Toward a More Sustainable Coffee Production: the Implementation Capacity of Indonesian Standard Coffee

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Abstract

This paper contributes to the literature on the emerging trend of Southern sustainability standards and certifications as a reaction to the Northern-based private standards by businesses and non governent organization (NGOs). It particularly analyzes the implementation capacity of Indonesian Standard Coffee (ISCoffee) as a public standard and certification initiated by the Indonesian government. We analyze the opportunities and barriers in the process of implementing ISCoffee and examine whether ISCoffee can become a viable alternative to Northern-based private standards and certification. We first concluded that the implementation capacity of ISCoffee is low, because of weak administrative structures, and communication and coordination deficiencies. Second, we conclude that ISCoffee will unlikely being able to solve smallholder-related problems in the coffee sector such as limited access to market, insufficient capital, and underdeveloped farmer organizations. Finally, we conclude that ISCoffee - on the short term - will not manage to become a viable alternative to Northern-based private standards and certifications.

Keywords: Implementation, smallholders, sustainable production, ISCoffee, certification, coffee

INTRODUCTION

The Indonesian coffee sector is fully liberalized, which means that actors can operate in the sector with a very little state intervention. The coffee sector is open to investments from both local and international businesses. Some multinational corporations invest in the Indonesian coffee sector as exporters, and some of them also as roasters. Exporters have quickly adapted to the increase in demand for certified coffee in the global market in the United States (US) and Europe by participating in global private certification schemes such as Fairtrade, Utz Certified, Rainforest Alliance, and Commond Code for Coffee Community (4C). These schemes,

although governing coffee production in the South, are generally initiated by Northernbased businesses and NGOs (Arifin, 2010; Bitzer et al., 2013; Bitzer & Glasbergen, 2015). They claim to regulate agricultural production and processing methods in order to achieve better environmental and social conditions, and to open opportunities for market access, to improve rural livelihoods and the competitiveness of Southern farmers, and to alleviate poverty in rural areas (Hoffmann & Grothaus, 2015). Many studies have tried to evaluate the claim by examining their impacts especially on smallholders' livelihoods and welfare (see for example Carlson & Palmer, 2016; Ibanez & Blackman, 2016; Ruben & Fort, 2012; Valkila, 2009; van Rijsbergen et al.,

2016). However, the studies' results are not conclusive yet and the debates regarding the impacts are still ongoing (Blackman & Rivera, 2011; Ibnu *et al.*, 2015; Loconto & Dankers, 2014). In the meantime, the Indonesian government through the Ministry of Agriculture responded to the Northern standards and certifications by initiating a public standard and certification for coffee called as the Indonesian Standard Coffee/ISCoffee (Media Perkebunan, 2013).

Other examples of emerging public sustainability standards and certifications include the Indonesian public standards for sustainable palm oil (Indonesian Sustainable Palm Oil, ISPO), and cocoa (ISCocoa), the Brazilian standards for sustainable soy ("Soja Plus") and coffee (Certifica Minas Café), India's Trustea standard for the tea sector, and South's Africa's standards for fruit and wine production (SIZA and WIETA). According to Schouten & Bitzer (2015), public standards and certifications reflect Southern actors' attempt to establish counter-initiatives to the Northern standards and certification. In the literature, we can identify different reasons underlying the attempt to establish counterinitiatives. Smith & Fischlein, (2010) for example, argued that counter-initiatives emerge because certain groups of stakeholders in the South feel dissatisfied with or disadvantaged by the outcomes of the Northern standards and certification. According to Wijaya & Glasbergen (2016), however, the counter initiatives emerge because the Southern government considers the regulation of the agricultural sector to be its own responsibility. The Indonesian government uses the national standards and certifications as a way to assert a national identity through national standards and certifications and pride that goes along with it. In addition, Sugandi (2014) argued that, through the national standards and certifications, the government tries to expand the market of agricultural commodities.

However, the doubt regarding the Southern public initiatives is that whether they can attain international recognition, including enhancing their shares in international markets. According to Giovannucci et al. (2014), Schouten & Bitzer (2015), and Wijaya & Glasbergen (2016), the Southern standards and certifications have some relevance for their domestic whereas Northern standards and certifications will be more demanded in international trade. The Southern state's authority to ensure the enforcement of the standards may also be problematic (Glasbergen & Schouten, 2015). Moreover, as they are relatively recent initiatives, the impacts of the Southern standards' are still unknown, particularly at a smallholder level.

Although ISCoffee has not yet been formally implemented, the Indonesian government has socialized the public initiative to stakeholders in some coffee producing regions already (e.g. Lampung and Nusa Tenggara Barat). This socialization includes pilot projects setting and verifying criteria for associations of traders, local governments, and farmer organizations (Media Perkebunan, 2013). The government expects to fully implement ISCoffee in the near future and it may become a prospective standard and certification in international trade, particularly in new emerging coffee markets in Asia and Africa that have recently overtaken Europe as the primary destination for Indonesian coffee export (Ditjenbun, 2015; SCP, 2014; Sughandi, 2014).

While the new coffee markets seem to be promising for ISCoffee, the expectations will not be easily realized neither will it be easy to certify millions of smallholders. In other words, the implementation capacity of ISCoffee is still uncertain and little attention has been given so far to this issue. This paper aims to contribute to our knowledge about the new Southern trend of public sustainability regulation, answering the research questions:

(1) what are the barriers and opportunities in the process of implementing ISCoffee? (2) what contribution can we expect from the implementation of ISCoffee regarding problems in the coffee sector? (3) to what extent may this public regulation become a viable alternative to private certification?

MATERIALS AND METHODS

ISCoffee Main Principles and Criteria

The government took a rather passive role in the coffee production for a long time, but it now explicitly acknowledges the economic value of coffee in its regulations (Pepres No. 45, 2015; UU RI No. 39, 2014). The establishment of the National Standard of Indonesia or *Standar Nasional Indonesia* (SNI) also fits into this trend, but SNI only covers the quality of coffee beans and processed coffee. Set by the Indonesian National Standardization Agency, SNI specifies the classification, the labelling and the packaging of coffee green beans (PP RI No. 102, 2000). ISCoffee is considered the first attempt of the government to more comprehensively pay attention to the sustainability coffee production.

Similar to Northern private standards and certifications, ISCoffee contains principles and criteria covering three sustainability pillars (i.e. economic, social, and environmental aspects) of coffee production. Overall, ISCoffee is built on 23 principles and criteria and 87 indicators. Producers who comply with the criteria become eligible for certification. Although ISCoffee to some extent duplicates the principles and criteria of Northern standards and certifications, it can also be considered as a cumulative set of already existing government regulations, including SNI (Media Perkebunan, 2013). Given this background, we see some differences between the Northern standards and certification and ISCoffee. For example, ISCoffee more strongly emphasizes the legality aspect such as the requirement of a certificate of land-ownership, a recommendation for land location (from the Indonesian Geospatial Information Board), and a SNI-based criterion (e.g. the defect values of coffee beans).

Analytical Framework

The extent to which ISCoffee will be well implemented to induce sustainability change in the coffee sector strongly relates to its implementation capacity. In this paper, we define the implementation capacity of ISCoffee as the capacity of stakeholders (farmers, different government levels, businesses etc.) to implement the public standards and certification. Based on the literature in the field of government and/or national policy, standardization and/or certification, business and/or organizational management, public administration, and innovation study, we recognized five essential 'conditions' for the implementation capacity (Figure 1). First, regulatory framework that refers to explicit formalized policies and rules on different government levels, imposed on all stakeholders by topdown decision-making procedures (Agterbosch et al., 2009; Dieperink et al., 2004; Guijarro, 2007; Kironde, 2006; Smit et al., 2008; Vermeulen & Hovens, 2006). Second, resources, knowledge and expertise refer to the availability of assets, infrastructure, and facilities as well as competent (human) personnel with knowledge and expertise on both technical aspects (e.g. tools, diseases, pests, soils, seeds etc.) and managerial/nontechnical aspects (e.g. communication and organization) (Amit & Schoemaker, 1993; Butler, 2003; Devas, 1997; Guijarro, 2007; Intarakumnerd et al., 2002; Stapel & Schneider, 2012). Third, the quality of the public administration that refers to the extent to which public administration can be trusted and considered satisfactory by a community; the indicators are transparent processes, administrative procedures, and the coordination of different public institutions that

Indicator

Table 1. Principles and criteria of ISCoffee

Principles and criteria

Principles and criteria	Indicator
1. Legality and plantation	
Legality of farmers' land	 land certificate, or document of land-lease agreement
	letter of permission to cultivate coffee
 Location of plantation is environmentally and 	The availably of recommendation from The Indonesian Geospatial
spatially appropriate	Information Board (Badan informasi geospatial)
Individual farmers must join farmer groups	 document of farmer group establishment
	 document of operational planning
	 document of group activity
2. Farming, harvest, and post-harvest	• • •
• •	Control from how they then have a different and
Seed must be from breeders that are recommended	Seed are from breeders that have been certified by certification
by the government	bodies accredited by the government
Harvest is done with the right technique and	Farmers record their harvest activity
the right schedule	
After harvesting, farmers sort the cherries according to their quality (size, maturity, and defects)	Farmers record their sorting activity
	. Forman day the showing as more than 12 hours since
Farmers dry (the sorted cherries) and then remove	Farmers dry the cherries no more than 12 hours since
the cherries' flesh and skin	picking them
	 Farmers record these activities
Farmers sort the coffee beans according	 Farmers record the sorting activity
to size and defect	 The defect value is based on national standard of
	SNI 01-2907-208
> Farmers sell all their coffee production to	• Document of selling agreement between farmer groups with
cooperative/companies based on an agreement	cooperative /companies
of minimum price	The availability of a document that explains the mechanism
	of price formation
	 Record of selling activities (including quantity and coffee
	price)
20 : :	i ···/
3. Organization	
Cooperative establishment	 Farmer groups join to form cooperatives
	 Local government facilitate the cooperative establishment
Coffee farmer's association	 Farmers join the Indonesian coffee farmer association (Asosiasi
	petani kopi Indonesia/APEKI)
	APEKI exists at provincial level
	The Estate Children to Vol
4. Social aspects	
Farmers prioritize health and safety conditions	 Farmers do not employ under-age children for doing high
of workers	risks jobs such as applying pesticides, and pruning coffee
	trees.
Farmers participate in improving public facilities	• Farmers involve in every activity to improve facilities in rural
	areas (by communal work or <i>gotong royong</i>)
Ammonistian of least window and least culture	
Appreciation of local wisdom and local culture	• Farmers make an agreement to list local wisdom/culture that
	need to preserved
	 Farmers make schedule of activities to preserve the local
	wisdom/culture
5. Environmental aspects	
	- Formano moles o do comunitado e destabara como de 1 e 1 - 2 d c.
Farmers open new lands without burning the forest	Farmers make a documentation that they open the lands without
	burning the forest
Farmers make buffer zone	Buffer zone is area between coffee plantation and their neighboring
	environments
Farmers improve biodiversity	• The area must be planted with annual trees that can conserve
r armers improve electivessity	soils and enhance biodiversity
	Farmers recognize protected flora and fauna, and do not kill or
	e 1
	hunt them.
Farmers protect water sources	 Farmers protect water sources by not opening coffee plantation
	near the water sources
	 Farmers protect river banks by planting trees along the banks.
➤ Farmers improve soil fertility	Farmers use fertilizers recommended by competent agency
	Farmers increase the use of organic fertilizers
	- 1 armers merease the use of organic fertilizers
Source: Ditjenbun (2013).	

serve the community (Comfort, 2007; Gray & Jenkins, 1995; Indraningsih *et al.*, 2015; Kelly, 2005; Löffler, 2001; Porter, 2000). Fourth, the economic context (market) refers to the extent to which market conditions (e.g. supply, demand etc.) can push or influence actors (e.g. local and international traders) to adopt the standards (Smit *et al.*, 2011; Trienekens, 2011; Vermeulen & Hovens, 2006; Wijaya & Glasbergen, 2016). Fifth, political context refers to political conditions and/or motives that drive the government to develop and to further imple-

ment the public initiative (Agterbosch *et al.*, 2009; Patterson *et al.*, 2016; Thow *et al.*, 2015). These conditions are assumed to affect decisions made by stakeholders through determining the barriers and opportunities for the stakeholders to actually implement the public standards and certification. Although each condition is necessary, it is not in itself sufficient for implementation. It is the way the stakeholders deal with the conditions that finally determine (actual) implementation (Agterbosch *et al.*, 2009).

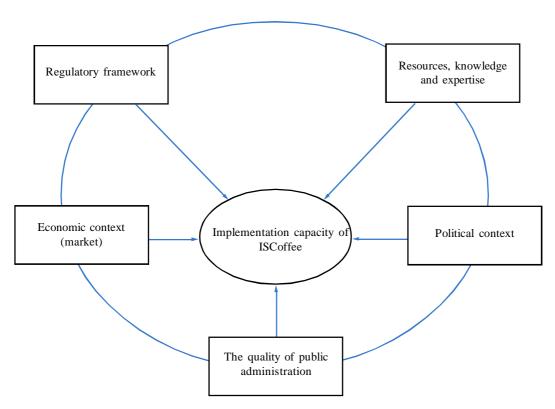


Figure 1. Conditions influencing the implementation capacity of ISCoffee

Data Collections and Analyses

The main methods employed for collecting data were in-depth interviews and document analysis. A qualitative research approach and interviews in 2016. The interviewed involved actors in ISCoffee at the national level, including those from the Ministry of Agriculture (i.e., the Directorate General of Plantations), the Ministry of Trade (i.e., the Department of Domestic and Export trading) and the Ministry of Industry (i.e., the Department of Food and Beverage). At the local level, we interviewed local government officers at provincial and district levels, including those from the plantation department, the department of trade, and the government extension office. As the province of Lampung is the main coffee producing region in the country, and ISCoffee has been socialized to stakeholders in this region, the interviews at the local level were also conducted in the province (i.e. Tanggamus and the West Lampung District). Next to the government officials, we also interviewed informants outside governmental institutions such as exporters and actors from AICE (the association of Indonesian coffee exporters), farmer organizations, and researchers from

national universities, NGOs, and village leaders. After conducting 30 interviews, we reached information saturation and therefore we did not add more respondents. According to Dworkin (2012), 25-30 respondents or interviews, combined with a variety of written materials (printed and online), are sufficient for qualitative analysis. Our interviews covered 11 interviews with government agencies (at the national and local level), eight interviews with farmer organizations (i.e. farmer groups and KUBEs), two interviews with village leaders, and nine interviews with exporters and the association of coffee traders and exporters, NGOs, and researchers (see Table 2).

We consulted scientific articles, published and unpublished documents from governmental and non-governmental institutions, news-articles from the Indonesian online media (e.g. Ditjenbun, 2013; Perkebunannews, 2016, and Sinar Tani, 2014; 2016), and magazines such as 'Media Perkebunan' and 'Agro Industri' that present the Indonesian government's policies and programs on coffee. In addition, we also used materials from a roundtable workshop focusing on developing a road map for the coffee sector in Indonesia. This workshop was held on

Table 2. List of informants

Categories	Number of informants
A. Interviews -2016	
NGOs	2
National government officials	6
Local government officials	5
Researchers (from university and research institute)	4
Village leaders	2
Exporter and association of Indonesian coffee exporter (AICE)	3
Farmer organizations	8
Total interviews	30
B. Printed and online documents	
Unpublished document of government body*	2
Published document of government body**	1
Unpublished document of non-government body***	2
Online Media	3
Magazines	2
Material presentations from a roundtable workshop	3
Total Documents	13

^{*} including unpublished report of local government on ISCoffee field testing, and ISCoffee draft.

^{**} including published strategic planning of the Directorate General of Plantation.

^{***} including unpublished documents of AICE (i.e., AICE's report and letter).

4 February 2014 and was organized by the Indonesian Ministry of Trade and the Word Bank to discuss opportunities, barriers, and development strategies for Indonesian coffee and comprised of speeches and presentations on topics related to sustainability standards and certifications.

We recorded the interviews and applied open questions to explore the five conditions influencing the implementation capacity of ISCoffee. Our questions connected with the analytical framework and the principle and criteria of ISCoffee. Regarding the regulatory framework, for example, we asked the informants about policies and rules on different government levels imposed on all stakeholders. We also asked questions associated with legality and plantation (e.g. land certificate and farmer groups' documentation). After the interviews completed, we replayed and carefully listened to the recordings. We used the analytical framework to understand information and further linked them to the relevant building blocks of the analytical framework. In this way, we assessed how ISCoffee deals with the five conditions and investigated the opportunities or constraints for the standard's implementation.

RESULTS AND DISCUSSION

Coffee is considered one of the most important agricultural commodities in Indonesia. The commodity has been exported for decades and therefore has contributed significantly to the national GDP. In the coffee sector, land conflicts and other clashes are relatively rare; these are favorable conditions for two million farmer households (or more than five million individuals) in rural areas who depend on coffee as their main source of income (Ditjenbun, 2015; Wahyudi & Jati, 2012). The favorable conditions, however, do not imply that a more sustainable coffee production can automatically be achieved and the problems

smallholders have to face are solved, such as low coffee productivity and quality, environmental degradation, forest destruction, smallholders' limited access to market and capital, lack of government support, and weak farmer organizations.

Regulatory Framework Conditions

To understand the legal procedures underlying ISCoffee, it is important to realize that the Indonesian government consists of two levels: the national and local level. The national government resides in Jakarta, including the Ministry of Agriculture. The ministry has some directorates that include the Directorate General of Plantation. This directorate manages the coffee sector and has local, decentralized units called dinas that exist at the provincial level (i.e. dinas provinsi) and district level (i.e. dinas kabupaten). At local levels, the governments are divided in more echelons. The highest level is the provincial one (led by a gubernur), followed by the district level (led by a bupati), the sub-district (led by a camat), and the village level (led by a kepala desa).

ISCoffee is initiated by the Directorate General of Plantation of the Ministry of Agriculture. It is therefore a national program implemented in, and delegated to, the local units. The bureaucratic lines will start from the directorate to the dinas provinsi and then to the dinas kabupaten. At the same time the law of regional autonomy suggests that the development of the coffee sector is the sharedresponsibility of national and local governments. This brings even more reasons for local governments to participate in developing the coffee sector. As dinas operate inside the regional authority of local governments, they should cooperate with the local governments. This theoretically will bring more opportunities for ISCoffee to be well implemented and supported along the different government levels.

However, we also found barriers related to the regulatory framework that potentially constrains the implementation of ISCoffee. These barriers include lack of clear supporting regulations for ISCoffee implementation. First, a regulation imposed on all stakeholders to implement ISCoffee has not yet been determined. Based on our interviews with a respondent from the Directorate General of plantation, the directorate prefers a regulation higher than ministerial level (e.g. a presidential regulation) for ISCoffee, but until now such a regulation has not yet been determined because apparently the government still focuses on ISPO.

Second, the relationship between national and local government is still rather ineffective in the era of regional autonomy. On the one hand, the national government seems to lose some control over the local government because of ineffective framework of power allocation (Devas, 1997). On the other hand, the local government often show inactive attitude to national policies and/or mandates that will likely increase difficulties concerning the implementation of ISCoffee. The inactive attitude may be resulted from the feeling of limited economic benefits or income opportunities from the implementation of the national policies/mandates. For example, the local government is mandated to actively play a role in supporting the implementation of the certification of geographic indication (CGI). The CGI is established by the national government to formally assure that certain agricultural commodities originate from particular regions, including Robusta coffee from Lampung province. However, the CGI certificate is held not by the local government, but by Masyarakat Perlindungan Indikasi Geografis or Geographical Indication Protection Society (Wahyudi & Jati, 2012). As a consequence, not all local governments are active to play the mandated role. Our interviews with a respondent from AICE Lampung

suggest that the local government does not active in the CGI as no noticeable activities or significant outputs are realized by the government related to the certification.

Resources, Knowledge, and Expertise

Institutions that specialize in coffee research are available in Indonesia, either managed by the Directorate General of Plantation (i.e. as one of its operational units) or as an independent organization (i.e. the Indonesian Coffee and Cocoa Research Institute). These institutions provide supports for farmers in the form of good quality seeds and coffee production techniques. These supports are essential for farmers and can be regarded as opportunities enabling the farmers to be able to participate in ISCoffee. However, we found that ISCoffee will likely meet more barriers than opportunities in the context of resources, knowledge and expertise. At a local level, the government has limited personnel with knowledge and expertise on the implementation of strategic programs. The interviews with a representative of dinas kabupaten confirm that many government personnel have inadequate capacities to implement programs because they are often included in ad hoc teams for a relatively short period and therefore lacking time to improve capacities.

We found two main issues that explain why the government personnel (especially at local levels) have low relevant knowledge and skills. First, the recruitment processes are rather poor. According to Yullyanti (2009), the recruitment processes generally fail to measure the competencies of applicants in relation with the job requirements. Second, we observed that the existing personnel are being burdened with various tasks related to not only coffee but also other agricultural commodities and spend most of their time on routines, handling data or information to make reports to their superiors. The implication

is that most of government personnel tend to develop administrative skills much more than to improve their managerial skills required to run a program like ISCoffee.

Moreover, budgets will be a challenging issue for ISCoffee because the standards require farmers to use coffee seeds produced by credible seed centers. These seeds then need to be certified by agencies acknowledged by the government. Because of budget constraints, however, infrastructures related to the distribution of certified coffee seeds will be remain difficult to be accessed, especially by farmers in remote regions. The risk is then that famers in remote areas keep using uncertified seeds. Our interviews with a representative of the Directorate General of Plantation explain in more details that budget is clearly challenging for running government programs because the allocation of state budget is only five percent to agriculture and plantation sectors, which further needs to be shared by many commodities. Agricultural programs cannot run well without supporting infrastructure, for example, seed infrastructures. However, credible seed centers are currently limited, which may not guarantee the availability of certified seed in disperse locations.

In managing their coffee plantation, farmers typically rely on knowledge and expertise acquired from their parents as well as their own experiences. The knowledge and expertise, however, may not thoroughly cover all criteria of good agricultural practices. Farmers therefore need to improve their knowledge and expertise in technical and organizational domains. Through providing agricultural extension services, the government can facilitate the knowledge improvement. The problem is that government extension services barely exist in the coffee sector. In addition to a lack of personnel, extension workers mostly specialize in staple food production rather than in coffee production and organization (Sinar Tani, 2016). In the field, our interviews with an extension officer in Lampung Province reveal that it is rarely happen extension officers specialize in coffee or organization. Extension officers mostly have knowledge and expertise in the production of paddy, maize, and other staple foods.

Other institutions (e.g. NGOs, research institutes, universities, and businesses) could potentially contribute to improving farmers' knowledge, but institutional mechanisms to link knowledge and expertise providers to farmers are rather weak. For example, linkages between universities and the coffee sector are often based on personal connections (between individual researchers and farmers) rather than institutional-based commitments. The case of klinik pertanian keliling may reflect the situation. Klinik pertanian keliling is a unit within a local university providing knowledge and expertise to farmers through trainings, demonstrations, seminars, and field visits. The life-span of such a unit is relative short although researchers, on an individual basis, still connect to farmers during fieldwork. The others rarely work together with the government often due to the government's negative perceptions, especially on NGOs (Iqbal, 2008). These situations limit the institutional support to the conveyance of knowledge and expertise and therefore we cannot expect much from these institutions regarding the implementation of ISCoffee and other governmental regulations/programs. As a consequence, ISCoffee will considerably depend on the capacity of the government to handle the process of providing knowledge/ information and communication to the millions of coffee farmers and the auditors. The process will involve government personnel from various departments and various levels.

Many national programs have been implemented prior to ISCoffee, and channels and media for information-flow and communication as well as knowledge transfer have been established already. ISCoffee may use the available channel and media such as website. email, audio/video conference, and other communication channels/media supported by information technology. At a government level, these channels and media can speed up the conveyance of knowledge and information. At a farmer level, potential supports for the information flow and communication of the public initiative can be provided by farmer organizations, extension services, and village leaders. However, potential barriers can also be identified. First, farmers are unlikely to use channels and media used by governmental agencies because they are unfamiliar with it. Government personnel therefore need to meet farmers in person to convey information and share knowledge. This will be challenging for the personnel as most coffee farmers live in rural areas, and many of them live in remote villages with relatively difficult access to public services and poor infrastructural conditions. Many farmers are also still unorganized, even further challenging the provision of information to all farmers. Second, many farmer organizations as the agents of communication at a farmer level are not welldeveloped or not even exist yet (see also Arifin, 2010) and extension officers are struggling with limited support from the government and a limited number of personnel, and the fact that coffee is generally not considered a priority in their work (Sinar Tani, 2016). Village leaders may also have agendas or priorities that are not in line with ISCoffee. Regarding extension officers, a representative of extension officers during the interviews explains the reality that the government extension agency is no longer an independent organization, but is combined with agricultural departments as one of its operational units. The concern is the extension agency lacks supports as independent organizations, and this may become worse after merging. Regarding extension services, the agency currently has less extension officers who routinely visit farmers. Ideally, one officer covers one village with four or five farmer groups, but at the moment extension officers mostly cover more than three villages. Incentives and facilities for extension officers to perform their duties are also limited.

Regarding village leaders, our interviews with respondent (a former village leader) suggest that a village leader is more a political position than a governmental agent. Competing with their own agendas, village leaders may not effectively communicate ISCoffee to farmers.

Public Administration Quality

The reformation of bureaucracy in Indonesia aims to establish good governance that is free of corruption, collusion, and nepotism (Anggraini, 2014). This is an opportunity for ISCoffee as corruption, for example, to some extent, has been controlled by KPK (Anggraini, 2014; Sudibyo, 2012). KPK (Komisi Pemberantasan Korupsi) is an independent state institution that works to eradicate corruptions in the government bodies (UU RI No. 30, 2002). However, we found that other issues related to the public administration are still unaddressed, which result in low satisfaction and trust of the farmers in the government. The issues are transparency and/or fairness problems, administrative problems, and coordination deficiencies. Regarding transparency and/ or fairness problems, we can learn from PUAP (Pengembangan Usaha Agribisnis Pedesaan). This is a financing scheme from the government to help farmers (i.e., distributed through farmer groups) with credits to improve their agricultural production and agribusinesses (Indraningsih et al., 2015). However, farmer group selection is found to be problematic because of the subjectivity of selection method (Indraningsih et al., 2015; Sudaryanto & Wijayanti, 2013). Our interview results further clarify the problem. According to the farmer respondents, PUAP involved some farmer groups but excluded the others. It was uncertain how the program included the participants, leading the farmer to deem that the selection method (of village leader) was very subjective.

Learning from PUAP, addressing the fairness issue regarding farmer group selection will contribute positively to the implementation capacity of ISCoffee. Furthermore, our interviews with farmer organizations suggest that the majority of coffee farmers have lands without certificate from the government. Most farmers only have a proof of ownership acknowledged by their village leaders and elderly people. Apparently farmers are hesitant to deal with the public administration because of the perceived difficulty in administrative procedures, extra costs, and also the reliability of the public administrations' services.

As ISCoffee require farmers to certify their land, farmers' hesitancy to do so can adversely contribute to the implementation capacity of the public standards. Moreover, an unpublished report of dinas provinsi on ISCoffee field-testing revealed that most of the difficulties that farmers felt in complying the public standards will relate to administrative requirements. For individual farmers, it will be difficult to fulfil the requirements (e.g. handing over land certificates, and documents related to seed and pesticides) and therefore they will rely on farmer groups. However, farmer groups also feel that the administrative requirements will be burdensome. A leader of a farmer group further explains that financial incentives for people who manage farmer groups are relatively small. These people are mostly volunteers and they are also farmers. Their main duties are managing their own plantations to support their families. ISCoffee is likely to put more burdens on farmer groups, especially these volunteers to handle many administrative requirements. The question is therefore whether these volunteers will be willing to do the task with the current incentives.

The last aspect of public administration concerns weak coordination among government agencies. For example, the Directorate General of Plantation that initiates ISCoffee feels that the standard is less supported by other ministers' directorates. In the interviews, a government officer from the Directorate General of Plantation claims that the directorate struggles alone for ISPO, ISCocoa, and recently for ISCoffee. This implies that the others may consider these standards are the solely responsibility of the Directorate General of Plantation.

Agro-Industri (2016) stated that weak coordination among directorates (from different ministries) are resulted from their different views on how to involve in the coffee sector, which in turn determines the strength of their motivations to be involved in ISCoffee. Our interviews further reveal that the directorates have different perceptions on the importance of coffee vis-à-vis other agricultural commodities, which may even more clarify the reasons why they are rather uninterested in ISCoffee. For example, a government officer from the Directorate General of Trade illustrates that his directorate prioritizes staple foods above coffee. The main concern of the department is trading to support marketing of any agricultural commodities, but the most important ones are rice, maize, and other staple foods. Compared to these staple foods, the department does not interfere much in coffee.

Market

Most coffee that is being produced in Indonesia is exported. Supply and demand conditions in international markets therefore greatly influence the Indonesian coffee sector, affecting quality exported, and also coffee prices. The required export quality may also touch upon the way in which smallholders produce the coffee (i.e., in a sustainable way through private standards and certification). In recent years, markets in Asia and Africa seem to become more attractive to Indonesian coffee exporters. According to Sughandi (2014), around 56% of the total Indonesian coffee has been exported to these new markets. ISCoffee therefore has the opportunity to be exported to these new markets which, different from the European and American markets, do not require the generally more strict private standards. At the same time, the demand for Indonesian coffee from the domestic market is increasing by more than five per cent per year (Agro-Industri, 2016; SCP, 2014; Sugandi, 2014). For farmers, this diversification of market opportunities can be beneficial; and ISCoffee might have the opportunity to improve sustainable coffee production and to promote certified coffee, especially in the local market and upcoming markets.

Although the diversification of markets seems to be promising, we can also identify potential barriers to the implementation of ISCoffee. The barriers relate to the limited power of the markets to convince traders (i.e. national-based and international-based companies) to adopt and follow the ISCoffee standard. National-based companies play dual roles as collectors and traders. They collect (uncertified) coffee beans from smaller local collectors (middlemen) and trade them to domestic and (new) international markets. These companies, however, seem to be less interested in improving sustainable coffee production. This is a potential barrier to ISCoffee implementation as the nationalbased companies are not easily convinced to change their practices, and - at the same timeneed to make new investments for adopting the standard. As a representative of AICE illustrates that most national companies have little experience with certification guidelines. These companies need significant changes in their operations to implement ISCoffee, including the establishment of a sustainability division. This division needs to work with farmers, helping them to fulfil certification requirements. This can be problematic for these companies because they do not have stable connections with farmers. They collect coffee beans from local traders or collectors in various areas.

Certified coffee is not considered important in the domestic market as relatively few consumers are aware of standards and certification. The new emerging markets (e.g., China and India) are similar to the local market and do not prioritize certified coffee (Wijaya & Glasbergen, 2016). Thus, it will not be a problem for the national companies to continue selling uncertified coffee to the domestic and upcoming markets, and it can therefore be doubted whether ISCoffee can realize the national companies' compliance to the standard principles.

Compared to the national-based companies, internationally-based businesses have more experiences in implementing sustainability standards and certification. An internationalbased company usually has partners in other coffee producing countries. Together, they are called as multinational corporations, supplying coffee predominantly to the old markets in which buyers prioritize (Northern) sustainability standards and certification. The multi-nationals that operate in Indonesia, at some point, have to decide on the adoption of ISCoffee as a credible and alternative standard for the private standards. Companies' decision to adopt ISCoffee can be a barrier to the implementation of the standard. As a representative of a multinational exporter clarifies, the company's policies are not fully independent, but are related to partners in other countries. It is unlikely that the company's partners adopt ISCoffee in their operation in Vietnam or in other countries because they may have other priorities and/ or preferences. The company may not be able to adopt ISCoffee and at the same time pushing the partners to adopt it.

Political Context

Globalization enhances international trade among countries. Trade tends to become more liberal and trade-barriers are decreasing. A country may be able to export products via less complicated procedures. The Indonesian government however, especially the Directorate General of Plantation, views the current tradesystem to be unfair. The market is not considered to be truly liberal as trade-barriers still exist, for example in the form of private standards and certifications. The government also feels that the attractiveness of local agricultural products in the domestic markets is threatened by subsidized, relatively cheaper products from abroad and it fears that the agricultural sector is susceptible to monopolistic behavior of a few actors, especially foreign investors.

The government further takes some steps to protect the agricultural sector in the area of food sovereignty, and in the area of land tenure and foreign investments. Regarding food sovereignty, the strategic planning of the Directorate General of Plantation 2015-2019 page 50 stated that government's interventions are viewed to be necessary. According to the strategic planning food sovereignty includes the right to protect and regulate national agricultural policies and to protect the domestic market from dumping and overproduction from other countries. Therefore, small farmers and farm workers should be given access to land, water, seeds and other agricultural sources. Thus, food sovereignty should take precedence over the interests of the market (Ditjenbun, 2015).

Furthermore, the government considers that more control on land tenure and foreign investments is necessary to protect the agricultural sector and to provide reasonable benefits for local actors. As stated in the strategic planning (page 100), in the future, it will need clear, realistic regulations and policies on the amount of plantation land to be exploited by foreign companies and how much investment can enter Indonesia with equitable benefit sharing with the government (central and local) and gardener's community (Ditjenbun, 2015).

In the coffee sector some local actors support the agricultural protections, urging the government to intervene by establishing regulations on foreign capital investment and export. According to AICE (2015), local companies cannot compete with large multinational companies. Their number has declined significantly, from 234 to only twenty local companies, and therefore the exporter association urges the government to reconsider the regulations on foreign capital investment and export (AICE, 2016).

Based on the forgoing, the formulation of ISCoffee seems to be largely influenced by 'protectionist' thoughts. ISCoffee can therefore be linked to the government's efforts to protect the agricultural sector in general and the coffee sector in particular. According to the government, in order to be protected, the coffee sector must follow government regulations, including the legality of land and SNIbased criteria embedded in ISCoffee principles and criteria (Ditjenbun, 2015). We can further see that although the government has the authority to implement the public standards and certification, the motivation underlying the standards formulation was not to improve the sustainability of coffee production (at least was not the strongest motivation).

Currently, the government's focus seems to be on developing standards and certifications for different commodities (e.g. coffee (IScoffee), palm oil (ISPO), and cacao (ISCacao)). However, less attention is given to the implementation capacity of the standards by thoroughly addressing their implementation barriers to boost the available opportunities.

In our view, there are five recommendations that can be considered to improve the current conditions and therefore enhancing the implementation capacity of ISCoffee. First, coherent regulations on ISCoffee and its supporting conditions must be established through enhanced collaboration of relevant ministries, including the Ministry of Agriculture, the Ministry of Home Affairs, and the Ministry of Rural and Underdeveloped Regions. The coordination, mediated by the Ministry of National Development Planning, is intended to firstly synchronize the planning of the different ministries because they work on interrelated sectors: rural areas, local governments, and coffee sector. After that, a regulation and/ or a standard operating procedure (SOP) should be established to guide the ministries and their subordinate levels to effectively share responsibilities. Second, ISCoffee need to have a better place in bureaucracy, managed by a national-level secretariat run by people with relevant expertise. The national-level sustainability secretariat needs to manage ISCoffee from a (strong) position in bureaucracy that has a power to enforce ISCoffee implementation at both national and local levels.

Third, the quality of public administration needs to be improved by addressing the issues of administrative procedures and coordination deficiencies. One of plausible ways to do that is by involving relevant government institutions that either directly or indirectly will involve in ISCoffee. For example, to address the issues of farmer's land certification, the Ministry of Agriculture should take the lead, in collaboration with the Ministry of Agrarian and Spatial Planning/National Land Agency, to proactively help farmers with the land certification procedures and/or administrative requirements. Fourth, extension service in coffee sector should also be improved through changed policies and enhanced investments. Therefore, to enhance the implementation capacity of ISCoffee, the ministry's policy on the extension service need to be reformed to give more attention to the coffee sector. After that, investments need to be increased for the extension service to expand the number of extension workers working on coffee sector, to enhance the knowledge and skills of the workers (especially on coffee production and organizational development), and to improve necessary facilities and incentives for the workers. Next, all of these investments need to be legalized or manifested in a regulation (e.g., to provide commitments on supporting resources, and who will provide the resources).

Finally, we noted that the aforementioned problems (e.g., weak farmer organizations, low quality in public administration, and lack of agricultural extension) have long been occurring. Efforts to address the problems, however, should not be solely attributed to the responsibility of the government. Instead, all stakeholders' participation is required to overcome the problems and/or to help the government to address the problems. Therefore, in the fifth and final recommendation, we endorse the enhanced collaboration between government and non-government actors to provide, for example, sufficient quality and quantity of extension services in the coffee sector. As ISCoffee is the government initiative, the implication is that the government should take the lead to invite other actors to contribute and to facilitate favorable conditions in which the actors' contribution can be significant. Overall, there is much to do for ISCoffee but addressing the barriers related to the five conditions can be considered as the standard's priority to improve the implementation capacity.

CONCLUSIONS

To our knowledge, this paper is the first attempt to analyze the opportunities and barriers in the process of implementing ISCoffee, contributions that we may expect from its implementation and whether the public standard can be a viable alternative to Northern-based private standards and certification. Our first conclusion is that ISCoffee is likely to have a low, insufficient capacity to be implemented in the Indonesian coffee sector. This is mainly inferred from the potential barriers to ISCoffee implementation that will be challenging to address, compared to the advantages that can be taken from the opportunities available. Our second conclusion is that ISCoffee, with the current level of implementation capacity, will unlikely to be able to thoroughly solve problems in the coffee. The problems that touch upon institutional, regulatory and resource are relatively challenging for ISCoffee to address because their barriers are interrelated and will require collaborated solutions at a policy level. Furthermore, our third conclusion is that-on the short term-ISCoffee will unlikely to be viable alternative to Northern private standards and certification in the old markets in Europe and US. The Northern standards and certifications have established their legitimacy in the markets and at the same time have become marketing gears of multinational companies.

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REFERENCES

- Agro-Industri (2016). Secangkir Kopi Bubuk Indonesia di Dublin. Kementerian Perindustrian. Jakarta, Indonesia.
- Agterbosch, S.; R.M. Meertens & W.J. Vermeulen (2009). The relative importance of social and institutional conditions in the planning of wind power projects. *Renewable and Sustainable Energy Reviews*, 13, 393–405.
- AEKI (2015). Revitalisasi Perkopian di Daerah Lampung. Asosiasi Eksportir dan Industri Kopi Indonesia, Lampung. Unpublished report.
- AEKI (2016). Peninjauan Kembali Peraturan Pemerintah RI Nomor 2 tahun 1996 tentang Kegiatan Perusahaan yang Didirikan dalam Rangan Penanaman Modal Asing di Bidang Ekspo dan Impor. Asosiasi Eksportir dan Industri Kopi Indonesia. Unpublished letter to the national government.
- Amit, R. & P.J. Schoemaker (1993). Strategic assets and organisational rent. *Strategic Management Journal*, 14, 33–46.
- Anggraeni, T. (2014). Menciptakan sistem pelayanan publik yang baik: Strategi reformasi birokrasi dalam pemberantasan korupsi. *Jurnal Rechtsvinding*, 3, 417–433.
- Anonim (2013). Indonesian standard coffee segera diterapkan. *Media Perkebunan*.
- Anonim (2014). Standar perkebunan kopi berkelanjutan Indonesia. *Sinar Tani*.
- Anonim (2016). Pasar ekspor kopi membesar local eksportir mengecil. *Perkebunannews*.
- Anonim (2016). Postur penyuluhan pertanian pada era UU pemerintahan daerah. *Sinar Tani*.
- Arifin, B. (2010). Global sustainability regulation and coffee supply chains in Lampung

- Province, Indonesia. *Asian Journal of Agriculture and Development*, 7, 67.
- Bitzer, V. & Glasbergen, P. (2015). Business–NGO partnerships in global value chains: part of the solution or part of the problem of sustainable change? Current Opinion in *Environmental Sustainability*, 12, 35–40.
- Bitzer, V.; P. Glasbergen & B. Arts (2013). Exploring the potential of intersectoral partnerships to improve the position of farmers in global agrifood chains: findings from the coffee sector in Peru. Agriculture and Human Values, 30, 5–20.
- Blackman, A. & J. Rivera (2011). Producer level benefits of sustainability certification. *Conservation Biology*, 25, 1176–1185.
- Butler, M.J. (2003). Managing from the inside out: drawing on 'receptivity' to explain variation in strategy implementation. *British Journal of Management*, 14(s1), S47–S60.
- Carlson, A. & C. Palmer (2016). A qualitative meta-synthesis of the benefits of ecolabeling in developing countries. *Ecological Economics*, 127, 129–145.
- Comfort, L.K. (2007). Crisis management in hindsight: Cognition, communication, coordination, and control. *Public Administration Review*, 67(s1), 189–197.
- Devas, N. (1997). Indonesia: what do we mean by decentralization?. *Public Administration and Development*, 17, 351–367.
- Dieperink, C.; I. Brand & W. Vermeulen (2004).

 Diffusion of energy-saving innovations in industry and the built environment: Dutch studies as inputs for a more integrated analytical framework.

 Energy Policy, 32, 773–784.
- Ditjenbun (2013). Pentingnya ISCOffee (Indonesian Sustainable Coffee). Direktorat Jenderal Perkebunan, Kementerian Pertanian, Jakarta, Indonesia.
- Ditjenbun (2013). *Prinsip dan Kriteria Standar Kopi Berkelanjutan Indonesia (ISCoffee)*. Makalah pelatihan ISCoffee in Sumber Rejo Tanggamus, Lampung. Direktorat

- Jenderal Perkebunan, Kementerian Pertanian, Jakarta, Indonesia.
- Ditjenbun (2015). Rencana Strategis Direktorat Jenderal Perkebunan Tahun 2015-2019. Direktorat Jenderal Perkebunan, Kementerian Pertanian, Jakarta, Indonesia.
- Dworkin, S.L. (2012). Sample size policy for qualitative studies using in-depth interviews. *Arch. Sex. Behav.* 41, 1319–1320.
- Giovannucci, D.; O. von Hagen & J. Wozniak (2014). Corporate social responsibility and the role of voluntary sustainability standards. *In:* P. 359–384. *Voluntary Standard Systems*. (C. Schmitz-Hoffman; M. Schmidt; B. Hansmann & B. Palekov, Eds.). Springer, Heidelberg, Berlin.
- Glasbergen, P. & G. Schouten (2015). Transformative capacities of global private sustainability standards. *The Journal of Corporate Citizenship*, 58, 85–101.
- Gray, A. & B. Jenkins (1995). From public administration to public management: reassessing a revolution? *Public Administration*, 73, 75–99.
- Guijarro, L. (2007). Interoperability frameworks and enterprise architectures in e-government initiatives in Europe and the United States. *Government Information Quarterly*, 24, 89–101.
- Hoffmann, U. & F. Grothaus (2015). Assuring
 Coherence between the Market-access
 and Livelihood Impact of Private
 Sustainability Standards. United Nations
 Forum on Sustainability Standards
 (UNFSS), CH-Geneva.
- Ibanez, M. & A. Blackman (2016). Is eco-certification a win—win for developing country agriculture? Organic Coffee Certification in Colombia. World Development, 82, 14–27.
- Ibnu, M.; P. Glasbergen; A. Offermans & B. Arifin (2015). Farmer preferences for coffee certification: A conjoint analysis of the Indonesian smallholders. *Journal of Agricultural Science*, 7, 20.
- Indraningsih, K.S.; H. Supriadi; B. Prasetyo & C. Muslim. (2015). *Analisis Kebijakan*

- Implementasi Program Pemberdayaan Masyarakat Perdesaaan. Pusat Sosial Ekonomi dan Kebijakan Pertanian Badan Penelitian dan Pengembangan Pertanian, Kementerian Pertanian.
- Intarakumnerd, P.; P. Chairatana; T. Tangchitpiboon (2002). National innovation system in less successful developing countries: the case of Thailand. *Research Policy*, 31, 1445.
- Iqbal, M. (2008). Konstelasi institusi pemerintah dan lembaga swadaya masyarakat dalam program PIDRA. *Jurnal Ekonomi Pembangunan*, 9, 28–45.
- Kelly, J.M. (2005). The dilemma of the unsatisfied customer in a market model of public administration. *Public Administration Review*, 65, 76–84.
- Kementan (2015). *Pelatihan Fasilitatsi/Rintisan Penerapan Perkebunan Kopi Berlanjutan*. IScoffee-Kelompok-Tani-Sentra-Kopi-Kec-Sembalun. Kementerian Pertanian, Jakarta, Indonesia.
- Kironde, J.L. (2006). The regulatory framework, unplanned development and urban poverty: Findings from Dar es Salaam, Tanzania. *Land Use Policy*, 23, 460–472.
- Lawson, B. & D. Samson (2001). Developing innovation capability in organizations:
 A dynamic capabilities approach.
 International Journal of Innovation Management, 5, 377–400.
- Lo"ffler, E. (2001). Defining quality in public administration. *Paper presented at UNPAN (United Nations Public Administration Network)*. The 9th NISPAcee Annual Conference: Government, Market and the Civil Sector: The Search for a Productive Partnership, Riga, Latvia, United Nations, New York, NY, 10–12 May.
- Loconto, A. & C. Dankers (2014). Impact of International Voluntary Standards on Smallholder Market Participation in Developing Countries: A Review of the Literature. FAO, Roma, Italia.

- Patterson, J.; K. Schulz; J. Vervoort; S. van der Hel; O. Widerberg; C. Adler; M. Hulberg; K. Anderton; M. Sethin & A. Barau (2016). Exploring the governance and politics of transformations towards sustainability. *Environmental Innova*tion and Societal Transitions, 24, 1–16.
- Perpres RI No. 45 (2015). Peraturan Presiden Republik Indonesia Tentang Kementerian Pertanian. Presiden Republik Indonesia. Jakarta, Indonesia.
- Porter, M.E. (2000). Location, competition, and economic development: Local clusters in a global economy. *Economic Development Quarterly*, 14, 15–34.
- PP RI No. 102 (2000). Peraturan Pemerintah Republik Indonesia Tentang Standardisasi Nasional. Presiden Republik Indonesia. Jakarta, Indonesia.
- Ruben, R. & R. Fort (2012). The impact of fair trade certification for coffee farmers in Peru. *World Development*, 40, 570–582.
- Schouten, G. & V. Bitzer (2015). The emergence of Southern standards in agricultural value chains: A new trend in sustainability governance? *Ecological Economics*, 120, 175–184.
- SCP (2014). Indonesia a business case for sustainable coffee production. Sustainable coffee program (SCP).
- Smit, A.A.H.; P.P.J. Driessen & P. Glasbergen (2008). Constraints on the conversion to sustainable production: The case of the Dutch potato chain. *Business Strategy* and the Environment, 17, 369–381.
- Smith, T.M. & M. Fischlein (2010). Rival private governance networks: Competing to define the rules of sustainability performance. *Global Environmental Change*, 20, 511–522.
- Stapel, K. & K. Schneider (2014). Managing knowledge on communication and information flow in global software projects. *Expert Systems*, 31, 234–252.

- Sudaryanto, R. & R.R. Wijayanti (2013). *Strategi*Pemberdayaan UMKM Menghadapi

 Pasar Bebas. Pusat Kebijakan Ekonomi

 Makro. Badan Kebijakan Fiskal.

 Kementerian Keuangan, Jakarta.
- Sudibyo, B. (2012). Reformasi pajak dalam kerangka reformasi ekonomi-politik di Indonesia. *Jurnal Akuntansi & Manajemen*, 87–103.
- Sugandhi, H. (2014). Developing a road map for the coffee sector in Indonesia: Potensi, hambatan dan strategi pengembangan kopi Indonesia. Paper presented at the Roundtable Workshop organized by the Ministry of Trade of the Republic Indonesia and the Word Bank. Jakarta, Indonesia.
- Thow, A.M.; W. Snowdon; R. Labonté; D. Gleeson; D. Stuckler; L. Hattersley; . . . S. Friel (2015). Will the next generation of preferential trade and investment agreements undermine prevention of noncommunicable diseases? A prospective policy analysis of the Trans Pacific Partnership Agreement. *Health Policy*, 119, 88–96.
- Trienekens, J.H. (2011). Agricultural value chains in developing countries a framework for analysis. *International Food And Agribusiness Management Review*, 14, 51–82.
- UU RI No. 30. (2002). Undang-Undang Republik Indonesia Nomor 30 Tentang Komisi Pemberantasan Tindak Pidana Korupsi. Presiden Republik Indonesia. Jakarta, Indonesia.

- UU RI No. 39 (2014). *Undang-Undang Republik Indonesia Nomor 30 Tentang Perkebunan*.
 Presiden Republik Indonesia. Jakarta,
 Indonesia.
- Valkila, J. (2009). Fair Trade organic coffee production in Nicaragua: Sustainable development or a poverty trap? *Ecological Economics* 68, 3018–25.
- Van Rijsbergen, B.; W. Elbers; R. Ruben & S.N. Njuguna (2016). The ambivalent impact of coffee certification on farmers' welfare: A matched panel approach for cooperatives in Central Kenya. *World Development*, 77, 277–292.
- Vermeulen, W.J. & J. Hovens (2006). Competing explanations for adopting energy innovations for new office buildings. *Energy Policy*, 34, 2719–2735.
- Wahyudi, T. & M. Jati (2012). Challenges of sustainable coffee certification in Indonesia. *Paper presented at The Seminar on the Economic, Social and Environmental Impact of Certification on the Coffee Supply Chain.* International Coffee Council 109th Session, London, United Kingdom 25th September 2012.
- Wijaya, A. & P. Glasbergen (2016). Toward a new scenario in agricultural sustainability certification? The Response of the Indonesian national government to private certification. *The Journal of Environment & Development*, 25, 219–246.
- Yullyanti, E. (2009). Analisis proses rekrutmen dan seleksi pada kinerja pegawai. *Jurnal Ilmu Administrasi dan Organisasi*, 16, 131–139.

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