





USAID'S VALUE CHAINS FOR RURAL DEVELOPMENT

April 30, 2019

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INTRODUCTION

The USAID-funded Value Chains for Rural Development (VCRD) project has helped transform coffee production in Myanmar by helping farmers shift from unprofitable commercial coffee to high-value specialty coffee - receiving prices that are up to 37.5 percent higher for cherries and 2 to 4 times higher for green beans. Since the initial pilot with four communities in Ywangan established Shan State as an origin for some of the most diverse and unique specialty coffees in the world, the number of farmers and communities engaged in specialty coffee production has steadily climbed. In parallel, "cupping scores" for each new harvest have continued to rise to ever higher rungs of the coffee quality ladder. This transformation has been guided by specialty green bean buyers and enthusiastically embraced by Myanmar smallholders, estates, and processors. Several factors have contributed to this success:

Quality relationships.

Relationships matter to specialty green bean buyers and roasters. Craig Holt of Atlas Coffee Importers (Seattle), Charlie Habegger of Blue Bottle Coffee (Oakland), Kim Thompson of Raw Coffee Company (Dubai) representatives from This Side Up (Amsterdam), and other buyers have returned to Myanmar multiple times to encourage producers and processors, provide feedback on coffee quality, and educate stakeholders about the global market. They want to know who produces their coffee and where

it comes from. They're willing to pay more and have been instrumental in promoting price transparency. And they're enthusiastic story tellers, shining a light on Myanmar's specialty coffee through launch events in cafes, blogs, videos, and social media.

Clear industry standards and protocols, supported by robust training curriculum.

The Specialty Coffee Association (SCA) defined "specialty coffee" for the global coffee industry in the 1980s and developed an industry-recognized protocol for scoring coffee quality. SCA's affiliate, the Coffee Quality Institute (CQI), fielded expert instructors under the project who delivered rigorous, participatory technical courses in key locations in Myanmar, known as "Q courses" (quality). A core group returned multiple times to Myanmar, which provided continuity: Marcelo Pereira taught coffee agronomy, Mario Fernandez taught coffee processing, Joel Shuler taught Q processing, and Lisa Conway and Sara Morrocchi advised on association capacity building and price risk management. Participants who demonstrated mastery in Q courses earned industry-recognized certifications. Q courses helped rapidly professionalize the sector and fostered lasting connections. In addition, many CQI consultants have their own successful coffee businesses, offering an insider's understanding of the global coffee sector, and have market connections. This is an uncommon advantage in the development consulting world, and particularly relevant to a market systems development project.

Design thinking approaches to innovation, feedback, and continuous improvement.

The project's support for specialty coffee started with a great idea - low-tech, high-value specialty "sun-dried naturals" are well suited to smallholder coffee production in Shan State. Starting small with a few communities allowed participants to maintain quality control and solve production issues. Identifying selection criteria for mobilizing new communities helped scale up incrementally, without jeopardizing quality. Cupping scores, flavor profiles, and buyer feedback taught farmers to "know your cup", essential for crafting the desired taste experience. Participatory, systematic, post-season reviews of cost structures, logistics, market risks, and other issues facilitated joint problem-solving and guided production planning for the following season. For example, economic analysis of community and processor-level operations identified cost ranges and averages to understand break-even points and identify high performers. In turn, this evidence helped communities negotiate prices with buyers and identify ways to achieve greater efficiency. Most importantly, the project team and consultants listened to farmers to understand the "why" underlying their decisions and practices. Rather than viewing them as vulnerable smallholders, the team respected them as entrepreneurs. Farmer organizations evolved iteratively, in response to identified needs. They started with relatively simple community-level working groups in the first three seasons. By the fourth season, Ywangan formed and registered a for-profit company to provide quality control and marketing services, protect smallholder interests, and qualify for a working capital loan. Smallholders in Hopong quickly replicated this model on their own initiative.

"Just do it" attitude.

Myanmar smallholders and other market actors embrace new opportunities and learning-by-doing and are not easily daunted by challenges and missteps. They are excellent innovators and problem-solvers. Participants "self-selected" and diligently pursued higher quality. These traits drove adoption, testing, adapting, replication, and resilience.

Value chain coordination.

VCRD's specialty coffee team launched the first specialty coffee pilot in Myanmar, linked communities and processors to specialty green bean buyers and international industry expos, organized training, managed an Innovative Grant program that financed new processing equipment in key locations, brokered working capital loans that set a ground-breaking precedent for agriculture lending in Myanmar, and helped build the capacities of associations. Foreign buyers have commented that Winrock's reputation and commitment were essential for attracting them to Myanmar in the initial phase. Project support gave them confidence that the communities could succeed in producing specialty coffee and that the logistics of establishing

relationships and transacting with communities and processors would be manageable. To enhance sustainability, the project has increasingly handed over key functions to the Myanmar Coffee Association (MCA) and for-profit community-based associations, shifting from directly managing marketing, training, and quality control activities to coaching associations on how to plan next steps and access support services.

Shan's competitive advantage in specialty dry naturals.

Myanmar has a competitive advantage over other specialty coffee producing countries. The weather is typically dry and sunny throughout the harvest season, which provides excellent conditions for drying. The terroir produces "clean, sparkling" dry naturals that are unlike any other country. Coffees from one community to the next express different flavor notes, which appeals to curators of micro-lots who seek unique taste experiences.

Passion.

People are passionate about exceptional coffee. Engaging in the craft of specialty coffee offers more than income. It inspires collaboration, experimentation, artistry, learning, pride, and adventure. One deeply passionate person who has found their calling can positively impact a large number of people. Fortunately, there are many in Myanmar.

This paper builds on previous project reports to assess the shift from commercial-grade coffee production in Shan State to high-value specialty coffee. It summarizes key milestones, provides evidence of value chain development, compares different arrangements for production and processing and their implications for smallholder inclusion and empowerment, and identifies Myanmar's unique competitive advantages.

BACKGROUND

Most of the world's commercial grade coffee farmers are not paid enough to sustain profitable farms, prompting many farmers to cut down their coffee trees. This was also the case in Myanmar when the project started in late 2014. Two global market practices are jeopardizing the future supply of coffee: 1) Coffee is traded in the commodity futures market by speculators who have no stake in ensuring the long-term sustainability of coffee production. In August 2018, the price dropped below \$1.00/lb - well below the cost of production. Even buyers within the sector that have a stake in the future of coffee demand prices that do not reflect the cost of production. 2) Prices paid for coffee as it moves up the farm-to-cup value chain are not transparent. Farmers receive a very small share of the market value of their coffee beans.

These challenges are not unique to coffee; they are common to agricultural commodities. If farmers shift to other crops or other factors reduce the global coffee supply, such as climate change and coffee leaf rust, prices will rise. However, the alternative scenario that has emerged is that coffee producers are engaging in a race to the bottom, characterized by consolidation and larger scale, lower-cost production. Although over 70 countries produce coffee, the vast majority is produced in Brazil, Columbia, Vietnam, Indonesia, Colombia, and Honduras.

Under the right conditions, high-value "specialty coffee" offers a viable alternative for increasing smallholder incomes. With funding from USAID in 2014, Winrock International and CQI partnered to implement the VCRD project and explore the feasibility of helping smallholder coffee producers shift to high-value specialty coffee production in Myanmar. At that time, Myanmar was not known within the coffee industry as a coffee-producing country.

Fast forward to January 2019. Myanmar specialty coffee farmers are producing among the finest coffee in the world. The project team sat down with Blue Bottle Coffee's green coffee buyer, Charlie Harbegger, to reflect on how far Myanmar coffee farmers have come and the state of the global specialty coffee market. Blue Bottle was among the first specialty coffee buyers to source from Myanmar. Charlie prefaced his observations by defining specialty coffee and describing the coffee quality pyramid.

Specialty coffee doesn't signify "the best coffee in the world". That's the top end of specialty coffee. Specialty coffee is any coffee whose price is determined by its quality. The marketplace for specialty coffee is one where the price depends on the flavor qualities of the cup -- compared to commercial or commodity coffee where there is no difference whatsoever between a coffee from Brazil, Ecuador, or Vietnam – it just doesn't matter to the people who are buying the coffee.

Figure 1: The Coffee Quality Pyramid



Quality in anything is shaped like a pyramid (refer to Figure 1). The better the quality, the less that is available. Scarcity and quality drive value. Approximately 20 percent of global coffee production qualifies as "specialty coffee", and only about 1-2 percent has a rare combination of high quality with distinct, harmonious flavor notes.

There's a lot of work in the world to get coffee from the bottom into the middle. That's usually the biggest change that people can hope for. What has happened in Ywangan Township is historic because its coffee went from the bottom all the way to top – in one harvest. It was like no coffee...amazing coffee. That's not something that happens normally. Education was put into the farm level. And the processing style was

designed in a way that fits perfectly with the lifestyle of the farmers, the climate, other crop cycles – there was a very harmonious solution for coffee and suddenly it was designed into this thing that was unique in the market. No other coffee in the world from any other country tastes like the coffee from Ywangan Township. I can compare it to Ethiopia because it helps customers or coffee tasters understand what flavors they're getting, but it does taste completely different.

The specialty coffee world is paying attention to Ywangan coffee. Ywangan coffee went from being obscure to being on the top shelf -- in our company and many other companies as well -- next to Ethiopian, Kenyan and Costa Rican coffees. Blue Bottle curates coffee for people and we shape their impressions by the way that we sell coffee. If we put Myanmar coffee on the shelf next to a very famous coffee producing country, then our customers trust the quality is equal.

Talking to people this week, the question from farmers was "What's your advice? What can we do to be better?" And frankly I think that the harvesting and processing technique is as close to perfect as I have ever seen. My advice is, find more farmers. Produce more coffee. Put more volume into the market, because there are roasters waiting behind me to buy the coffee. – Charlie Harbegger, formerly of Blue Bottle Coffee, a California-based roaster, 1/18/2019.

THE SPECIALTY COFFEE VALUE CHAIN

The makers who help craft a better cup of coffee

Specialty coffee can be compared to fine wine. The people who make it are passionate about their craft. The people who drink it appreciate the unique flavor notes and connection to place imparted by its terroir. And they respect the skill and care that goes into creating a great cup of coffee. Passionate, informed consumers who pay more for higher quality ultimately determine its value. Their willingness to pay is shaped by people engaged in creating coffee culture. On the front lines are the roasters and baristas who educate customers about unique origins, flavor notes, roasting profiles, and brewing techniques. In addition, important intangible factors enhance people's appreciation. Specialty coffee taps into people's desire for ritual, alchemy, story, and unique experiences.

The process of creating specialty coffee is like a relay. As the coffee moves from the farm to the cup, it passes through many hands. If anyone misses their mark, the baton has been dropped. It begins with relatively rare growing conditions - planting Arabica coffee trees in fertile soils above 1,100 meters. If the cherries are picked when ripe and the terroir imparts desirable flavor notes, the farmer has a better cherry (refer to Figure 2). If the cherries are properly sorted and processed, the processor has a better green bean. If the roasting profile compliments its unique flavor notes, the roaster has a better roasted bean. And if the barista brews it skillfully, the customer enjoys a better cup of coffee. Better still, a story about its origin and the farmers who cultivated it enhance the customer's experience.

SPECIALTY COFFEE ASSOCIATION COFFEE QUALITY INSTITUTE (CQI) (SCA) AND OTHER ASSOC. **ENVIRONMENT ENABLING** Trains and certifies: Global standards, Q Graders. coffee culture. Input Q Processers, knowledge sharing, **Processors** Q Coffee price transparency, Suppliers, **Exporters** transacton quide Trainers, Banks COFFEE BEAN JOURNEY **Producer Farmer FARM TO CUP** Green Consumers QC **Cafes** Bean Buyer ssociations Groups Enlightened, passionate, Roasters and Other and and and Retail **Estates** Companies **Importers** Planting, pruning, Q-grading, Marketing, Aggregation, Brewina. Pay more, marketing, price premiums, branding, composting, coffee culture, appreciate the hand-picked ripe relationships consumer education dry naturals stories craft and makers A Better A Better A Better A Better A Better Cup of Tree and **Roasted** Green Coffee and Cherry Soils Bean Bean Story Shan terroir Ripe, Cupping score >80, Complementary Delicious, flavor notes desirable flavor notes roasting profile sorted unique A More Sustainable, Inclusive Value Chain More trees, farmers, and communities Increased incomes, especially for smallholder coffee farmers

Figure 2: Drivers of supply and demand for Myanmar specialty coffee

producing high-value specialty coffee

Coffee quality standards and specialists are guiding everyone along the path. The SCA was instrumental in establishing global standards for specialty coffee, by setting a new bar for coffee quality based on a scoring method that buyers trust (known as "Q grading"). In parallel, CQI trains specialists on the skills needed to ensure quality at each step in the farm-to-cup journey. If a significant share of the value created is paid to farmers - sufficient to earn robust incomes - farmers will sustain and expand production. It requires enlightened consumers and green bean buyers who respect farmers, care about the future of coffee, and are willing to compensate farmers accordingly. Project level and global strategies for promoting a sustainable, inclusive value chain are described in later sections.

Non-market value

Beyond the value recognized by market prices, specialty coffee has several positive externalities that enhance the resilience of communities, households, ecosystems, and farming systems. Refer to Box 1.

In addition, the harvest period coincides with a period in the agricultural calendar that has few other economic opportunities. Drying tables occupy otherwise fallow fields and sorting and grading creates seasonal jobs for people who previously migrated for work.

Extensive economic linkages

Specialty coffee production creates economic opportunities for multiple market actors within Myanmar. 2017-2018 season data from the 19 Ywangan project-supported communities show that of the average FOB price of \$3.59/lb, farmers earned \$1.23 by selling cherries (34 percent of FOB) plus \$1.39 profit from value-added processing (39 percent of FOB), some of which they elected to invest in their local communities. In addition, \$0.55 (15 percent) was paid to local laborers (drying and sorting), local input suppliers and manufacturers (storage bags), and local service providers (warehouses, transport, dry milling, and export logistics); and \$0.25 (7 percent) was paid to local banks for interest. Less than 5 percent was spent on imported inputs, such as GrainPro bags, chicken wire, and buckets. This model contrasts sharply with the dominant model promoted in other countries, in which the profits from value added processing accrue to foreign corporations who pay farmers rock-bottom prices for their cherries.

Community-based specialty coffee is also creating opportunities for businesses in other sectors. For example, the Lonely Planet travel website features 1-day coffee tours from Nyaung Shwe at Inle Lake to Ywangan for \$109/person.

The specialty coffee belt in Myanmar

The following map shows the locations of selected market actors featured in this report: 1) the three specialty coffee processors who received VCRD Innovative Grants to establish new wet and dry mills -Mandalay Coffee Group (MCG), Amayar Company, and Lilypad Company (Behind the Leaf); 2) the two community-based producer associations engaged in specialty dry naturals - Shwe Taung Thu and Indigo Mountain: and 3) the associations' member communities.

BOX 1. SPECIALTY COFFEE'S CONTRIBUTIONS TO RESILIENCE

Provides an alternative livelihood to:

- Opium poppies
- Mining jobs
- Migration, a human trafficking risk
- Crops that rely on child labor, e.g. tea
- Tobacco

Agro-ecological systems and climate

- Carbon sequestration
- Bird habitat
- Allows intercropping and fits well with other crop cycles
- Raises awareness of the potential for higher quality and prices for other crops

Smallholder and women's empowerment

- Key buyers seek direct relationships with communities and promote price transparency
- Largely cultivated, harvested, and sorted by women.
- Specialty dry naturals are a high-value market niche that is largely delinked from the commodity price

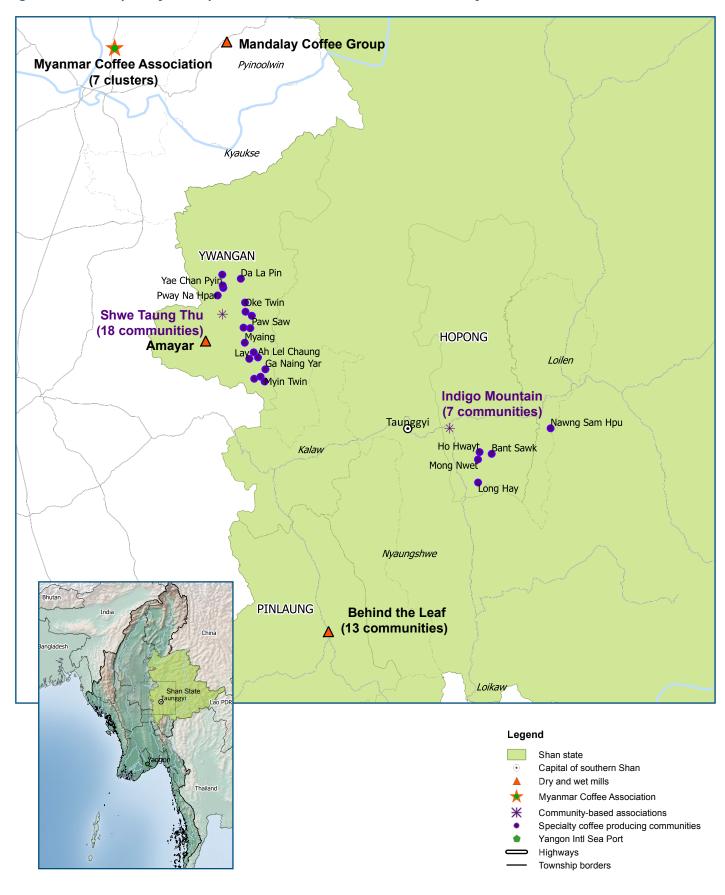
Appropriate technology

- Dry naturals are produced using simple, labor-intensive practices and technologies that avoid complex operations and maintenance requirements (therefore are more resilient) and maximize employment
- The dry naturals process does not produce wastewater nor require significant water resources: it is well suited to the dry season, which coincides with the coffee harvest period

Economic collaboration

• MCA coffee clusters, training courses, farmer-to-farmer visits, and Facebook posts bring people together from diverse socio-economic and ethnic backgrounds to collaborate on economic activities and share information

Figure 3: Selected specialty coffee processors, associations, and communities in Myanmar (2019)

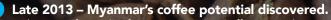


This map will be expanded following the 2018-19 harvest season to more fully capture market actors, identify areas where conditions are suitable for specialty coffee production in Myanmar, and assess Myanmar's production potential.

THE ROAD TO EXPORTING MYANMAR SPECIALTY COFFEE (2013-2019)



DISCOVERY PHASE



Rick Peyser, formerly of Green Mountain Coffee, visited Myanmar as a USAID Farmer-to-Farmer (F2F) volunteer. Roast, a specialty coffee trade magazine and website, subsequently published an article by Peyser that informed readers that Myanmar is a potential "new origin". Potential buyers outside of Myanmar started to take notice.

March 2015 - First visit from Coffee Quality Institute (CQI) consultants.

May 2015 - First cupping competition in Myanmar conducted to assess coffee quality across the coffee growing belt and raise awareness of potential.



FIRST SEASON - PILOT

November-December 2015 - A stretch target, a "just do it" attitude, and an elegant process design for "dry natural" coffee.

Target: export one container in 2016. Industry experts cautioned that it couldn't be done. Four communities decide to try. At this time, cherries sold for 0.65 USD/lb (green bean equivalent weight, GBE) and green beans sold for 1.1 USD/lb in local markets.

February 2016 - First "New Origin" tour for foreign buyers resulted in the first export order for a producer community and established a price transparency precedent.

Atlas Coffee Importers pays 3.30 USD/lb.

March 2016 – Second cupping competition showed dramatic improvement in coffee quality. Of 60 coffee samples submitted by individuals and communities, 49 scored in the "very good specialty" range (compared to 21 the baseline year).

April 2016 - Myanmar coffee caused a stir at the annual Specialty Coffee Expo in Atlanta.

May 2016 - The first specialty coffee export of 36 MT heads to Seattle and points beyond, filling two containers - double the target.



SECOND SEASON - SCALING UP

September-November 2016 - First 5 CQI-certified **Q** Arabica Graders in Myanmar.

December 2016-March 2017 - Specialty coffee production started to scale up.

Based on the success of the pilot, 40 communities in Ywangan expressed interest in producing specialty coffee. Sixteen are selected to maintain quality control, bringing the total to 20 communities.

January 2017 - Farmer-initiated replication of the Ywangan pilot in a conflict-affected area.

Inspired by Facebook posts about the Ywangan communities' successful pilot, five farmers from two communities in Hopong (Ban Sauk and Long Hay) visited the Mya Ze Di farmers' group to learn how to produce specialty dry naturals.

Early 2017 – First non-collateralized SME loan by a Myanmar bank, Yoma, in the agriculture sector (\$143,210).

March 2017 - Third cupping competition showed dramatic increase in "excellent specialty" scores.

Of 72 samples, 38 were "very good specialty" and 26 were "excellent specialty" - up from 6 excellent specialty the prior year.

April 2017 – Myanmar Coffee Association (MCA) has a booth at the annual Specialty Coffee Expo in Seattle.

May 2017 - First quality dry mill commissioned, operated by Mandalay Coffee Group (MCG) in **Pyin Oo Lwin**





THIRD SEASON - ORGANIZATIONS MATURE

January and March 2018 – Processing capacity expanded.

Processors pay farmers 1.00-1.20 USD/lb for quality cherries (GBE), 54-85% higher than the local 2015 price.

- March 2018 This Side Up European buyer posted cost structure and prices online to show coffee consumers how much of the price they pay goes to farmers: \$3.40/lb.
- March 2018 MCA succeeded in organizing the annual cupping competition award ceremony.
- May 2018 The first registered community-based specialty coffee producers association.

18 communities in Ywangan formed an association, Shwe Taung Thu, to promote transparency and provide quality control and marketing services on a sustainable basis. In October, farmers in Hopong registered Indigo Mountain on their own initiative, motivated by a similar desire for autonomy and self-empowerment. They own their coffee to the point of export and sell specialty dry naturals for FOB 3.30 to 4.30 USD/lb.



The biggest difference that I see is much more ownership on the part of the farmers.

They can speak directly to the coffee buyers.

They have a lot more confidence. Now there's a model for high prices and better quality that they can continue. They know how to scale – it's more drying tables, more coffee – but the same standard.

– Charlie Harbegger, Blue Bottle



FOURTH SEASON - PROJECT HAND-OVER

August 2018 – 3rd wave of CQI-certified Q Arabica Graders in Myanmar.

The total number of Q Arabica Graders in Myanmar rises to 18.

- December 2018 International Women's Coffee Alliance (IWCA) Myanmar Chapter registered.
- December 2018 January 2019 MCA organized the first CQI Q Processing training courses in Myanmar.

Twenty participants earned a Level 1 (generalist) certificate and 30 participants earned a Level 2 (professional) certificate.

- December 2018 A major international coffee roaster partnered with Indigo Mountain to promote "revival coffee" from a conflict-affected area and financed Hopong region's first coffee quality control laboratory.
- January-February 2019 Buyers' observations on farmers and processors progress since 2016 (refer to quotes below)



When I first got here 3 years ago, I needed to say a lot of things, whereas this time I'm watching fellow professionals.

The processors have a legitimate opinion and know what they're doing.

 Joel Shuler, Austin based coffee roaster and CQI-certified Q Processing trainer

SPECIALTY COFFEE ACTIVITIES AND MILESTONES (2013-2019)

This section summarizes key activities and milestones on Myanmar's journey to specialty coffee. Refer to Figure 4 for milestone highlights.

Discovery phase

Late 2013 - Myanmar's coffee potential discovered.

Rick Peyser, formerly of Green Mountain Coffee, visited Myanmar as a USAID Farmer-to-Farmer (F2F) volunteer, at the request of the Myanmar Fruit, Flower, and Vegetable Producers and Exporters Association (MFVP). At this time, all coffee producers and processors acted independently. The association gathered several stakeholders together to form a group in preparation for Rick's trip. Participants met their first specialty coffee buyer. Peyser "cupped" several coffee samples and was impressed by the complex character and flavor notes. He encouraged coffee farmers to organize themselves to adopt quality control standards as a pre-condition for attracting specialty coffee buyers. Roast, a specialty coffee trade magazine and website, subsequently published an article by Peyser that informed readers that Myanmar is a potential "new origin". Potential buyers outside of Myanmar started to take notice.

2014 - Producers identified the need to organize themselves.

In response to this encounter, the participants started exchanging information and meeting to discuss concerns about low coffee prices and other issues. They identified the need for centralized processing facilities that could provide services for multiple producers. From July to December, several estate owners in Mandalay formed the Mandalay Coffee Group (MCG) and Myanmar Coffee Association (MCA).

MCA also requested an F2F volunteer. Al Liu of Seattle-based Atlas Coffee Importers conducted marketing trainings in Pyin Oo Lwin and Ywangan. He shared stories of smallholder farmers in other countries who have produced specialty coffee. In addition, he hosted a half-day cupping event in which he compared five Myanmar coffee samples with coffee from Ethiopia, Congo, India, Indonesia, Brazil, and Nicaragua. He encouraged farmers with the following feedback:

> This is a very interesting coffee. It has very good aroma. The fruit is very soft and elegant. It has good body. This is a surprise – I was not expecting to taste something like this. This is a huge opportunity for you. People don't know about you and will be very surprised to see what you are doing here. If you focus first on promoting quality practices at all levels, you can then create a brand and image that people will remember.

BOX 2. SPECIALTY COFFEE FIRMS AND PROCESSING METHODS

Coffee quality and flavor is influenced by the interplay of growing conditions and processing techniques. The project supports the following types of firms and processing methods in Myanmar:

Private processors

Washed. The cherry surrounding the bean is removed in a pulping machine and the bean is fermented in water for between a few hours to a couple of days. The beans are rinsed and dried outdoors on a raised bed or in a dryer. This process produces fine, elegant, bright notes.

Honey. The cherry is removed and the beans are spread out to dry without washing for 10-15 days, leaving some of the sticky fruit pulp (honey) on the bean. The attributes of both washed and dry naturals are expressed, and the crafter can emphasize one or the other by playing with the amount of pulp left on the bean.

Private processors also produce dry naturals, described below.

Community-based processors

Dry naturals (sun-dried). The cherry is sun-dried on a table for 25-35 days, then hulled. The fruit's sugars and flavors are concentrated in the bean, imparting greater body, less acidity, and fruited notes. Dry naturals are tricky because the fruit can ferment or spoil, resulting in coffee that tastes sour or yeasty. When well crafted, dry naturals show off a region's unique terroir.

March 2015 - First visit from Coffee Quality Institute (CQI) consultants.

In late 2014, Winrock International signed a cooperative agreement with USAID to implement the Value Chains for Rural Development project (VCRD). CQI, a sub-awardee, fielded Ted Lingle and Mario Fernandez to meet with local coffee stakeholders and identify potential project interventions. In addition, the consultants conducted initial "Know Your Cup" trainings for Myanmar producers, processors, roasters, and baristas.

May 2015 - First cupping competition in Myanmar.

The project collaborated with MCA to host a nationwide cupping competition to identify the country's best coffees and expose more coffee stakeholders to cupping and quality standards. Fifty-eight farmers submitted samples. Judges announced that 21 coffee samples (36 percent) scored in the "very good specialty" range – between 80 and 84.99 on a scale of 100. The owner of Atlas Coffee a judge and U.S.-based green bean importer - expressed interest in returning the following year to purchase coffee, provided that farmers improved the quality. Though not a random sample, the cupping scores provide evidence of coffee quality prior to project interventions.

June-August 2015 – Initial training.

The project rolled out agronomic training for farmers to improve on farm practices, using local trainers and CQI materials adapted for local conditions. Post-training, the project debriefed with farmers and learned that they were reluctant to prune because they held cultural beliefs against cutting coffee trees their parents or ancestors had planted, and they didn't trust they would achieve higher yields. In addition, farmers expressed reluctance to invest in inputs or labor-intensive practices unless coffee prices improved.

October 2015 – Initial MCA workshop.

The project facilitated a capacity building workshop for MCA. Participants identified a vision statement - to create pathways to prosperity for the Myanmar coffee industry - and reached agreement on a three-year operational budget and communications plan.

October 2015 - Drying table design.

In response to interest in improving processing, a CQI consultant conducted training on how to build drying tables, a component of all coffee processing methods (refer to box 2). The initial woven bamboo design was beautiful, but costly. The project team revisited design instructions to focus on functional requirements rather than "how to build". Farmers innovated during trainings and identified

BOX 3. Q COURSES BUILD BRIDGES

The Q courses brought together a diverse set of producers, processors, roasters, traders, and baristas. People from diverse socio-economic and ethnic backgrounds formed teams to learn how to cup and process coffee, interacting with people that they would otherwise never have an opportunity to work alongside. Participants reported that they made lasting connections, bonding during the long hours and rigorous training exercises. Although team building is not a stated objective of the courses, they proved to be highly effective at building bridges across traditional divides.

More so than other crops, people's shared passion for crafting specialty coffee fosters mutual respect and collaboration.

lower-cost designs made with less bamboo, non-oxidizing chicken wire, and horticultural shade cloth.

First season – pilot

November-December 2015 – A stretch target, a "just do it" attitude, and an elegant process design.

Marcelo Pereira, a CQI consultant with expertise producing dry naturals in Yemen and other countries, pitched the idea of promoting community-based, high-value, specialty dry naturals because it doesn't require high-tech processing equipment or water. The project set a target of exporting one container in 2016. Industry experts cautioned that it couldn't be done. The team wanted to try. At a minimum, they would learn along the way and be better positioned for the following harvest. Most importantly, they found an unusual community with a history of working together who also wanted to try - Mya Ze Di. About a decade before, a local Buddhist monk had encouraged the community to plant coffee trees to raise funds for a road. These conditions set the stage for community-level aggregation, which is essential for drying and sorting. MCG stepped forward and offered Mya Ze Di a \$10,000 loan (10 million MKK) for working capital. The community accepted the risk and started constructing their drying tables. In January 2016, three more neighboring communities stepped up, funded by Ban Chuan, a local coffee trader. A few farmers from other communities decided to try on their own. The project contracted local agronomy trainers to provide training and quality control monitoring to the pilot communities in Ywangan, using CQI training materials on dry naturals production, adapted for local conditions.



February 2016 - First "new origin" tour for foreign buyers established a price transparency precedent.

U.S.-based Atlas Coffee Importers, Allegro Coffee (supplier for Whole Foods Markets), and Roast magazine visited smallholder communities and MCG to cup their coffee and assess quality control systems, accompanied by a CQI consultant. Craig Holt, the owner of Atlas, placed an order for specialty coffee from MCG and nine communities in Ywangan and Pinlaung, including the four pilot communities. Most importantly, he was committed to price transparency, assessed their cost structures, and paid \$3.30/lb - a price three times higher than local market rates (\$1/lb) and more than double the global commercial grade price (\$1.50/lb). Prior to this, producers had no idea of the value of their coffee and generally accepted the prices traders offered. In addition, Craig expressed his interest in cultivating a longterm relationship with local specialty coffee producers.

March 2016 – Second cupping competition showed dramatic improvement in coffee quality.

Of 60 coffee samples submitted by individuals and communities, 49 scored in the "very good specialty" range (compared to 21 the baseline year). Six samples scored in the "excellent specialty" range for the first time. The firstplace winner, Green Land Estate, scored 87.08.

April 2016 – Myanmar coffee caused a stir.

At the annual Specialty Coffee Expo in Atlanta – the world's largest specialty coffee trade event - CQI hosted a high-profile cupping of Myanmar coffee. Curious importers, roasters, and baristas packed the room, making it standing

room only. Myanmar origin coffee became the new "one to watch" in the specialty coffee trade. That same month, Atlas Coffee Importers created a Myanmar page on their website, featuring origin notes for the Ywangan communities.

May 2016 – The first specialty coffee export.

Craig Holt returned to Myanmar to oversee the first export shipment of 36 MT, comprised of 26 MT from MCG estate members and 10 MT from communities. This filled two containers - double the project's stretch target. The coffee required drying in preparation for export and MCG's planned dry mill was not yet operational, so it was necessary to use the dry mill at the Department of Agriculture (DoA). Missing components created logistical and quality control challenges, but expert trouble-shooting overcame these. The shipment arrived in Seattle and New Jersey in July, in excellent condition.

August 2016 – La Colombe Coffee introduced Myanmar specialty coffee to their customers.

The Washington, DC based roaster hosted an event and Winrock International posted a professional video on You-Tube entitled "Myanmar Coffee Enters the Global Coffee Market," creating further buzz.

September-November 2016 - First 5 CQIcertified Q Arabica Graders in Myanmar.

A CQI instructor taught four, 3-day Pre-Q Arabica courses in Pyin Oo Lwin, Ywangan, and Yangon – followed by three 6-day Q Arabica Grading courses. CQI courses are extremely rigorous. Of 48 people trained in the Pre-Q courses, 18 passed and progressed to the Q Grading course. Of these, 5 passed and earned a Q Arabica Grader certificate. This established the initial cadre of experts in

Myanmar able to provide cupping services and "speak the language of the global coffee industry".

Second season - scaling up

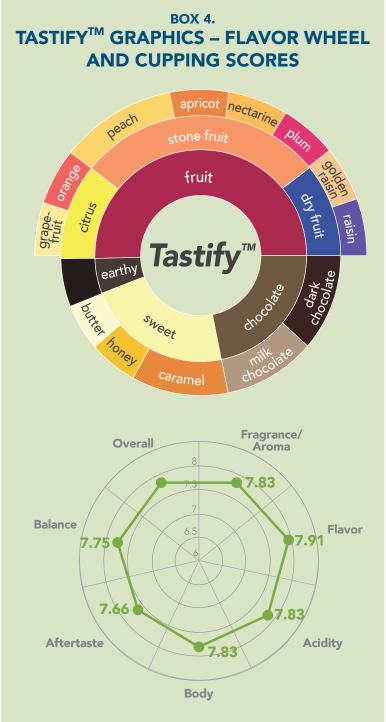
December 2016-March 2017 - Specialty coffee production started to scale up.

Based on the success of the pilot, 40 communities in Ywangan expressed interest in producing specialty coffee. To ensure a manageable rate of growth, which was essential for maintaining quality control, the project team and Danu, a local service provider, worked with the four pilot communities to identify selection criteria for new communities. Criteria included: the community must establish a single Working Group with individuals willing to perform quality control, have enough flat sunny area for drying tables, and be able to produce at least one metric ton. Sixteen additional communities were selected, bringing the number of Ywangan communities to 20. In parallel, Amayar and Lilypad started sourcing cherries to produce specialty dry naturals from six and nine communities, respectively.

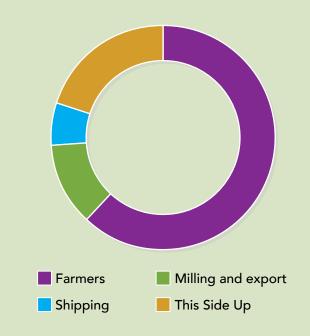
January 2017 - Farmer-initiated replication of the Ywangan pilot in a conflict-affected area.

Inspired by Facebook posts about the Ywangan communities' successful pilot, five farmers from two communities in Hopong (Ban Sauk and Long Hay) visited the Mya Ze Di farmers' working group to learn how to produce specialty dry naturals. Within two days of returning home, the Hopong farmers built two drying stations at their own expense and started to organize other farmers in their community to supply cherries on credit. They produced 180 kg of green beans, which cupped a strong 84. The project helped link them to a Dutch coffee importer, This Side Up, who bought the coffee at \$3.4/lb. This Side Up is a global leader in coffee price transparency and smallholder empowerment. In their own words, "we use our position to help coffee

farmers be in charge of their own fates." Early 2017 - First non-collateralized SME loan by a Myanmar bank in the agriculture sector (\$143,210). The project brokered a non-collateralized loan between Yoma Bank and MCG, made possible by a loan guarantee from Netherlands-based Rabobank Foundation for 100 percent of the value of the loan. In turn, MCG agreed to on-lend to the Ywangan communities and Amayar Women's Coffee Producer Group. The loan disbursement was delayed by five months, beyond the period of critical need, pending approval by the government bodies responsible for approving investment proposals - the Myanmar Investment Commission and its secretary the Directorate of Investment and Company Administration. Several MCA members - local estate owners, processors, and roasters - stepped up to advance working capital in time for the harvest season. Despite the challenges, the Yoma loan set a significant precedent for access to finance in the agriculture sector.



BOX 5. THIS SIDE UP COST BREAKDOWN FOR HOPONG ORIGIN COFFEE



€10.62

the price you pay for this coffee p/kg. We paid Mandalay Coffee Group USD 4 p/lb FOB Yangon for the Long Hay Village lot.

€3,23 + €3,24

the price Mandalay Coffee Group pays Hopong farmers for their dried cherries as p/kg price of green (milled) coffee. The extra €3,24 is a premium we paid the Hopong community members to reward the quality they produce and to support them for the next harvest.

€0,46 + €0,15 + €0,38 + €0,46

Mandalay Coffee Group costs incurred: milling and packaging + local logistics + export logistics + local taxes respectively.

€0.56

international shipping + clearance costs in Rotterdam, Netherlands.

€2,14

This Side Up compensation for spending time and resources importing this coffee. Our work includes building relationships with shipping and warehousing partners, managing export, import and shipping bureaucracy, Q grading, sampling and jointly promoting this coffee with MCG and the Hopong farmers themselves.

March 2017 - Third cupping competition showed dramatic increase in "excellent specialty" scores.

Of 72 samples, 38 were "very good specialty" and 26 were "excellent specialty" - up from 6 excellent specialty the prior year. In addition, 4 samples scored above 87, up from 1 the prior year. Arrow Brothers of Mogok, a family-owned farm, placed first in the washed category with a score of 87.16, and MCG, a processor, placed first in the dry naturals category with a score of 89.58. Communities won three of the top five places in both categories.

The project worked with MCA to make several competition design improvements. Categories were established for specialty and non-specialty. For the first time, participants were required to have produced at least 200 kg of coffee, and to pay MCA an entry fee (10,000 MMK). In return, they received a Tastify[™] card – a visual representation of their coffee's unique flavor notes (refer to box 4). Representatives of Shwe Danu and MCA were enlisted to implement a two-step coding process that ensured "blind" judging.

April 2017 - MCA has a booth at the annual Specialty Coffee Expo in Seattle.

In addition, the first specialty coffee profiles booklet was published for green bean buyers, featuring 21 community-based producer groups in Ywangan Township. It described each community, listed the elevation, and presented their Tastify TM assessment. Also this season, two tours were facilitated for buyers from the Middle East, Europe, Japan, South Korea, Australia, and Turkey.

May 2017 - First quality dry mill commissioned.

MCG started to operate Myanmar's first dry mill suitable for specialty coffee processing, based in Pyin Oo Lwin. Joel Shuler, a CQI-certified consultant, trained MCG on dry milling and washing. Winrock found that using this state of the art dry mill increased the mass of green bean qualifying as specialty grade by 10%. The equipment was funded by an Innovative Grant awarded under the project.

August-November 2017 - 2nd wave of CQIcertified Q Arabica Graders in Myanmar.

Forty-eight people received Pre-Q Arabica training. Of these, 20 passed and progressed to the Q Arabica Grading course. Of these, 6 passed, bringing the total number of Q Arabica Graders in Myanmar to 11.

Third season - organizations mature

January and March 2018 - Processing capacity expanded.

Amayar Company in Ywangan and Lilypad Company in Pinlaung commissioned dry and wet mills funded by Innovative Grants awarded under the project. Refer to Table 5 in the following section for a description of milling capaci-

January 2018 – Second loan by Yoma Bank (\$645,000).

The project brokered a second loan between Yoma Bank and MCG, guaranteed by Rabobank at 80 percent of the value of the loan (down from 100 percent the first year), with 20 percent of the loan backed by MCG collateral. Yoma disbursed the loan one month later than planned. MCG again advanced its own funds to cover January working capital needs, then on-lent the Yoma loan to Ywangan communities and Amayar Women's Coffee Producer Group.

March 2018 – This Side Up posted Hopong's cost structure and prices online.

This Side Up purchased 2.4 MT of specialty dry naturals from Hopong communities – 10 bags from Ban Sauk at \$4.30 USD/lb and 30 bags from Long Hay at \$4.00 USD/lb. They calculated the cost structure and prices paid to farmers and others in the value chain, and posted it on their website (refer to Box 5). The efforts of several specialty coffee buyers to help Myanmar farmers and others understand coffee cost structures has had a significant impact on farmer's ability to negotiate better prices.

March 2018 - MCA succeeds in organizing the annual cupping competition award ceremony.

The project stepped back from its organizing role and instead provided MCA with a detailed "how to" guide and coaching. Local coffee companies, including Sithar and Genius, helped sponsor the event.

April 2018 – Smallholder communities tell their story.

In the wake of the Rohingya humanitarian crisis in Rakhine state, first reported in September 2017, the Ywangan communities drafted a letter to tell their story so that buyers and consumers considering boycotting Myanmar coffee (as part of a broader boycott) could understand the negative impact on smallholder livelihoods. They described their community-based, smallholder production model, including cost structures and distribution of profits. Although Myanmar specialty coffee producers and processors attended the April 2018 Specialty Coffee Expo in Seattle, they decided to not have a booth.

May 2018 - Atlas Coffee Importers posted "A Lesson in Micro-Lots from Myanmar".

Atlas re-designed the way it sells single origin coffee from Myanmar. In the past, they received dozens of pre-shipment samples from various communities and estates, shared these samples with their customers (roasters), and placed orders only once a roaster signaled interest. Monitoring interest and quantities available and coordinating container shipments was complicated. In 2018, they streamlined this process by confirming the lots they want from origin communities before sharing samples, so that roasters can be confident that a sample they fall in love with is, in fact, available. Availability is important to single origin coffee buyers who invest time in curating unique coffees. Once an origin sells out, there is no substitute.

May 2018 - The first registered communitybased specialty coffee producers association.

In response to efforts by some local processors to undermine and discourage the Ywangan farmers by spreading false information – and recognizing that project support would end in late 2019 - 18 communities formed Shwe Taung Thu, an association to promote transparency and provide quality control and marketing services on a sustainable basis. In October, farmers in Hopong registered Indigo Mountain on their own initiative, motivated by a similar desire for autonomy and self-empowerment. The Shwe Taung Thu communities have been the largest producer of dry naturals in Myanmar since the pilot season. Several of the association's leaders were previously employed by Shwe Danu.

August 2018 – 3rd wave of CQI-certified Q Arabica Graders in Myanmar.

Sixteen participants who passed prior Pre-Q Arabica training but not the Q Arabica Grading course were given an opportunity to re-take it. Of these, 7 passed, bringing the total number of Q Arabica Graders in Myanmar to 18. As noted earlier, the Q courses are extremely rigorous. Instructors promote a constructive learning environment so that even participants who do not pass still benefit from increased knowledge and are encouraged to try again.

November 2018 – MCA hosted price risk management training.

Sara Morrocchi, a CQI consultant, trained 27 people from Shwe Taung Thu, Indigo Mountain, and Amayar on price risk management. Topics included financial management and indicators, types of sales contracts, local and global prices, and price fixing strategies.



December 2018 – International Women's Coffee Alliance (IWCA) Myanmar Chapter.

In consultation with IWCA's Asia Pacific Coordinator, several women in the coffee sector came together in August to establish an IWCA Chapter in Myanmar. Elections were held in September and the chapter was registered in December as a business association.

Fourth season – project hand-over

December 2018 – January 2019 – MCA organized the first 30 CQI-certified professional Q processors in Myanmar.

CQI instructor, Joel Shuler, taught a 3-day Q Processing Level 1 – Generalist course in Yangon. Twenty of 24 participants earned a Level 1 certificate. He subsequently taught two 6-day Q Processing Level 2 - Professional courses in Pyin Oo Lwin and Ywangan, assisted by Luz Stella Artajo Medina. Thirty of 43 participants earned a Level 2 certificate. In early March 2019, MCA leaders conducted a debrief to reflect on potential logistical improvements for the next round of technical training.

December 2018 – Major international coffee roaster partnered with Indigo Mountain to promote "revival coffee" and financed Hopong region's first coffee quality control laboratory.

One of the world's largest specialty coffee companies identified Indigo Mountain in Hopong as a potential participant in their "revival coffee" program, which sources high-value

specialty coffee from communities in conflict-affected areas. As a pilot, this large roaster provided a \$53,868 grant to capitalize Indigo Mountain, establish a quality control laboratory and a revolving fund for working capital. If the 2018-2019 season's coffee quality and flavor profiles meet their requirements, this roaster could commit to a 5-year partnership with Indigo Mountain involving providing technical assistance and buying large quantities of green bean. MCA and project partners will provide coaching as needed to successfully manage the revolving fund and lab.

January 2019 – MCA evolves.

MCA started to initiate value chain development activities without project support. For example, they now have 10 coffee clusters that provide a mechanism for member engagement and consultation on production, processing, and marketing issues for both commercial and specialty grade coffee. In addition, MCA recently reviewed and discussed its bylaws to resolve issues about membership categories and fees, define coffee clusters, and draft a code of conduct. It also created a communications plan and priority plan for 2019. In March they will hold their annual general assembly to elect a **new board**.

February 2019 – First SME loan to a community-based producer association (approximately \$230,000).

Building on the precedent set by the Yoma Bank loans through MCG, the project brokered a loan between Ayeyawaddy Farmers Development Bank ("A bank") and Shwe Taung Thu Association for 350 million MMK and another with Amayar for 153 million MMK, guaranteed by Rabobank Foundation at 80 percent of the value of the loan.

This was an important milestone for A bank. The project's prior attempts to broker a loan deal with A bank had been unsuccessful due to lack of confidence on the part of bank employees responsible for making lending decisions – a consequence of lack of experience with agriculture lending and a loan application form that did not fully capture information required to assess credit worthiness. As a result of their experience working with Rabobank, A bank has adapted Rabobank's loan guarantee application for their own use, paving the way for more robust future lending in agriculture and other sectors. The project's success expanding access to finance for processors and community-based producer associations is undoubtedly its most significant contribution to market systems development.

January-February 2019 - Buyer observations on progress since 2016.

The biggest difference that I see is much more ownership on the part of the farmers. They can speak directly to the coffee buyers. They have a lot more confidence. Now there's a model for high prices and better quality that they can continue. They know how to scale – it's more drying tables, more coffee -- but the same standard. – Charlie Harbegger, Blue Bottle

Joel Shuler – an Austin based coffee roaster and CQI-certified Q Processing trainer who has trained and advised Myanmar specialty coffee processors on several occasions – shared the following observations:

When I first got here 3 years ago, I needed to say a lot of things, whereas this time I'm watching fellow professionals. The processors have a legitimate opinion and know what they're doing. For example, Su Su of Amayar knows what maturation levels are best for her washed coffee, her honey coffee, and her naturals. She knows the drying times. She knows the potential customers for each lot...Cupping with Melanie of Behind the Leaf, she knows her coffee and treatments very well. She's at a point now that if someone comes in and tells her that her coffee is an 82 and it's an 86, she's confident enough that she's not going to doubt it and sell it at a price appropriate for an 82. That's really important.



EVIDENCE OF VALUE CHAIN DEVELOPMENT

This section summarizes evidence of value chain development, using market data and information.

Before and after project comparisons

The following table compares the state of coffee production in Myanmar before the project with conditions in early 2019.

Table 1. Specialty coffee value chain development outcomes

Table 11 Specialty	able 1. Specialty coffee value chain development outcomes					
Market Features	Baseline Year (2014)	Project Years (2015-early 2019)				
Access to inputs and extension services	 Smallholders did not invest in quality fertilizer or other inputs Public and private sector capacities to deliver extension services were extremely limited 	 Shift from project-delivered training to embedded services. Since 2015, the project has facilitated specialty coffee training, extension, and quality control for farmer groups – reaching over 8,000 smallholders – largely through Shwe Danu, a local agricultural NGO. Several Shwe Danu staff members have been hired by one of the five specialty coffee firms and associations to provide extension and quality control to their members or suppliers. DOA supported coffee producers on two fronts: 1) In 2018, the DoA in Pyin Oo Lwin started to train farmers on coffee GAP. VCRD and MCA contributed technical content for training materials. While training can improve coffee quality, GAP certification does not factor into specialty green bean buyers' sourcing decisions because they rely on cupping scores to confirm coffee quality, a more direct measure. 2) DOA worked with farmers to expand the number of nurseries in southern Shan from 14 to 61 (2017 to 2018), which increased the supply of coffee seedlings by 81,000. 				
On-farm practices	 Most cherries picked green, before ripe, stripped from the plant, thus destroying new buds Dried on the ground Stored with livestock in unhygienic conditions, sometimes in pesticide bags Reports of many farmers cutting down their coffee trees 	 Cherries picked frequently, at peak ripeness (red). Dried on tables Hand sorted Properly stored and labeled Properly packaged for export: double-bagged in GrainPro and jute bags, in a lined container to avoid moisture condensation Cupping scores verify coffee quality (refer to Table 4) 				
Coffee quality standards and awareness	 No grades or price differentials for quality cherries or green beans Some Myanmar coffee was capable of qual- ifying as specialty; however, lack of farmer awareness and linkages to specialty green bean buyers prevented any coffee from being sold as specialty 	In partnership with MCA, CQI has trained 150 people on Q Grading and 67 people on Q Processing, resulting in the following CQI certifications: • 17 Q Graders (7 women, 10 men); • 20 Generalist Q Processors (Level 1) • 30 Professional Q Processors (Level 2) This represents a cadre of experts who are able to assess coffee quality and characteristics for producers, processors, and green bean buyers. Joel Shuler observed that processors are now able to customize their coffee for potential buyers by enhancing desired characteristics, and will not be susceptible to buyers who imply that their coffee scores are lower than actual quality.				

Market Features	Baseline Year (2014)	Project Years (2015-early 2019)
Farmer groups and associations	 Myanmar Coffee Association (MCA), a national non-profit organization, was founded in September 2014 by members of Mandalay Coffee Group (MCG), a company engaged in estate production of commercial grade coffee Farmers had no experience with group formation and participation 	 MCA has expanded its mandate to support estates, smallholders, and other market actors engaged in commercial-grade and specialty coffee production and marketing. Ten MCA coffee clusters provide a mechanism for member engagement and collaboration, bringing people together from diverse socio-economic and ethnic backgrounds. At least five clusters in Shan State and Mandalay Division have members producing specialty coffee: Ywangan, Pinlaung, Hopong, Modoc, and Pyin Oo Lwin. Two for-profit smallholder associations. Shwe Taung Thu and Indigo Mountain provide quality control, marketing, and access to finance for 23 community-based Working Groups producing specialty dry naturals. Refer to the following section for additional information. A chapter of the International Women's Coffee Alliance (IWCA) was established in Myanmar in August 2018. Current membership is 52 women.
Market linkages, prices, and producer compensation	 Myanmar was not recognized as a coffee producing country outside of the country, with the exception of importers in neighboring Thailand and China Farmers sold coffee in the 5-day markets to local traders. Most coffee was processed into instant coffee or exported to China and Thailand Traders and green bean buyers sought lowest cost and disregarded quality Many farmers were cutting down their coffee trees and replacing with other crops 0.65 USD/lb for cherries (green bean equivalent, GBE) 	 Myanmar exports specialty coffee to North America (U.S. and Canada), Europe (U.K., Netherlands, Germany, and Iceland), Australia, the Middle East (United Arab Emirates), Russia, and Asia (Singapore, Taiwan, Japan, and South Korea). Buyers also include several domestic specialty roasters. Green bean buyers pay higher prices based on cupping scores and costs of production FOB prices for specialty dry naturals ranged from \$3.30 to \$4.30/lb – compared to about 1.00/lb for commercial grade 63-83 percent of the FOB price goes to farmers Local prices for quality cherries (0.99-1.21 USD/lb) are 12.5% to 37.5% higher than the standard rate paid by traders who do not distinguish based on quality (0.88 USD/lb, often lower). In addition, local cherry prices have increased 35% since baseline due to increased demand (a spillover effect). Enlightened buyers recognize that farmers need robust incomes to ensure a sustainable supply. They want coffee farmers to thrive, not just survive. These tend to be niche "relationship", "single origin, "revival", and "fair trade" coffee buyers (however, fair trade certified is not necessarily specialty grade). Other buyers attempt to negotiate lower prices based on volume. However, sellers have options. Communities are using Facebook to tell their stories and communicate directly with green bean buyers and end consumers.
Processing capacities	 The DoA in Pyin Oo Lwin owned the sole dry mill in Myanmar. The design was inad- equate for specialty coffee and the equip- ment was not properly maintained Smallholders hulled their cherries using a mortar and pestle, crushing and breaking the beans 	 Three companies operate dry and wet mills in Mandalay and Shan State using equipment co-funded by USAID and private investment – MCG, Amayar, and Lilypad. They produce washed, honey, and dry naturals. Two for-profit smallholder associations are producing specialty dry naturals using low-tech methods (refer to Table 5)

Market Features	Baseline Year (2014)	Project Years (2015-early 2019)		
Export licenses	MCG had an export license	Three processors have an export license – MCG, Amayar, and Lilypad. Two producer associations plan to apply for an export license. In the meantime, they export through one of the three exporters on a cost-plus fixed-fee basis.		
Access to credit	Nationwide, no non-col- lateralized loans were available for small and medium enterprises (SMEs)	VCRD has brokered non-collateralized SME loans for working capital with three local banks – Yoma Bank, CB Bank, and A bank. The loans are guaranteed by Netherlands-based Rabobank Foundation to mitigate risk for Myanmar banks who are willing to pilot new loan products for small and medium agribusinesses. Rabobank's application form has influenced the adoption of more robust, streamlined credit application forms and processes by A bank, who previously hesitated to lend to agribusinesses because they lacked confidence in assessing risk and creditworthiness.		
Local coffee culture	 Farmers rarely drank their own coffee. They produced it as a low-input, low-value cash crop Most coffee consumed in Myanmar was instant coffee 	 Producers are drinking quality coffee; for example, Pa'O farmers now drink "Behind the Leaf" coffee made from their cherries. Gentleman Coffee Roaster of Yangon is pursuing a vision to have Myanmar surpass other specialty coffee producing countries in the share of locally produced specialty coffee consumed and enjoyed in country. Local hotels, restaurants, and cafes are increasingly serving Myanmar specialty coffee in the coffee producing areas, Yangon, and tourist destinations. Element Coffee of Yangon launched the Barista Association of Myanmar in 2015. 		



BOX 6. SCA'S CUPPING METHODOLOGY

The following steps are followed to score each coffee sample in competitions:

- Five cups of coffee are prepared in accordance with SCA's protocol.
- At least three judges assess each cup and record their scores on SCA's Arabica Cupping Form.
- A score of 6-10 is assigned for each of the 10 attributes listed in Table 2, points are subtracted for defects, and the total sum is each judge's "final score".
- The average of all the judges' final scores is the sample score.
- This process is repeated for the top five scoring samples in each competition category (washed, honey, and dry naturals) to confirm the winners.

Improvements in coffee cupping scores

Cupping competitions have been instrumental in raising awareness of coffee quality and recognizing individual farmers, communities, estates, and processors who have achieved substantial improvements. Judges are CQI-certified Q Graders who are also foreign green bean buyers and roasters. They typically go on to buy and promote Myanmar's specialty coffee. Refer to Box 6 (prior page) and Table 2 for a summary of the cupping methodology and terms.

Whether cupping takes place in the context of a competition or buyers' trip, the scores determine the coffee's quality classification: outstanding specialty (90-100), excellent specialty (85-89.99), very good specialty (80-84.99), and commercial grade (below 80). Table 3 shows the evolution of cupping scores in annual cupping competitions. It presents the number of coffee samples that score within each class, broken down into 2-point spreads for the following reasons:

- Buyers care about 2-point spreads. Q graders can readily detect a 2-point difference in the cup, and whether a coffee scores 82, 84 or 86 influences its price point and/or access to buyers. Some buyers only want "excellent specialty".
- A robust, precise results indicator. Two-point spreads create a "quality ladder" to assess the number of producers who are progressing to higher scores.

The 2015 cupping competition was held before the project started to work with coffee farmers, so the data provide an informal baseline. The population comprised participants who self-selected and were curious to learn about their coffee quality (therefore not a representative sample of all coffee producers). Participants in subsequent competitions also self-selected based on their interest in learning about their coffee quality and/or having a venue for gaining recognition in local and international markets for producing specialty coffee.

In 2015, 21 samples scored in the "very good specialty" range of 80-84.99. Over the next three years (2015-2018), the number of samples achieving specialty grade climbed steadily to 77. More importantly, the number of samples achieving "excellent specialty" rose from zero to 26 and winning scores climbed above 87 for the three consecutive seasons, reaching as high as 89.58.

The number of participants has also increased from 58 to 88. The percentage of the total sample lot that is rated "specialty" is not used as a project or value chain performance indicator because the competition is open to anyone who wishes to participate, and therefore includes a mix of farmers who have received assistance and those who have not.

Cupping competitions have made significant contributions to raising awareness and facilitating market linkages. In addition, awards and high scores foster farmer and community pride - an intangible yet powerful benefit - particularly for marginalized groups and people engaged in poppy production.

Table 2. Cupping terms

Attributes	Description
Fragrance/Aroma	Aromatic aspects
Flavor	Taste and aroma, mid-tones
Aftertaste	Duration of positive flavor attributes
Acidity	Brightness and/or sourness
Body	Mouthfeel or heaviness perceived on the surface of the tongue
Uniformity	Any odd cup(s) among the five
Balance	Whether the prior attributes combine well or any particular attribute is too strong
Clean cup	Transparency, free of off-flavors and defects
Sweetness	Subtle, pleasant sweetness
Overall	Overall rating
Defects (taints & faults)	Any undesirable flavor, such as moldy, phenolic, chemical, or over-fermented

Table 3. Evolution of cupping scores for Myanmar coffee (2015-2018)

Cupping	Quality Class	Number of coffee samples				
score		2015	2016	2017	2018	
categories		58	60	72	88	
89-90.99	int Ity	0	0	1	0	
87-88.99	Excellent Specialty	0	1	3	3	
85-86.99	SP	0	5	22	22	
Total 85+		0	6	26	25	
83-84.99	od ty	2	37	27	37	
81-82.99	Very Good Specialty	8	12	9	11	
80-80.99	Ver	11	0	2	4	
Total 80+		21	49	64	77	
75-79.99	ė _	26	2	6	5	
70-74.99	Comm- ercial	3	0	1	3	
<70	0	8	3	1	2	
Total <80		37	5	8	10	

Specialty coffee value chain participants

The following table presents data on the number of farmers selling to a community-based Working Group under a specialty coffee producer association (Shwe Taung Thu or Indigo Mountain) or selling to one of the processors who received a VCRD Innovative Grant (Amayar, Lilypad, and MCG).

Table 4: Number of farmers and communities in the specialty coffee value chain (2015-2019)

Indicators of scale	2015-16	2016-17	2017-18	2018-19*
Participants				
No. of communities producing specialty dry naturals (green beans) and selling through an association	8	22	20	23
Additional communities selling quality ripe cherries only	27	48	65	72
No. of farmers (estimated)	3,168	4,867	5,865	7,166

The data under-represent growth in the number of specialty coffee producers of quality cherries and/or green beans, as it excludes other Myanmar coffee processors, firms, and communities that have shifted to specialty coffee as a result of CQI Q Grading and Q Processing training and project-facilitated market linkages. Refer to Box 7 for an example.

Anecdotal information indicates that other local coffee firms are starting to shift to specialty coffee, more farmers are entering the supply chain, and farmers are planting more coffee trees. Following the 2018-19 coffee season, the project will work with MCA to conduct further analysis to identify the market actors in Myanmar's specialty coffee value chain and the scale of specialty coffee production.



Significance of proof of concept and replication

The project's primary contributions to specialty coffee value chain development are establishing proof of concept and helping create the enabling conditions for replication. The number of participants and volume and value of sales are interesting, but evidence of successful replication, profitability, and the productive capacity of the specialty coffee belt are better predictors of long-term growth. These factors will be further investigated as part of the post-season assessment.

Enabling conditions and sustainability

The project played a central role in coordinating value chain development activities during the first two seasons, recognizing that specialty coffee production requires technical expertise and quality control systems that did not exist in Myanmar in 2015. Unlike other value chains, identifying buyers was not a primary challenge. The primary challenge was having a specialty coffee sample to show buyers, who would then have a reason to visit Myanmar, begin cultivating relationships with communities and processors, and signal the value of Myanmar specialty coffee.

BOX 7. SPECIALTY COFFEE CONNECTIONS

Ko Thiha Gyawalie of Arrow Brothers Coffee manages his family coffee farm in northern Shan (a conflict-affected area), was coached by Marcelo Pereira on processing techniques via phone calls, won the specialty washed category in the 2017 Cupping Competition, and now sells his Ruby Hills coffee to Yangon-based Gentleman Coffee Roasters, who he met in a Q Grading course.

Thiha also met Su Nandar Lin in the Q course, owner of Shwe Ywangan Coffee Company in southern Shan. Together, they launched "The Lady Specialty Coffee" to honor the women who produce Myanmar coffee. The two entrepreneurs work with 35 women from two communities in Ywangan township, paying them 1,000-1,050 MMK/visviss for quality cherries and distributing 20 percent of profits from coffee bean sales back to the farmers.

Once the initial pilot succeeded and started to expand and replicate, the project worked with MCA to build its capacities. As of early 2019, MCA has updated its bylaws and strategies to support both commercial-grade and specialty coffee and assumed full responsibility for managing cupping, Q training and other technical assistance, and promotional events. It is currently recruiting to fill its first full-time position, an Association Administrator who will support the MCA Board and facilitate coordination with Coffee Clusters, and is offering a salary sufficient to attract a skilled individual.



LEARNING FROM DIVERSE BUSINESS MODELS

As of early 2019, the project has assisted five for-profit specialty coffee enterprises that reflect two business models.

Model 1 - Processors.

The firm buys cherries from estates and/or smallholders, uses its own equipment to produce washed, honey, and dry naturals, and exports under its own export license. They use the highest quality cherries to produce dry naturals. Upon cupping, they may set aside some community's beans as single origin, some of which may score sufficiently high to be in the top tier of the coffee quality pyramid. They use other high-quality cherries for wet processing, mixing cherries from multiple communities because the wash process does not retain unique characteristics. The resulting green beans can qualify as specialty coffee, the middle tier of the coffee quality pyramid.

Model 2 - Community-based associations.

Community-based Working Groups buy cherries from "core members" and "associates", produce specialty dry naturals, enlist the dry milling and export services of other companies on a cost-plus-fixed-fee basis, and sell directly to a green bean importer or domestic buyer. The association charges a 2 percent fee to facilitate market linkages. Lower quality cherries rejected in the sorting process are sold to traders in the five-day market. Members are required to contribute labor and may also provide cherries on credit. Associates are paid at the time of collection and have no obligations. Each Working Group distributes the profits from value-added processing to both members and associates through a second payment. Traceability to individual communities helps them capture premiums for "relationship", "community", and "single origin" coffee. Many Working Groups are producing and selling at the top tier of the specialty coffee pyramid. Refer to Figure 5.

Table 5 (at the end of this section) describes key features of each enterprise related to how they source cherries, process coffee, and access finance. Following is a summary of pros and cons of the two models and shared challenges related to community and smallholder autonomy and empowerment, side-selling and poaching, value chain resilience, traceability, and profitability.

Community and smallholder autonomy and empowerment.

Myanmar coffee that is marketed by processors as "smallholder coffee" refers to the type of farmer who produced it and does not necessarily signify anything about the price they received. The inclusive, community-based association model adopted by Shwe Taung Thu and Indigo Mountain empowers smallholders in the following ways:

Risk and profit trade-offs for smallholders. Each community-based Working Group owns their coffee until it leaves the port. This is significant to both the buyer and farmers because it allows smallholders to maximize their share of the value created in the specialty coffee value chain - they receive approximately \$0.99-\$1.21 for cherries per Ib GBE based on a conversion rate of 6:1, plus earn profits from producing dry naturals of \$1.39/lb (average for Shwe Taung Thu Working Groups in 2017-18 season) to \$2.36/lb (estimate for Indigo Mountain Working Groups, reflecting higher sales prices). However, they risk losing money if the Working Group buys more cherries than they can sell and/ or green bean coffee prices fall below the cost of production. In contrast, smallholders who sell their cherries to processors do not receive a second payment, but have lower risk and still benefit by receiving 12.5% to 37.5% higher prices for quality cherries (900-1,100 MMK/viss), compared to the local market price (800 MMK/viss). A priority for the Working Groups is to advertise their first and second payments on social media, so that farmers understand the benefits of membership and do not simply compare cherry prices when they decide who to sell to. Starting in the 2018-19 season, some Working Groups will charge new members a joining fee of approximately \$80, reflecting the value of the equity they have built to date related to equipment, origin reputation, and relationships with buyers.

Decentralized decision-making authority. Each Working Group decides how to distribute the second payment. Feedback from post-harvest reviews indicates that decisions have been made democratically and transparently, motivated in part by competition for cherries. They typically invest in drying tables, moisture meters, and other equipment; compensate members who have contributed labor based on records of hours worked; distribute a portion to members and associates according to the volume of cherries contributed; and/or donate to community

Figure 5: Myanmar Coffee Quality and Prices



projects or the local monastery, consistent with cultural practices. These donations help attract new members, in part by signaling that specialty coffee production is profitable. Autonomy empowers smallholders and allows for a diverse set of policies and approaches to emerge.

Countering subversive tactics. Some local coffee companies seek to undermine the shift to specialty coffee production by spreading false information in the press and among local communities, sowing doubt about Myanmar's coffee quality. This occurs because commercial grade coffee companies and traders face greater competition for cherries and want to keep the price low. According to association members, this behavior is motivating them to strengthen their capacities, and reinforces the benefits of having an association that can protect smallholders' interests. Associations are countering false information by using Facebook to post photos of their buyers, cupping competition results, and specialty trade articles that document buyer's interest in Myanmar coffee. Conversely, some local companies falsely imply that their coffee is sourced from the specialty coffee producing communities. However, Blue Bottle's buyer noted that specialty green bean buyers can readily taste the difference in the cup. In addition, they cultivate direct relationships with communities and routinely verify the source before agreeing to buy. Still, he recommended that the associations should strengthen and protect their brand to minimize counterfeit sales.

Side-selling and poaching challenges.

Processors and associations have a minimum scale they must achieve to cover costs. Both are concerned about side-selling, in which 1) an association member does not transact (sell their green beans) through the association to avoid paying a commission, or 2) a smallholder does not sell their cherries to the processor or Working Group who has provided training, quality control, and other support, and instead sells to another buyer. Side selling is encouraged by buyers who seek to expand their supply base by approaching established specialty coffee producers who have a pre-existing relationship with an association or processor, rather than investing in organizing and training new communities. This practice is not illegal in a free market. Competition can benefit smallholders by driving up the price of cherries, putting pressure on associations to demonstrate their value, and putting pressure on processors and others to be "a better buyer". For example, now that Shwe Taung Thu has secured a loan to provide working capital for its members - which meets an important need - it will likely require borrowers to commit to sell a minimum volume through the association to ensure the financial sustainability of the association. In turn, members will have an incentive to do so.

Side-selling can undermine relationships built on trust and mutual benefit and is unlikely to benefit smallholders in the long-run. Some of these lessons are best learned from

experience. One member community who side-sold to a local processor rather than the association did not have a positive experience. Stories spread quickly by word of mouth and Facebook, which allows people to learn from others' experience.

Traceability.

The associations have opted to manage a separate micro-lot for each community. This requires significantly more work; however, specialty coffee buyers value traceability because it enables them to market it as "single origin" and learn to know the farmers who produce it. Similarly, some buyers seek "relationship coffee" and are loyal to the same community or communities over multiple years. Even if green beans are blended at the request of the buyer, the association's records allow them to trace beans back to the community and farmer if an issue with coffee quality is detected through routine quality control cupping on the daily lots or warehouse lots. Behind the Leaf also manages micro-lots. They systematically cup the coffee in their lab and when they find something extraordinary they set it aside.

Efficient picking and sorting.

Practices related to picking and sorting ripe cherries have varied across the five enterprises. This work is performed almost entirely by women, who are viewed as more proficient at picking and sorting than men.

Community-based dry naturals require higher quality cherries than washed and honey processes. Sorting is conducted by Working Groups at the community level. Some of the initial sorters were so diligent that they went beyond what was required for specialty coffee. In addition, some farmers figured out that if they carry two baskets they can sort as they pick, separating any defective or green cherries picked inadvertently. This practice minimizes subsequent sorting costs and has been shared on social media, using video and photos. Working Group members are highly motivated to pick and sort carefully because they are compensated for producing higher quality coffee through 2nd payments.

Private processors buy cherries of variable quality and sort at a central location. For example, Amayar purchases two grades of cherries (defined by her, not the local market): 90 percent red with some rejects – for which she pays 900 MMK/viss; and near 100 percent red with no rejects and no sorting required - for which she pays 1,000 MMK/viss. She then sorts the cherries into four grades: specialty grade (for dry naturals), grade 1 (good red cherries for washed), grade 2 (substantial green cherries for washed), and grade 3 (overripe, dry, floating cherries sold to instant coffee processors).



Processors and Working Groups who have bought cherries without sufficient attention to quality incurred high sorting costs and input losses, rendering their operations unprofitable. An analysis of 19 communities showed that the percentage of cherries they purchased during the 2017-18 season that had to be discarded because they were unripe or floated varied from almost zero to 24 percent.

Value chain resilience.

Sara Morrocchi, the CQI consultant fielded to conduct training for the specialty coffee firms on price risk management in late 2018, noted that it is much easier to buy cherries than to sell them. Paying farmers premium prices for cherries concentrates too much risk at the processor level. Rabobank Foundation made the same observation in the context of assessing loan guarantee applications. If a processor becomes bankrupt, it disrupts the supply chain and impacts a large number of market actors. The two-step payment scheme used by the Working Groups is a better way to manage risk, in which farmers are paid the prevailing market price for cherries (differentiated based on quality) and receive a second payment tied to realized profits. In parallel, it appears that a correction in the prices paid for cherries may be warranted.

Profitability of specialty washed versus dry naturals

Specialty washed green beans are substantially lower value than specialty dry naturals (\$3.30-\$4.30/lb and higher), in part because washing forfeits most of the coffee's distinct flavor notes and does not score well enough to be single origin. In 2018-19, Atlas Coffee Importers declined to purchase washed coffee from Myanmar because the asking price (\$2.30-\$2.50/lb) was higher than excellent washed coffees from Latin America (\$1.80/lb). Processors have sought and found other buyers, such as Toby Estates of Australia. Atlas sees an opportunity for growth in Myanmar's natural processed coffees (see Atlas Coffee's Myanmar Landing Page, dated 2/26/2019). This suggests that specialty dry naturals, particularly single origin, are more resilient to market price risk because they face less competition. It also suggests that processors will need to identify ways to improve cherry quality to shift a higher share of production to specialty dry naturals, develop close relationships with buyers to tailor flavor profiles to their specifications, and identify ways to lower costs.

Table 5. For-profit specialty coffee production, processing, and marketing models (2019)

		COMMUNITY-BASED ASSOCIATIONS			
Features	Mandalay Coffee Group	Amayar Company	Lilypad Company, Ltd. "Behind the Leaf"	Shwe Taung Thu Association	Indigo Mountain Company
Business model		The association buys cherries from its members and others, enlists the processing and export services of other companies on a cost-plus-fixed-fee basis, and sells directly to a green bean importer or domestic buyer. Profits are distributed to members and associates through a 2nd payment			
Owner profiles	Estate owners, roasters, and other investors	Owned by a Burmese woman who previously traded coffee	Managed by a Burmese man, with volunteer, full- time advisory support from an American wom- an who founded Lilypad as a social enterprise	Association members, similar to a cooperative in other countries	
Start dates	Registered: 2014 First specialty coffee: 2015	Registered: 2016 First specialty coffee: 2015	Registered: 2006 First specialty coffee: 2015	Registered: May 2018 First specialty coffee: 2015	Registered: October 2018 First specialty coffee: 2017
Region	Pyin Oo Lwin, Mandalay	Ywangan, Shan State	Pinlaung, Shan State	Ywangan, Shan State	Hopong, Shan State
Internet & Facebook	mcg.coffee. Facebook (English), and Instagram	Facebook: Amayar Women Coffee Pro- ducer Group (Eng)	www.behindtheleafcof- fee.com	Facebook: Shwe Taung Thu Cof- fee (English)	Facebook: Indi- go Mountain
Cherry sources	Estates and smallholders	Smallholders Association membual smallholders of farmer groups Non-members – re "associates"		organized into	
Business objectives (inferred)	 Maximize profits for owners Lead the specialty coffee sector in Myanmar Diversify income streams by providing processing and export services 	 Earn a sustainable profit for the owners Facilitate increased incomes while helping balance risk for smallholders – Amayar focuses on women; Behind the Leaf focuses on families Diversify income streams by providing processing and export services 		he helping balar focuses on on families members over the long selling directly to green buyers	
Additional benefits for small- holders	 Contributes 1.5% of export sales value to MCA MCG was instrumental in providing working capital loans to the Ywangan communities and Amayar to buy cherries the first two harvest periods. 	■ Community pride	 Community pride Alternative to poppies Lower costs – farmers no longer sell in the 5-day market nor hull the cherries Lilypad provides eyeglasses, water filters, and other benefits for community members 	■ Community pride	Community prideAlternative to poppies

		PROCESSORS		COMMUNI ASSOCIA	
Features	Mandalay Coffee Group	Amayar Company	Lilypad Company, Ltd. "Behind the Leaf"	Shwe Taung Thu Association	Indigo Mountain Company
Cherry collection and payment scheme	 MCG's collector buys the coffee at farm gate Farmers receive a single payment for cherries MCA's price reflects the percentage of ripe cherries and rejects per lot (similar to Amayar) 	 Farmers deliver cherries to Amayar's processing facility in Ywangan Amayar buys two grades of cherries: 90% red with some rejects (900 MMK/viss) and no sorting required (1,000 MMK/viss) 	 Lilypad hires an aggregator from within each community who manages collection 5 days per week during harvest Farmers receive cash on the spot or at the end of the month (their choice). Lilypad sets cherry prices each season based on financial estimates. Lilypad transports to their processing facility 	on actual green less a 2% associand actual costs milling, transporetc.). Each grouto allocate this pallocate all procaccording to the contribution.	ing Group that ion, drying, and payment is 1st payment if market price ies (or higher). It is are sold. It is 2nd payment to distributed based bean sales price, ation service fee is (1st payment, t, export, taxes, producides how payment. Some eeds to farmers is volume of their thers donate fit for community
Cherry prices paid to farmers (2017-18)	Prices paid to farmers are not public information	900 to 1,000 MMK/ viss (equivalent to \$0.99- \$1.10 per lb green beans, based on 6:1 conversion)	1,000 MMK/viss (equivalent to \$1.10 per lb green beans)	1,100 MMK/viss (equivalent to \$1.21 per lb green beans)	900-1,000 MMK/viss (equivalent to \$0.99-\$1.10 per lb green beans).
FOB prices and added profit	Unknown – all profits from value added processing ac- crue to the firm	Unknown – all profits from value added pro- cessing accrue to the firm	Unknown – all profits from value added pro- cessing accrue to the firm	FOB \$3.58/lb (average) Added profit: \$1.39/lb (average)	FOB \$4.00 to \$4.30/lb Added profit: \$1.95-\$2.38/lb (estimated)
Traceabili- ty	Cherries from smallholders are kept separate from estate cherries, and marketed as "smallholder coffee" to green bean buyers. Beans of varying quality are mixed within each stream.	Cherries from small- holders are mixed and marketed as "women's coffee" or "smallhold- er coffee"	Most beans are blended and marketed as "Pa'O coffee" referring to the ethnic group Some beans are kept separate and marketed as "single origin" under the community's name	Most coffee is bagged and labeled with the community name so that it can be sold as "single origin". Some of the coffee is mixed.	
Links to producers as of March 2019 (esti- mates)	9 estates 20+ Ywangan communities	15 communities 500 farmers	15+ communities 750+ farmers	18 communities (dry naturals) 22 communities (cherries only) 379 core mem- bers 3,000 associates	5 communities (dry naturals) 37 farmers

		COMMUNITY-BASED ASSOCIATIONS			
Features	Mandalay Coffee Group	Amayar Company	Lilypad Company, Ltd. "Behind the Leaf"	Shwe Taung Thu Association	Indigo Mountain Company
Export license	Yes	Yes	Yes	No	No
Processing equip- ment and capacities	 Pinhalense dry mill (processor 1,150-1,200 kg/hr, huller-polisher 900-1,200 kg/hr, and coffee grader 1,800 kg/hr) Conveyance equipment Two metal silos Coffee Pro lab equipment & Mahlkonig coffee grinder Ecco Filtro recirculation pump for wet mill 	 Penagos dry mill (300 kg/hr parchment coffee) Ecological wet mill (350-500 kg/hr) Power source (60 KVA generator) 	 Dry mill (300 kg/hr) Rotary dryer (4,000 kg, 22-hour drying time) Wet mill (1,200 kg/hr) Coffee Pro lab equipment & Mahlkonig coffee grinder Power source (150 KVA transformer, 100 KVA generator) Drying tables 	The association processes through Amayar's facility, located in the same town	Lab equipment for cupping
Invest- ment	 VCRD Innovation Grant for processing equipment (\$158,533) Owner's prior investment: MCG members had recent- ly installed a wet process- ing facility (\$500,000) 	 VCRD Innovation Grant for processing equipment (\$72,738) Owner's co-invest- ment: 240 million MMK (about USD 160,000) 	 VCRD Innovation Grant for processing equipment (\$129,368) Owner's co-invest- ment (\$69,800) 	No significant capital invest- ment – produc- ing dry naturals which use low- cost drying tables	2019: Major international coffee roaster support (~\$50,000) to purchase lab equipment for cupping and other uses described below
Access to credit	 April 2017: \$143,210 Yoma Bank non-collateralized working capital loan, guaranteed by Rabobank Foundation (100%) Jan 2018: \$645,000 (800 million MMK) Yoma Bank non-collateralized working capital loan guaranteed by Rabobank Foundation (80%). MCG on-lent portions of both loans to Amayar and 13 communities 	 2017: \$15,000 CB Bank non-collateralized SME loan 2018: \$102,000 of MCG's Yoma loan 2019: \$230,000 (350 million MMK) A-Bank pre-season working capital loan, guaranteed by Rabobank Foundation 	Self-financed from personal resources. In addition, Lilypad mobilizes a substantial number of American volunteers to help with construction/engineering, IT, marketing, and other tasks	 2016: Local roasters provided pre-season micro-loans (\$10,000) 2017: MCG on-loaned the Mya Ze Difarmer group 10 million MKK at 1.5% per month. 2019: \$230,000 (350 million MMK) A Bank pre-season working capital loan, guaranteed by Rabobank Foundation 	2019 revolving fund: Loans to farmers for drying tables Association working capital to buy cherries from members and pay staff salaries

PROSPECTS FOR MYANMAR'S SPECIALTY COFFEE

Global trends

The current global price crisis for **commercial grade coffee** renders production unprofitable in all but a few countries where firms have adopted a business model based on high volumes and efficiency. In December 2018, SCA and other stakeholders launched an initiative to promote price transparency and equity. The Specialty Coffee Transaction Guide (www.transactionguide.coffee) encourages buyers to pay farmers higher prices at levels that support the long term sustainability of supply.

Three factors help mitigate market risk for Myanmar specialty coffee farmers: rising global demand for specialty coffee, particularly as consumer demand in China and India grows; Myanmar's advantages relative to other producers of specialty dry naturals; and Myanmar producers' connections with U.S. and European specialty coffee importers who are committed to price transparency and sustainability.

Posts about **Myanmar from Atlas Coffee Importers**

Micro-lots.

If you've never tasted coffee from Myanmar, specifically naturallyprocessed Myanmar micro-lots, they are something to behold: ranging from boozy and blue-purple fruit to gummy-bear, these clean, sparkling naturals taste entirely unlike naturals from any other region. Each community's flavor profile is so unique that we'd be happy to share individual lot descriptors or, better yet, send you some pre-shipment sample so you can decide on your own.

- Atlas Coffee Importers,



Cup Profile.

Natural-processed coffee from Myanmar is so clean and bright that many people think it's a washed-processed coffee, but the body is medium-full and so the coffee shines equally as bright as a singleorigin offering or blend component. The flavor profile is so unique that it's easy to pick out a natural-processed Myanmar coffee blind on a table full of naturals, and we see this cup profile as one of the most exciting and sustainable features of Myanmar's coffee industry.







