopian economy still depends on coffee as one of its major sources of foreign currency. Low coffee prices can be devastating to the overall Ethiopian economy. Small scale producers are particularly vulnerable to price fluctuations that can push them from poor to destitute. Unstable prices make farmers less able to be committed to growing high quality coffee and more likely to switch to other cash crops.

- Climate change, which includes variation in the timing of rainy seasons and the threat of drought, will require improved varieties of coffee. Climate change will have different effects in various regions and may also exacerbate coffee diseases like coffee berry disease and coffee wilt or bring new pests. New varieties of coffee will need to be adapted to the regional needs.

- Capacity and scale for seedling multiplication is insufficient and underfunded.

- Washed coffees bring higher prices and increasing the percentage of washed coffee is an Ethiopian government priority. However, washing facilities are in short supply and increasing washing facilities will require significant amounts of water in a drought-prone country.

- Producers lack information about the distribution system and the final markets their coffee is destined for.

5.7.3 Distribution and Marketing

- The supply chain includes a huge number of players, from producers to suppliers,
processing station workers, truck drivers and packers. Food safety, contamination prevention and quality control must be maintained throughout this entire chain, a task which is extremely challenging for the Ethiopian government and its limited resources.

- The lack of a sufficient supply of coffee jute bags leaves the supply chain vulnerable to contamination and also adds costs when bags must be imported from abroad.

- Ethiopian producers do not benefit from the value-added benefits of coffee production. Profits from production of jute bags, vacuum packs bags, roasting and blending are not captured by the Ethiopian producers and traders.

- Regional African markets (North African countries, South Africa) hold good potential for Ethiopian coffee, but there is weak capacity in both marketing and technology (roasting etc) to fully take advantage of these opportunities.

- Ethiopian producers and government do not have the capacity to support marketing overseas – for example in Japan with Japanese language materials.

5.7.4 Overseas Specialty Coffee Markets

- Specialty coffee is currently a small percentage of Ethiopian coffee (4%) but it is a growing global niche and it is the one area where Ethiopia can both control prices and market its image. Currently growth in these important overseas markets is facing two major obstacles:

  - Insufficient marketing has resulted in more Fairtrade, organic and other certified coffee produced than has found buyers. This results in producers not always benefiting financially from the certifications.
  - An ECX system that still does not allow traceability to the farmer level, to support direct purchases of single origin and micro-lots. This not only inhibits foreign trade in single-origin specialty coffees, but it removes incentives for coffee farmers to preserve the environmental resources that produce the particular characteristics of the coffee, as well as incentives to produce at the high quality levels that specialty buyers require.
6 Recommendations

6.1 Tanzania’s Kilimanjaro Coffee Industry

The support for a revival of coffee industry in the Kilimanjaro state is necessary to improve livelihood of coffee growers in the state. Falling incomes because of decline in both production volume and price has resulted in some producers struggling to access adequate education or medical care. Although the Japanese demand for high quality Kilimanjaro coffee from the northern area is strong, as the production volume and quality decline, the coffee often fails to meet the Japanese demand.

To support a revival of the Kilimanjaro coffee production area, the focus should be on improving coffee quality rather than increasing production volume. A primary factor in the decline of the Kilimanjaro coffee industry has been the movement of Tanzania’s coffee production base from the north to the south, a trend reflected in government policy. As a result, the productivity of the northern highlands is already only about one third of the southern productivity, and the north is also falling behind the south in terms of quality (especially bean size, an important physical characteristic) and price. In reality, going forward, there is little possibility that the north will be able to regain dominance over the south in terms of productivity for 4 main reasons.

- Coffee trees in the south are 20 years younger and one southern tree can produce 0.1kg more than those in the northern highlands.
- Because the south is not a mountainous region with steep slopes, the tree density per hectare is more than twice that of the north.
- Government plans through 2012-2013 to introduce new disease tolerant, high-yield coffee varieties allocate about 13,000,000 more trees for the south than for the north.
- There is no room to expand the planting area in the northern areas, but in the south, land is more abundant and because coffee is already a proven cash crop, there is room to expand the production area.

For these reasons, there is little possibility of northern Tanzania returning to the large scale production it enjoyed 20 years ago. The only advantage that the northern highlands have over the southern region is quality, and the high price that comes along with that. Kilimanjaro offers the ideal growing conditions for Arabica- it is 1000-2000m above sea level, 15-24 degrees in
temperature and has 1500-2000 mm of annual precipitation. Japanese traders and roasters expressed that they use beans produced in the north when they need to be particular about the taste and one of the reasons that northern beans have better flavor is the difference between the growing conditions in the north and south. Such an ideal natural condition is an absolute advantage for the northern highlands. Therefore, in the northern highlands it is extremely important to improve the declining quality in order to differentiate it from the southern area.

This improvement in quality will be welcomed by Japanese traders, and if stable quantities and quality could be assured, northern Tanzanian producers would have an ongoing market for their beans in Japan.

In order to achieve high quality, stable production, the aid must be provided to the most competitive producers’ organization in the Kilimanjaro state, where production is already declining, in order to avoid abandonment of production due to international price changes and to encourage maintenance of coffee farms and cultivation practices. For instance, organizations such as G32, which produces high quality beans that target premium prices through branding, or cooperatives who create incentives for producing certified and high quality beans by facilitating direct export can be potential candidates for the aid.

Another option is to promote contract farming through private investment or to establish larger scale farms on the condition that they guarantee employment for the local farmers. This fits well with the government's agricultural policy of promoting private sector-led commercial agriculture and also follows an existing trend of increasing production by large-scale farms and estates from 5% in 2001 but expanded to 15% in 2009. In addition, larger scale farms are more likely to be able to produce high quality beans on a stable basis, and through their direct exports they can eliminate margins taken by middlemen, which will be beneficial for both producers and the Japanese buyers. However, would be necessary for promotion of large scale farms or plantations to be monitored by the government, supporting organizations and NGOs etc. to be sure that local residents maintain land use rights and do not have any property grabbed for plantation creation. It would also be essential to insure than any contract farming or plantation employment was benefitting the local residents with fair employment contract (e.g. permanent employment rather than low wage seasonal worker during harvest season.)

With these potential targets in mind – producer groups, strong cooperatives and private-sector led large scale farms – the following support should be considered for the Kilimanjaro state.

71 Tanzania Coffee Research Institute “Black Aroma – The Story of Tanzanian Coffee”
72 Another reason is a quality difference of water used for wet processing.
73 Christopher Coles and David Mhando 2010 “Kilimanjaro Coffee Value Chain Case Study: Producer Benefits from Fairtrade and Free Market Channels”
6.1.1 Donor support for dissemination of high yield coffee varieties and additional CPUs

These 2 items, support for dissemination of high yield coffee varieties and additional CPUs, are already included in the 2011-2016 Coffee Industry Development Strategy. The Tanzania Coffee Research Institute is mainly responsible for dissemination of high yield coffee varieties and the Tanzania Coffee Board helps establish for CPUs. However, unlike the Tanzanian Agricultural Sector Development Programme (ASDP), the Coffee Industry Development Strategy program does not receive donor funding and so these two important activities are underfunded. Tanzanian coffee is consumed almost exclusively by developed countries and it is important for these countries – including Japan, the largest consuming country – to support the coffee industry policy in order to ensure smooth and continuing trade.

6.1.2 Improvement of traditional irrigation systems and agricultural extension instruction

The main reasons that production in the northern highlands is unstable are the large differences in precipitation volumes year to year and the biennial production cycle of the coffee trees.

Some traditional irrigation systems have already been installed in Kilimanjaro Region it is important to maintain and expand these irrigation systems in order to balance the annual rainfall instability. Currently, in the Tanzanian Agricultural Sector Development Programme, support for irrigation is underway in the many places in Tanzania through the support of the basket fund of donor contributions. If the mountainous region of Kilimanjaro can also expand irrigation also with the cooperation of donors, it will be a huge boost for coffee production.

Preserving farming knowledge and increasing technical capabilities are also key to expanding production. In order to avoid the loss of knowledge about cultivation techniques specific to individual coffee producing regions, utilizing Tanzanians who have worked at the cooperative unions as professional coffee cultivation experts and extension workers (but are now retired) can be key. They are a potential wealth of valuable knowledge that should be actively sought out.

New farming knowledge can come through international cooperation as well. For example, the biennial fruit production cycle is also seen in Japan for mandarin oranges and apples, and Japanese agriculture experts are familiar with methods for minimizing these cycles, such as partial fruiting, alternate fruiting by site and using fertilizers. Experts from Japan can cooperate with Tanzanian producers to teach cultivation methods that prevent biannual fruiting, which could contribute to more stable production of coffee in Kilimanjaro Region.
6.1.3 Development and Dissemination of Drought-resistant Coffee Varieties

Drought resistant coffee varieties are a priority not only for Tanzania but for other countries in the region struggling with climate change and changing rainfall patterns. Support for development of these varieties and dissemination to small scale producers not only will help stabilize production, but will help protect the incomes of small-scale farmers who can be devastated by a drought in Tanzania and other African countries. Drought resistant coffee varieties are one tool to be used in efforts towards poverty alleviation.

Japan has experience in joint seed development with African nations through the New Rice for Africa (NERICA) project, which developed a drought resistant and high yield rice variety. In that case, Japan provided not only funding but also experts, dispatched through JICA. Japan is now building a network for seed dissemination, through the Coalition for African Rice Development (CARD) established in 2008 and has been working on the dissemination of NERICA in African countries. Utilizing the networks and research program experience developed through rice research and dissemination, Japan can be working with the Tanzania Coffee Research Institute to support its development and dissemination of drought-resistant coffee varieties.

6.1.4 Development of laws to prevent multinational cartels

The Tanzania Coffee Board has long recognized the problem of cartels by multinational companies but has been unable to come up with efficient solution. One of the reasons is that the Coffee Board both sets regulations related to coffee on behalf of the Ministry of Agriculture, Food and Cooperatives, and at the same time is a self-monitoring organization, supervising activities under it according to the regulations it set. There is a lack of separation of powers. In order to solve this problem, there will need to be both appropriate legal regulations as well as a clear enforcement agent.

JICA, working with Japanese legal professionals, has experience in supporting the drafting of legal frameworks, such as drafting the civil procedure bill and supporting its enactment into law in Cambodia in 1999. If a legal framework to break the cartels can be designed, it will be able to contribute to the improvement of the production price (and thereby improving the livelihoods of growers) and encourage fairer competition. JICA and other international agencies with legal advisory experience may have an opportunity to support coffee farmers through legal consulting with TCB and the Tanzanian government.

74 Tanzania Coffee Board “Coffee Sector Strategy 2001/2006”
6.1.5 Aid for the South

The coffee from the south also has an important market in Japan, especially lower priced coffee for use in products such as canned coffee. The south has already succeeded in achieving high production and they are slated to receive the bulk of the new coffee varieties that will be disseminated. Therefore, the region does not need the production volume support of the north. Instead, the problem in the south is that the coffee flavor is poor, caused primarily by the quality of the water used for processing. In the south, 75% of coffee is wet processed, which is a lower percentage than the north and more than 60% people use a river or pond as their water source. River and pond water becomes muddy in the rainy season when coffee is harvested and the coffee flavor is damaged when such water is used for processing. Therefore, it is recommended to support development of basic water supply infrastructure and agricultural irrigation system. This will improve overall water quality and in doing so improve the quality of the coffee beans.

6.2 Ethiopia's Coffee Industry

When considering the most appropriate actions to take to support the further development of the Ethiopia coffee industry, a balance must be struck between supporting an increased percentage of profits going to vulnerable coffee producers and other actors in the supply chain, with promoting development of sustainable, high quality products that will continue to be in demand in key markets such as Germany and Japan.

Realistic actions that would support both these goals are:

6.2.1 Technical assistance in capacity building for analysis and conservation of coffee genotypes and development of coffee varieties

Technical assistance is valuable on two fronts. First, on the conservation side, Ethiopia needs to be able to more quickly and accurately categorize and conserve the genetic coffee resources that are unique to Ethiopia. These resources not only hold globally valuable clues to genetic characteristics related to coffee productivity, disease resistance and tolerance to extreme climate conditions, but these resources have the potential to be developed by Ethiopia into new commercial varieties of coffee, such as naturally caffeine-free species. Thorough understanding of the genetic resources is an essential step towards creating benefits for the population in the
form of new employment opportunities or increases in income. To do the categorization that is necessary before commercial development, the Institute of Biodiversity Conservation and its affiliated gene banks need the support of trained organic chemists and researchers as well as technical equipment such as a DNA sequencer.

The research centers, such as the Jimma Research Center, which develop new varieties and do the multiplication, are also suffering from a shortage of research equipment, generators and advanced training on seed multiplication processes.

Not only would support of the operational costs and equipment needs of these institutions – IBC, gene banks and research centers – be valuable to Ethiopia, but sending Japanese technical experts in plant biology, research methods and genetic categorization would be of great benefit.

### 6.2.2 Investment in domestic jute bag production facilities

During investigations into the source of the pesticide residue on coffee beans in 2008, the potential for contamination through reuse of jute bags was identified as a critical problem. The resulting requirements by the Ethiopian government for use of new jute bags for coffee have led to high demand for jute bags that cannot be met by current domestic production. While recycled jute bags may not necessarily be the cause or only cause of pesticide residue contamination detected in 2008, the use of new jute bags and stricter regulations on coffee bean handling throughout the value chain has hygiene and quality control benefits. Investment and support of additional jute bag factories, especially those using domestic Ethiopia raw materials would be of benefit not only to the coffee trade and its goals of insuring food safety and quality through the supply chain, but it would also have secondary benefits by providing employment in jute bag processing and income through production and sale of raw materials for jute bags.

### 6.2.3 Technical assistance for development of domestic roasting, packaging and marketing for expansion of regional African trade.

The Ethiopian trade and government all expressed confidence in the potential for expanded coffee trade within Africa, especially Northern African countries, South Africa and later Russia and China. This would not only provide new trading partners but could allow Ethiopia to capture a higher portion of the final price of processed coffee by keeping the value adding activities (roasting and packaging) within Ethiopia.
Support for the development of a domestic roasting industry for regional African export would include investment or technical assistance in roasting, packaging and marketing. Secondary industries that can be developed to support regional value-added coffee trading include production of vacuum plug bags for retail packaging (currently bought for 1$ each from India) and marketing of original regional blends of African coffee using both Ethiopia and other African coffees.

Development of this industry not only supports Ethiopian coffee producers and traders and would create additional employment, but would be an opportunity for international investors and aid to be part of a growing market.

6.2.4 Support for traceability systems to farm level to further develop specialty coffee market

Traceability is a key concern for importers, whether of commodity Ethiopian coffee or specialty beans. The Japanese market in particular is extremely concerned with traceability. Because Ethiopia hopes to rebuild the Japan market as a major export destination, any support or pressure for increased traceability systems is potentially an advantage. Not only does traceability to farm level give reassurance to buyers but it also provides an incentive for the coffee producer that is currently missing, to preserve and improve the quality and characteristics that the end buyer is interested in. Traceability encourages communication between the production level and the final market. This direct connection allows producers to understand where their coffee goes and why certain production and processing is necessary. On the other hand buyers can better understand the environment and challenges that face the producers. In the case of Japan, where certain types of Ethiopia coffee are particularly prized, maintaining that quality, aroma and flavor are essential to maintaining share in the Japanese market.