Challenges of Sustainable Coffee Certification in Indonesia

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Summary

It is suggested as the need that all coffee sector, both in consuming and producing countries to implement sustainability program. This paper describes the result of a study to evaluate the challenges of sustainability coffee certification in Indonesia. Coffee producers in Indonesia mainly are smallholders with relatively low income, low education and skill. Number of problems in the production of coffee bean such as low productivity, unstable price and increase in consumers' requirement bring them into a dilemma that they shall continue to produce coffee, but they also have to stand in the risk of poverty. Sustainability program which is lead to certification to show that the farm and its supply chain confirmed with certain requirement resulting a big question mark, whether producer can get benefit from the program such as getting incentive price (premium), better production, tool in marketing and cost efficiency; or even bring coffee producers into difficulty in fulfill the requirement and putting additional cost for the certification. Coffee certification was started in 1990s in Acheh when a coffee company started to produced organic certified coffee. Numbers of certification programs initiated by private sectors then have been imposed to coffee producers, including Utz Certified, Organic (JAS, EU, USDA/NOP), GAP, HACCP, Rainforest Alliance, Fair Trade etc. These certification programs require the fulfillment of defined indicators covering social, environment and economic sustainability, and product traceability. Currently, 46 Indonesian coffee companies have been certified with total certified coffee of 47,000 ton per year. Nevertheless, coffee producers give varies respond including the confusing at farmer level and cost certification issue. Direct contact between buyer and producer by ignoring middlemen also provides a case sensitive in implementing the certification programs. These conditions lead to a need of certification that is adopted and proven by coffee producers, traders and consumers to ensure the sustainability in coffee sector. Further discussion during the ASEAN International Seminar on Coffee and discussion in ASEAN National Focal Point Working Group on Coffee, June 12-14, 2012 concluded the same understanding on the need of reconciled efficient sustainable coffee certification in ASEAN countries which is accepted globally.

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INTRODUCTION

Coffee is not the original plant of Indonesia. But along the way, coffee has spread to almost all corners of the islands of Indonesia, a long time ago called as "Nusantara" (call name of for islands of Indonesia). The entry of coffee to Indonesia could not be separated from the ambition of the Dutch colonial business. Cultivation of coffee moving the lifeblood of the economy and internalize the various cultural communities. Historically, coffee was once of the agricultural commodities that became the backbone of the Dutch colonial economy in the "Nusantara". Nicolaas Witsen, a Mayor and Governor of Vereenigde Amsterdam Oost-Indische Compagnie (VOC) started the history. He recommended the coffee plants to be developed in the Dutch Colonial area with soil fertility, which was Java Island. In 1696, head of the Dutch colonial in Malabar India, Andrian van Ommen send coffee seeds from Kananur Malabar to Java. In India, coffee has been developed since 1600, entirely in Chikmaglur, mountainous area of Mysore, southern India.

After Indonesia reached independence in 17th August 1945, the role of farmers in coffee cultivation increasingly dominant as the government reduces its role in the coffee plantation. When the private company also left away from the coffee industry, coffee farmers live to supply the consumption needs. It is appropriate when the coffee farmers are called the "real coffee investor", not the government or private companies.

Coffee distributed in almost of islands of Indonesia. Sumatra Island dominates with 74.2% of the production, with the largest production in Bengkulu, Lampung and South Sumatra areas. The rest are distributed in Sulawesi (9.0%), Java (8.3%), Nusa Tenggara (5.8%), Kalimantan (2.0%), and Maluku and Papua (0.6%). Nevertheless, more than half of the national production significantly produced in five provinces, namely South Sumatra (21.4%), Lampung (12.6%), Nanggroe Aceh Darussalam (8.7%), Bengkulu (7.4%), and East Java (7.2%).

Not only is the bond of the long history, the economic value of coffee also makes many farmers rely on coffee. Currently, the number of coffee farmers in Indonesia reached 1.97 million, with an average of 0.6 ha of land ownership.

Assuming family member of coffee farmer as 4 members, at least 7.9 million people depend on coffee price fluctuations.

The main obstacle faced by coffee producers is the coffee price. Since the period of the 1970s, the prices received by farmers tend to fall. Farmers gain around 19-22% of the total price of a cup of coffee. It is inversely proportional to the value-added coffee in consuming countries. It seems clear that the managing their field, is not guarantee a significant bargaining power in the industry. Application of sustainable farming system certification is one of the efforts to gain better income for famers and coffee supply chain.

Indonesian Coffee Specificity

With the tropic area, Indonesia is not only an appropriate place of coffee cultivation but also produce various types of coffee with unique flavour character. A same coffee variety can produce beans of different characters. Arabica coffee grows in Sumatra can be another flavor to it in Java or Sulawesi. In general, the taste of coffee is to follow the region of origin. Different sense of the term different from the ground, differences in composition of soil nutrients in the soil and climatic conditions is one the causes. Even so, the taste of coffee is certainly not just because it comes from; cultivation techniques, post harvest, even the process also determines the flavour specificity. Indonesia with regional diversity and cultural communities, has produced a generation of coffee beans with varies of specificity. A lot of them have been well known as specialty coffee, such as Java, Mandheling, Gayo, Flores, Lintong, Kintamani, Toraja etc.

In Sumatra, coffee grows well from the tip of Aceh to Lampung. Gayo Aceh region produces coffee. Varieties of Arabica coffee produced from plantations that stretched along the Gayo Highlands who altitude of 1,200 meters above sea level (masl), intirely in Central Aceh and Bener Meriah Province. Gayo coffee is generally prepared by wet processing methods. Gayo coffee has a strong aroma and balance body.

Figure 1. Coffee producers are moving into better coffee handling, in respond to better quality better prices and consumer requirement.

Besides Gayo coffee, Aceh coffee also became popular with its Robusta coffee “Ulee Kareng”. This coffee is produced from the area Lamno Geumpang Pidie and Aceh Jaya. Ulee Kareng showed gentle character, but it seems bitter with salty-astringent taste sensation on the tongue at its first sensation. Specialty coffee can also be found in North Sumatra, namely Mandheling, Lintong and Sidikalang coffee. Everything comes from the Arabica type.

Mandheling coffee is developed in their fields, which spread in South Tapanuli, North Tapanuli, Simalungun, and Deli Serdang. Mandheling title itself is taken from the name of the Batak tribe, Mandailing. Mandheling coffee character is with complex body, low acidity, not too bitter, spicy, slightly earthy, and small fruit like flavour.

Lintong coffee is coffee that comes from Lintong Nihuta of Humbang Hasundutan District in North Sumatera. Lintong coffee has clean character and good body. One of the Starbucks Coffee menu with Lintong coffee base is Black Apron Excelusive. Furthermore, Sidikalang coffee is also famous, produced from the area

Sidikalang Sumbul/Sidikalang of Dairi district with elevation of 1,500 masl. Sidikalang known as an arabica coffee with a strong and sharp flavor, high acidity, balance body with slight sensation of grassy and green. In addition to Arabica, Robusta Sumatra also produces. One is the famous Lampung Robusta. There are four coffee-producing regions, namely Bandar Lampung, Lampung Barat, Tanggamus, and the Way Kanan. Interestingly, though still in one province, the character of these coffee produced by the four regions are specific, not identical.

As the first part of the Nusantara where coffee was grown, coffee from Java Island is very famous. One of them is Java Coffee, produced from Arabica plantations in East Java under management of PTPN XII. “Jampit” is one trademark of famous Java coffee. Java Arabica coffee character is medium body, chocolaty, flowery and balance. Java Arabica grows well around Mount Ijen, at its peak between 900-1400 masl. There are five areas that have long been developed as a center of Java coffee since the Dutch era, namely Belawan, Jampit, Pancur, Kayumas and Tosari. Java Arabica is processed with wet process with 24-36 hours fermentation and sun dried.

Although only popular since 1990s, Bali is also famous for producing special coffee, “Kintamani – Bali Coffee”. Coffee is widely cultivated in the mountains at an altitude of 900-1,500 masl Batur. Coffee is intercropping with orange that has lasted longer supported with ideal soil and climatic conditions thought to be the determining factor. Bali coffee has fruity taste with mild acidity. The lovers of this coffee are mostly from Japan, the United States, the Netherlands and France. Kintamani coffee is the first agricultural products in Indonesia to obtain a certificate of Geographical Indications products and recorded at the Directorate General of Intellectual Property Rights Directorate, Government of Indonesia.

Other parts of Indonesia, Sulawesi and Nusa Tenggara are the source of Toraja and Flores Bajawa coffee, the flagship specialty coffee. Popular Toraja Arabica coffee is a coffee derived from the Toraja and Kalosi covering an area of South Sulawesi. Therefore there are two popular call brands of these coffee,”Toraja Coffee” itself, and “Kalosi Coffee”. Toraja coffee is very complex character with the sensation of chocolaty, sweet and herb flavor spicy. Meanwhile, Bajawa Flores coffee is derived from the island of Flores. Flores mountains landscape, active volcanoes confers andosol soil which is ideal for medium to grow Arabica coffee. Flores Coffee grows at altitudes between 1,200-1,800 masl. Flores coffee characters have the sensation chocolaty, sweet, fruity, and slightly citrus aftertaste.

Production and Economic Value

Coffee is one of the world's most important commodity traded in nearly 60 countries, classified as "the top cash crops in developing countries' economies and crucial for some countries (World Bank, 2004). Contribution of coffee in the Indonesia economy is quite significant. Coffee is one of Indonesia's main agricultural commodities. The volume of exports in 2009 amounted to 433,000 tons or 7.6% of total world exports. Value of exports reached US$ 849.9 million (about IDR 8 trillion). Contribution of coffee exports value to total exports by 0.71%, while to the total GDP of 0.16%. Coffee export value in 2011 reached 1,064 million dollars.

With the tropic area, Indonesia is not only an appropriate place of coffee farming, but the communities are familiar and enjoy with coffee farming. With total ara of production ca. 1.2 million hectares, 1.15 million hectares (96%) are coffee farm hold by smallholder, while the rest are under private and government owned companies. Coffee production is mostly located in rural areas, especially in dry lands and mountains, involving more than 4 million families. Coffee processing and marketing involved considerable labour and the relatively long trade chain.

Principal problems encountered in the development of coffee in Indonesia, includes several factors as follows:

- ✓ Around 96% of the area are smallholder farm cultivated in monoculture not intensively managed.
- ✓ Coffee yield is still relatively low i.e. 500 – 800 kg/hectare/year which is around 60% of potential production. This is due to the use of unrecompensed coffee variety and some of the coffee tree has already too old.

- ✓ Low quality coffee due the application of standard processing has not fully adopted
- ✓ Coffee industry (roaster) is still oriented to fulfill domestic consumption and only 1% of the processed products exported coffee.
- ✓ Coffee consumption per capita is still low (ca. 500 g/capita/year) compared with Brazil and Columbia which are reach 3-4 kg/capita/year.
- ✓ Niche market of specialty coffee and sustainable certified coffee has not managed optimally.

Table 1. Coffee bean export 2006 - 2011

Year	Arabica		Robusta		Product		Total	
	000 ton	US$ 000	000 ton	US$ 000	000 ton	US$ 000	000 ton	US$ 000
2006	67,775	169,901	227,620	294,164	12,482	33,263	307,876	497,328
2007	50,952	141,926	247,852	425,332	13,279	55,343	312,083	622,601
2008	59,735	228,072	348,187	630,917	13,843	64,553	421,765	923,542
2009	62,854	172,909	434,430	608,304	8,098	22,351	505,382	808,564
2010	78,036	294,162	360,603	571,977	8,855	25,404	447,494	846,543
2011	73,715	438,671	265,368	580,266	12,924	45,432	352,007	1,064,369

The Need of Sustainable Coffee Certification

The Increase in public awareness on the future agriculture management has led a number of commodity production systems, including coffee farming into a production that is sustainable and responsible. Production activities are categorized as sustainable if the three pillars of sustainability can be met namely environmentally friendly, socially responsible and economically traceable, safe and valuable.

The importance of preserving the environment and the need to implement sustainable agriculture systems, along with the effort to appreciate human and social rights in all coffee supply chain of production, processing and distribution; product traceability; and demand for health and safe product drives the coffee production to be produced in a sustainable and responsible manner. This situation has also led to the creation of a special market for the coffee produced following sustainability standards which by certification activities. Nevertheless, according to Giovannucci et al. (2008), the market share of certified coffee beans in the world is not big, but it continues to grow. The world's certified coffee exports consist in term certified sustainable coffee is ca. 4%, and specialty coffee at ca. 6%.

Sustainable coffee certification have created a niche market with rapid development, in which for some producers can be an opportunity to increase their income and produce better quality and productivity of coffee beans as well as for long term production. This coffee market is used as a prospect to premium price, expand markets, and supporting sustainable agriculture commitment. Byers & Liu (2008) noted that the certified product penetration is still relatively uncertain, but the coffee was more advanced commodities in the agricultural sector into the certification program, both in terms of quantity and frequency of use. Initiatives such certification program is more a response to the demands of the user community and a vehicle for producers to meet the demands of sustainable coffee and distribution of risk, especially when coffee prices are uncertainly, known as market driven.

When a crisis in coffee prices in the late 1990s and early 2000s occurred, numbers of coffee producers lost and forced them to stop as coffee producer. Coffee prices fall sharply; however, the price declines that occurred on certified coffee beans are not as sharp as that occurred in conventional coffee beans (Varangis *et al*., 2003). In normal conditions, the certified coffee producers even enjoy the premium given to their production.

Challenges of Sustainable Coffee Certification

The trends of the increase in sustainable coffee trade in global market affects the respond of the coffee producers in Indonesia to take part coffee certification. For the coffee business, application of sustainable certification of their coffee production based on a variety of purposes. Most of them considered on the benefits of the implementation program, but others apply for the purpose of marketing as tool, reducing the risk when price fluctuated, easier to gather coffee beans from farmers and getting premium price.

Numbers of certification on coffee sustainability exist in Indonesia significantly, include Organic (JAS, USDA/NOP, EU), Utz Certified, C.A.F.E Practices, Fair Trade, Rain Forest, Geographic Indication and Indonesian Organic (SNI). Most of the certified sustainable coffees are Arabica coffee (75%) and the rest are Robusta coffee. Distribution of certified coffee is still limited in Aceh and North Sumatera (Arabica), contributed around 75% while the rest spread in southern part of Sumatera island (Robusta) and East Java (Arabica and Robusta), South Sulawesi (Arabica), Bali (Arabica) and Papua (Arabica).

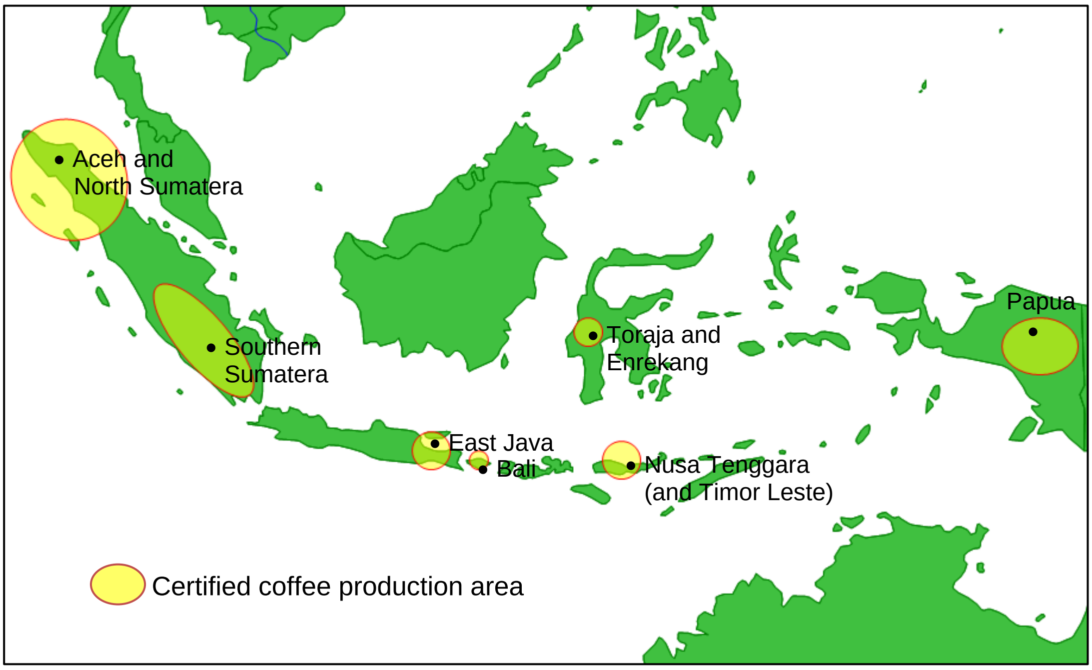

Figure 2. Certified coffee production area in Indonesia

Certified sustainable coffee export from Indonesia in 2011 was noted at 46,867 metric ton produced by 46 coffee companies. The certifications can be single or multi certification in form of combination of more than one program. Most of the certified coffee beans are certified with Organic (USDA, JAS/NOP, EU) ca. 60%, Utz

Certified ca. 25%, C.A.F.E Practices ca. 20% and less than 10% with Rain Forest Alliance, 4C, Fair Trade, GI and Organic SNI. The multiple certifications are especially the combination of Organic, C.A.F.E Practices and Fair Trade. Bird Friendly Coffee has been introduced in two three years, but until 2011 no companies has produced this certified coffee type.

Certification refers to the confirmation of certain characteristics of an object, person, or organization. This confirmation is often, but not always, provided by some form of external review, education, assessment, or audit run by independent third party. Accreditation is a specific organization to assess professionalism of a certification body. Some criteria those concern in the application of sustainability program in the center of coffee production, including:

Social Aspects

- ✓ Minimum wage, salary
- ✓ Worker age
- ✓ Education conflict, minor worker
- ✓ Working environment, facility
- ✓ Health and safety
- ✓ Discrimination
- ✓ Forced labour

Environment Aspects

- ✓ Land protection (forest)
- ✓ Erosion (surface, steep area)
- ✓ Pesticide
- ✓ Water source protection
- ✓ Diversity, protection
- ✓ Waste management

Product and Economy Aspects

- ✓ Transparency and equity
- ✓ Traceability
- ✓ Quality
- ✓ Safety and GMO
- ✓ Processing, consistency

Observation in farm level, also found that smallholders were not fully understand the intention and objective of a respective program. The number of certification programs lead to confusion at farmer level in responding to their required criteria and indicators; some time an inspector has to ask questions similar to farmers on different days. In business perspective, coffee processor, trader, exporters has also considered multiple certification programs a additional cost that actually shall be limited. Most businesses run a certain certification programs more due to buyers demand considerations, rather than the awareness of the importance and benefits of the application of indicators in sustainable coffee certification programs.

At the beginning stage, certification activity was conducted by foreign certification body or branches of foreign certification body. However, in the last five years, it has grown a number of nationally accredited certification bodies. National Accreditation Committee (KAN) provides accreditation to certification bodies based on the IEC ISO 65. A number of international certification body that has operated in Indonesia for sustainable coffee certification including Control Union, NASA, CERES, IMO, RA and SGS. Meanwhile, a number of national certification bodies which are capable to certify sustainable coffee include BIOCERT, SUCOFINDO, SDS INDONSIA, CCQC, INOVIS, LESOS, PERSADA, DISPERTANPANG SUMBAR and MUTU AGUNG LESTARI.

Figure 3. Conformity to coffee sustainability indicator assessment by local inspectors

Most of the coffee production in Indonesia, i.e. ca. 96% is produced by smallholders, whiles the rest by private and government (PTP Nusantara) estates. These two subjects showed different supply chain model (Figure 4). Therefore, the coffee sustainable certification program implementation pattern is also different. At the smallholder, certification is usually run by traders / exporters, as the holder of the certificate, while at the plantation (estate), the certification is run by the owner of the plantation itself. Coffee farmers till now still has no capability to hold certification, due to cost constraints, knowledge, networking and marketing. The exception is with Geographic Indication certification; in which currently the holder of the certificate is “Masyarakat Perlindungan Indikasi Geografis” (Geographical Indication Protection Society). Direct contact between buyer and producer by ignoring middlemen also provides a case sensitive in implementing the certification programs.

Figure 4. Supply chain and certification program implementation

ASEAN International Seminar on Coffee and Workshop on National Standard for Indonesian Sustainable Coffee

ASEAN International Seminar on Coffee was held in Denpasar, Bali, Indonesia on 12-13 June 2012 coordinated by ASEAN National Focal Point Working Group on Coffee. This meeting showed a remark that coffee sustainability program which is lead to certification to show that the farm and its supply chain confirmed with certain requirement resulting a big question mark, whether producer can get benefit from the program such as getting incentive price (premium), better production, tool in marketing and cost efficiency; or even bring coffee producers into difficulty in fulfill the requirement and putting additional cost for the certification. Nevertheless, sustainable coffee certification is the need that all coffee sector, both in consuming and producing countries to implement sustainability program.

Numbers of certification programs initiated by private sectors have been imposed into coffee producers, including Utz Certified, Organic (JAS, EU, USDA/NOP), GAP, HACCP, Rainforest Alliance, Fair Trade etc. This large number of certification programs accepted by producer in term of smallholder as a confused and extra cost. It was reported that average of certification basic cost in Indonesia at US$ 0.63 – 0.70 per hectare. ASEAN certification which is adopted and proven by coffee producers, traders and industries is needed to be established. Considering the growth of coffee industries in ASEAN countries, ASEAN Coffee Certification system adoption by the industries would be an advantage.

Following the trend in sustainable coffee certification, the need to maintain economic value of coffee in society and the responsibility to sustain coffee growth, Government of Indonesia cq. Ministry of Agriculture has also held a workshop in Jakarta on 4 September 2012 to discuss and draft a national standard for sustainable coffee standard and its certification system. This workshop concluded that a national system needs to be provided in facilitating and supporting sustainable coffee certification. The committee will follow up with steps to construct the system and promote their implementation and adoption at industry and market level.

CONCLUSSION

Numbers of certification programs initiated by private sectors those have been imposed to coffee producers, including Utz Certified, Organic (JAS, EU, USDA/NOP), GAP, HACCP, Rainforest Alliance, Fair Trade etc. These certification programs require the fulfillment of defined indicators covering social, environment and economic sustainability, and product traceability. Currently, 46 Indonesian coffee companies have been certified with total certified coffee of 47,000 ton per year. Nevertheless, coffee producers give varies respond including the confusing at farmer level and cost certification issue. Direct contact between buyer and producer by ignoring middlemen also provides a case sensitive in implementing the certification programs. ASEAN coffee countries (from International Seminar on Coffee, June 12-14, 2012) concluded the need of reconciled efficient sustainable coffee certification in ASEAN countries which is accepted globally and cost effective.

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