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Environmental Certification Schemes Based on Political Ecology: Case Study on Urban Agricultural Farmers in Bandung Metropolitan Area, Indonesia

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Abstract: Urban farmers who want to produce food for export must adhere to an environmental certification program due to the scarcity of resources in cities and the unpredictability of the international food trade. This paper employs a descriptive narrative technique along with a qualitative methodology. The relevant data were collected through observation, in-depth interviews, and documentation, and analyzed by condensation, data presentation, and drawing conclusions or verification. Our results suggested that certification was not yet a useful tool for persuading farmers to adopt more environmentally friendly farming practices. The majority of the agricultural business techniques used by export-scale urban farmers are not organic. There was a tendency for farmers to complete certification if it was required for export. In the meantime, social certification, food safety, and content quality were just recommendations made by international organizations rather than being strictly enforced, particularly in Indonesia.

Keywords: Environmental certification; Urban agriculture; Political ecology

1. Introduction

The development of environmental management in the agricultural sector has given rise to a new attribute called certification scheme geared to environmental principles. Under the certification scheme, farmers and traders need to develop a regulatory system, which ensures that the food commodities marketed follow environmental principles [1]. As a result, the global food market is filled with agricultural food certification private and voluntary schemes [2]. According to the Division of Trade and Markets, FAO (2007), the following are some certification schemes in agriculture, especially those applied to the Asia Pacific region:

- Environmental certification, which relates to organic farming and is used to control both the environment and agricultural land in a single system.
- Social certification, which relates to fair trade commitments (worker rights, environmental protection, and social standards).
- Food safety certification, which resorts to safety and good practice to make sure that production methods adhere to good agricultural practices (GAP) requirements related to agricultural production processes from input to exit from agricultural land.
- Food content quality certification, which aims to evaluate the physical, chemical, and biological qualities of

food ingredients.

Political ecology offers at least three perspectives that can be used to comprehend the rise of certification, including those of policymakers, commodities producers, and environmental justice advocates [3, 4]. Meanwhile, the proliferation of standards stems from market restructuring driven by consumer concerns, retail industry competition dynamics, and the transfer of quality assurance laws from public authorities to retailers and certification organizations in North America and the European Union. For food safety, traceability, and quality assurance, major retailers have reconfigured their supply chains [5].

The certification has evolved into a modern conservation initiative in connection to environmental management. Environmental certification activities might be considered a sort of conservation activity [4]. It implies that purchasing environmentally friendly goods and participating in environmentally sound management initiatives are the same for humans. Therefore, certification is viewed as an endeavor to educate consumers about the precise facts about the acquired products. The reason is that the production process permits covert environmental and human exploitation [6]. Many experts argue that certification is the proper mechanism to educate consumers to think about the production process. As a result, the certification mechanism encourages users to exercise their political influence. Because a commodity's manufacturing history is linked to its social and environmental impacts, consumers have the power to select whether or not to purchase a product [7].

This idea is known as an ecolabel, which symbolizes the global green governance initiatives to overcome dysfunctional economies by harnessing consumer power [6]. The ecolabel is a type of compromise made in order to maintain free trade. The mechanism was created in an effort to ensure sustainability, fair trade, and worker welfare, but this has political ramifications and adds to the ecological and economic complexity [6].

However, powerful companies may use certification as a weapon to take advantage of weaker producers, particularly small agricultural businesses. Large retailers (buyers) are likely to benefit from requiring product certification from manufacturers as a condition of doing business with them [6-8]. The certification program can lessen trade rivalry from rivals who are uncertified farmers [9]. Derek Hall (2015) added that producer certification in the global south has had a dual impact on how producers participate in the global food system. Because it is typically very difficult for small producers to pay for certification if they do not have outside technical and financial aid, certification serves as a strategy to exclude non-certified producers and to verify conformity with export market priorities [9].

Because of this, putting in place the certification method is still quite a challenge, particularly for the participants in the network of new food producers in developing nations. To determine whether this certification mechanism can penetrate better environmental management or does not affect the improvement of agricultural, environmental management, this paper innovatively investigates the reality that describes the fulfillment of agricultural certification by farmers. Numerous research on certification fulfillment have thus far centered on product certification, such as those for coffee, oil palm, and forest goods [8, 10-14]. Meanwhile, farmers in developing nations are required to certify production processes as well as commodities.

The study focuses on the urban agriculture in Bandung Metropolitan Area, Indonesia, where urban farmers also face the mandatory certification of production practices. As new food producers, some of the urban farmers in Bandung Metropolitan Area have expanded their market to export scale [15]. They must also meet certification requirements, which are policy instruments in Indonesia. To reduce the ecological effects of intensive agricultural production, certifications must be done to support the clean production and environmental management. As a current topic, extensive case studies are needed to examine certification compliance, which places pressure on farmers in urban agriculture, particularly in the global south states.

2. Methodology

2.1 Research Methods

This study employs a qualitative methodology and a narrative technique to describe how urban farmers in Bandung Metropolitan Area fulfilled certification requirements. The narrative technique was implemented to ask one or more individuals to tell their life stories [16]. The authors then retold or restored the obtained information in a narrative timeline [16]. This technique is ideal for examining the context or meaning of how regulations are applied to carry out agricultural certification as well as how farmers fulfill the relevant requirements. For this purpose, the authors needed a thorough and systematic analysis method.

2.2 Location Selection

This study covers the entire Bandung Metropolitan Area region, which spans five Indonesian regencies and cities, namely, Bandung City, Cimahi City, Bandung Regency, West Bandung Regency, and a portion of Sumedang Regency. These areas are connected to one another and share a lot of physical and non-physical traits [17]. The Bandung Metropolitan Area has a total area of 3,313.08 km2. Geographically speaking, the Upper Citarum Watershed, where the Bandung Metropolitan Area is located, has environmental issues that all national

policymakers in the Republic of Indonesia are concerned about: a growth in the amount of bare land and critical land, soil erosion, the conversion of protected areas into urban, suburban, and rural areas, among other things [18]. Thus, the study area, a center for intensive urban farming, is situated in an area with serious environmental damages. Farmers in Bandung Metropolitan Area must decide whether to engage in intensive agricultural activity in the production zone or to conserve the environment for the safety of the Upper Citarum Watershed.

2.3 Determination of Informants

Purposive sampling was utilized to identify the informants, according to specific criteria from local governments, exporters, and farmers. The informant farmers are urban farmer actors directly involved in the export-scale trading of agricultural commodities as well as farmers involved in export-scale trading but only through exporter middlemen. In the meantime, the authors looked into exporters in the Bandung Metropolitan Area that accept goods produced on a large scale by urban farmers. The information on farmers and exporters who fit the criteria was provided by the Department of Agriculture in each region. The authors visited the Department of Agriculture in Five Regencies and Cities in the Bandung Metropolitan Area for licensing and acquiring secondary data on the names of farmer organizations and the address of their secretariat. The local government, which is in charge of examining and certifying foreign certificates in the agri-food sector, was subjected to in-depth interviews. Informants were added based on the point of redundancy. The authors determined the common thread running across each informant's responses. The data collection was terminated, when no new information or fresh responses came from further informants. A total of 27 informants were interviewed.

2.4 Qualitative Data Collection

The research data were collected directly from the field. The National and Political Unity Agency has given the authors the go-ahead to investigate the province and regency/city areas. Direct observation served as the initial stage of our data collection process. Here, direct observation was carried out by examining production activities on farmland and the packaging warehouse run by the urban farmer groups in Bandung Metropolitan Area. Our observation also covered the West Java Provincial Food Quarantine Agency. The authors met with the management and members of the urban farmer group, and carried out thorough interviews on these people. During the in-depth interviews, open-ended questions were designed to elicit information on the urban farmers in the Bandung Metropolitan Area who had successfully completed the certification requirements. Furthermore, the authors carefully observed the regional government-owned packing houses and agricultural quarantine organizations, apart from interviewing government employees in charge of running the packing house and the agricultural quarantine agency. In addition, the authors documented the data collection process. Photo files, documents, videos, and audio recordings were gathered from various interviewees. The voice recordings from informants are essential for transcribing their responses to the questions.

2.5 Qualitative Data Analysis

The qualitative data were analyzed through an interactive model analysis. According to Miles and Huberman (2018), qualitative data analysis involves three concurrent flows: condensation, data presentation, and drawing conclusions or verification. Here, the qualitative data analysis is performed in reference to the literature.

During data condensation, the data were selected from field notes and interview transcripts for abstracting and transformation. After that, the data were encoded to generate classes: fulfillment of environmental certification, fulfillment of social certification, fulfillment of food safety certification, and fulfillment of food content quality certification. These classes were determined based on the general application of certification in the Asia Pacific region, drawing on the Division of Trade and Markets, FAO (2007). Farmers and exporters must complete four certifications, namely, environmental certification, social certification, food safety certification, and food content quality certification.

During data presentation, the data were described narratively. The statements were quoted from the informants, and numbered from 1 to 27, according to the serial number of the informants. Next, tables and flowcharts were prepared to help readers understand the research results.

Finally, drawing conclusions or verification was carried out by configuring all classified data to answer the research questions. For verification, the field notes were reviewed, and the arguments or views of each researcher were developed.

3. Results

3.1 Environmental Certification

Prima certification is an environmental certification that export-scale urban farmers must meet in order to

proceed with various export processes. Fresh food products that have received the Prima certification must meet the food quality and safety criteria of The Center for Food Quality and Safety Control, a state extension institution. This center serves as a key auditor to test environmentally friendly farming techniques and evaluate the safety of the goods made by farmers. Farmers must provide the following administrative documents in order to receive the prima certification: An application form, an application identity, a land map, and an agricultural quality management system (Garden Registration/GAP/SOP). Farmers then need to meet technical standards in areas with readily available administrative facilities (workspace, document storage, and communication facilities). Likewise, farmers must comply with the Agricultural Food Quality Assurance System requirements in accordance with the intended prima certification application requirements, as evidenced by records, records of the execution of activities, and/or other evidence in accordance with the prescribed requirements. There is also a technical expert and a person in charge of the quality system.

Most of the urban farmers who produce food for export have earned their Prima 3 certification. All of the interviewees, including exporters, farmer groups, and partner farmers, lacked the ISO 14001 certification for organic agriculture. This is because that neither the export requirements in Indonesia (the country of origin) nor the country of destination specify that only organic goods may be exported.

The Indonesian government mandates that produce exported from that country must at the most least be certified as Prima 3, a label that indicates a product is safe for ingestion. Only when farmers have registered their plants and implemented GAP can they acquire Prima certificates. Prima 3 has a threshold for the use of pesticides even though the farmers have not yet reached the organic stage. Farmers who want a Prima 3 certificate must modify their pesticide usage in accordance with the certificate's rules.

The processing of Prima 3 certification was done, according to farmer informants, for they abide by the new rules governing the quality control of the production process and the amounts of pesticides and fertilizers they use. Likewise, the Department of Agriculture's personnel (Informant 4) stated that export farmers, particularly those in Bandung Regency, have Prima certification at level 3.

The statement reads: The majority of our farmers are in this situation because they are dependent on pesticides. From GAP (initially), after passing the GAP, you can proceed to Prima 3, or you can go organic. For Prima 3, the products are safe for consumption, and you can use pesticides, but the amount must be below the threshold.

The farmers depend on pesticide intervention, for the commodities planted must be resistant to pests and decay. Organic farming is also included by Standard 1 of the Prima certification. Informant 4 from the Department of Agriculture, however, added:

Companies that apply for organic certificates appear to fail the certifications because of numerous manufacturers surround the waters nearby. We must determine the origin of the water sources. It must not obstruct the household water supply system.

Thus, it is difficult to obtain the necessary organic certificate because the surrounding environment can impact the organic standard. It is possible that the farmers adopted organic farming methods. The organic criteria could not be satisfied, for organic farming was not adopted in the lands surrounding the farmers. This is partly attributable to the contamination from synthetic pesticides can be influenced by the water source nearby.

The certification application procedure also depends on the buyer's request in the country of destination. The processing of organic certificates is not required. It is not a barrier in the export trade mechanism, according to Informant 12 from the exporters, who also stated that exporters and farmer groups have not carried out the management until the stage of obtaining organic agriculture certificates.

For ISO, export is not required; instead, it depends on the demands of the purchasers. If the buyer requests ISO, we will sign up right away.

This situation occurred in Bandung Metropolitan Area, where the farmers failed to obtain certification because consumers did not choose between certified and uncertified items when making product purchases. Through environmental certification, any attempt that uses consumer power to encourage large-scale urban farms to practice environmental responsibility tends to be futile. The cost of agricultural products and consumer income continue to influence customers' decisions about which vegetables and fruits to purchase. Informant 11, an export farmer, stated that:

Nothing leads to organic or maybe not yet, for corporate, it must be that way, but why would we refer to organic if the price is the same as the market price? Unless the price is raised, then we can follow the SOP, the harvest handling procedures as well, but why would we follow it if the prices are the same?

Because it was so challenging to achieve the requirements, export-scale urban growers refrained from applying for organic certification. After all, the assessment also takes into account the biophysical environment surrounding the producing region. Additionally, urban farmers with a commercial bent have not completely understood and appreciated the extra benefit of holding an organic certification.

3.2 Social Certification

Social certification serves as a physical representation of fair-trade principles. The relationships between

exporters and purchasers are covered by this certification. It ensures that the agricultural export trade in global-south nations like Indonesia has an orientation towards the welfare of farmers and farm laborers by guaranteeing a more local character. The evaluation indicators required to earn GAP certification include social certification assuring that agricultural operations adhere to fair trade standards. In point 16, provisions for worker welfare are regulated. It covers the significance of upholding employee safety and security through protocols for dealing with risks and accidents, the accessibility of security facilities, instruction in the use of machines and tools, hygienic and medical facilities, and other factors that are strongly advised as crucial to obtaining GAP.

The GAP's list of worker welfare points falls under the category of highly and generally recommended. That is, these points are not mandatory. Some farmer groups and exporters the researchers spoke with do not yet have social certifications, such as those issued by Fairtrade Labeling Organizations International (FLO) or other organizations. These parties do not pay attention to fair production during agricultural activities.

This situation arose because it is not an obligation to apply for a social certificate. Th e SA8000 concentrates on the working conditions of wage workers. This and other aspects of social certifications are useless to smallholders. Some urban farmers in Bandung Metropolitan Area who operate on an export scale are therefore unfamiliar with this social certification. Informant 14—a farmer—said he was not quite aware of the necessary social certification:

I do not even understand the certificate yet. Only the exporter is aware of it.

Moreover, it appeared that applying for this social certification would be rather expensive. According to Dankers (2003), wealthy nations and poor farmers may encounter specific challenges when attempting to take advantage of social and environmental certification, owing to the expenses they must bear that are levied against the producers. Further, this social certification is only recommended to be fulfilled. Therefore, the farmers are uninformed of the social certification requirements set forth by international institutions. If the government and the buyer require certification, urban farmers who produce food for export would fulfil the certification.

Therefore, farmers and exporters in the Bandung Metropolitan Area have not been able to meet the urgency of completing social certification to assure a fairtrade. As a result, the social certification lacks the authority to guarantee fair governance, particularly in terms of the welfare of the workers and communities residing near urban agriculture on an industrial scale. This social certification intends to serve as a safeguard for partner farmers against commercial practices that exclude farmers from markets for their goods. Demands to meet commodity standards, sorting processes that did not ensure product absorption, and price variations played by exporters of export commodities were particularly detrimental to the export-scale urban agriculture in the Bandung Metropolitan Area.

3.3 Food Safety Certification

Certification of food safety and good practice manifests that agricultural practices are following the GAP. In Indonesia, the process for acquiring plantation registration certification specifies that GAP must be followed. Urban farmers in Bandung Metropolitan Area who grow crops for export are required to register their plantations or business zones after each stage. Application, verification, assessment, and reporting of assessment results are among the stages. Farmers are thought to be capable of meeting the indicator components for evaluating GAP practices if they have certified their plantation registration.

During plantation registration, farmers must comply with the requirements to implement GAP for fruits and vegetables in order to produce high-quality products. The techniques include using environmentally friendly technology, preventing the spread of pests, maintaining worker welfare, and preventing the spread of diseases (Ministry of Agriculture, 2010). The GAP guidelines use three criteria, specifically:

1. Recommended or A (*), recommended to be implemented.
2. Highly recommended or SA (**), highly recommended to be implemented.
3. Mandatory or W (***), must be implemented.

Urban farmers that produce for export are obligated to follow GAP in accordance with indicators. This is related to the demands that exporters make of their partners when they want them to apply for the plantation certification. The plantation certification has a two-year validity period, following which the farmer must renew it once again. Informant 25 revealed that the government has attempted to persuade farmers to register their plantations or gardens. He is a member of the Department of Agriculture in one of the regencies in Bandung Metropolitan Area.

We followed up with them (farmers), but many of them did not renew. We wanted them to pass the plantation certification first. Only a small number of them have the certification for plantations.

The lack of perceived benefits or additional value is what caused the farmers' poor interest in applying for plantation registration. Besides, some farmers who already held a plantation certification decided not to renew it because doing so required payment. The renewal took a significant amount of time and effort. Also, there is no difference in pricing between certified garden products and uncertified ones. As a result, some farmers decided not to renew their certification for plantations. According to Informant 22 who works for the Bandung Metropolitan Area Agriculture Agency:

Since 2012, there have been numerous urban farmers who have chosen not to renew their certifications for the

GAP. The price of the product with GAP and conventional was the same. So, why should they renew it?

However, plantation registration is essential for farmers involved in the export industry. They have to be certified by Prima. The farmer must submit an application for Prima certification if he/she can satisfy the GAP requirements in the plantation registration. Smallholders typically have access to GAP information and have put the required procedures in place to comply with the standards.

In general, farmers and exporters in the Bandung Metropolitan Area have not yet adopted the practice of ISO 22000 or other food safety certification of international organizations. Informant 26 from The Food Quarantine Agency (Barantan) claimed that large exporters typically adhere to food safety certification:

For high-quality businesses, the food standard is already in use; the quarantine installation now stipulates that it be done.

The majority of major exporters who performed food safety certification own a packing house. The West Java Province's Center for Food Quality and Safety Control routinely inspect the exporters' packing facilities to ensure that the quality of their products follow hygiene and sanitation standards. Exporters must provide complete documentation and certifications from all inspections conducted by the West Java Province's Center for Food Quality and Safety Control. The researchers discovered that most exporters without packing houses had neglected to get food safety certifications like ISO 22000 or the International Food Standards (IFS). The following is what Informant 17, an exporter in the Bandung Area, said:

Perhaps we will take care of it in the future; right now, all we do is phytosanitary work because it is mandatory. We would not be able to export the items without phytosanitary.

Farmers and exporters in the Bandung Metropolitan Area must follow a certain certification process in order to export. Although it is not yet required, certification in food safety does not seem to be a top priority.

3.4 Food Content Quality Certification

The nutritional worth of food and the composition of its elements can both be evaluated using the quality of the food's content. As of now, a number of export destinations for agricultural products from the Bandung Metropolitan Area do not demand food quality certification. The reason is that each institution in charge of certification has a unique management system in each nation. It is meant to encourage trade between nations by using different words. According to the following informants from the Food Quarantine Agency, food content quality certification is not a necessity in export regulations for fresh vegetable and fruit commodities:

We did not investigate the food content. We just performed checking at the buyers' request. The grade of what we will examine and if the OPT was in place were not restricted.

Because it is not a necessity for export, many exporters, farmer organizations, and partner farmers did not submit applications to obtain the quality certification of this food content. Since they were not necessary for export, many of the farmer informants chose not to apply for food content quality certification.

In contrast to processed foods, the farmers believe that applying for food content quality certification is not as urgent or vital for fresh vegetable products. The farmer identified as Informant 2 stated the following:

There is no obligation; food quality certification only applies to processed foods; veggies are fresh foods.

Some major exporters, particularly those with packaging houses, have examined the food safety of agricultural products deposited by partner farmers. This may improve the completeness of the documents when Center for Food Quality and Safety Control of West Java Province oversees the packing house. Nevertheless, farmers are not required to complete the certification of the quality of the food content as stipulated in the practical instructions for agricultural exports by an international organization, notably the Food and Agricultural Organization (FAO) (2007).

4. Discussion

Agricultural exports cannot be separated from the dynamics that occur at the policy level. These dynamics began when foreign donor organizations started to reach out to countries in the global south nations, like Indonesia, to brand their agricultural exports. Agricultural exports are designed to increase the community's economic options and have a big impact on foreign exchange and agro-industrialization [9]. For the success of its agenda, the government stepped in to support farmers as market subjects.

The development of export agriculture is accompanied by regulations that aid in the protection of the environment. The government must integrate environmental policies into economic policies, such as to limit or minimize environmental damage brought on by manufacturing processes and maintain the stability of the country's economy, which depends on the availability of natural resources [19-21]. To maintain environmental stability, proper agricultural management must be sustained. The secret to environmental sustainability, according to Jhariya (2019), is curbing pollution and environmental degradation through sustainable environmental management.

The certification issuer must get involved in environmental conservation as it relates to the set of policies that are represented in the certification [4]. Given that environmental quality is created, generated, and evaluated

through these institutions, a more focused political ecology study on certification highlighted the crucial function of the state or nation in granting a role to government agencies that offer the certification requirements [4]. The Center for Food Quality and Safety Control of West Java Province was established as part of the provincial food security service in Bandung Metropolitan Area, reflecting the responsibility of the state in that region. The organization is responsible for monitoring the activities that take place in the farmer's packing house. This serves as a control enforcement method, which demonstrates the power of the state. According to Richard Peet et al. (2011), individuals are induced to accept or obey applicable rules through internalizing various types of control and authority.

Environmental certification, meanwhile, is a crucial tool for justifying the necessity of environmental conservation methods based on social justice ideals [4]. Academics, environmental NGOs, and numerous nations are attempting to communicate social and environmental issues [9]. Environmental certification, however, is not necessarily a tool that may be utilized to safeguard the environment in practice. The fulfillment of environmental certification by export-scale urban farmers in Bandung Metropolitan Area describes this reality. The farmers are required to apply for planting certification and Prima registration. The standard nevertheless permits the use of pesticides and inorganic fertilizers below the designated threshold when Prima 3 is required. However, the authors discovered that farmers that use synthetic fertilizers and pesticides do not take into account the threshold but rather the number of pests and weather variations.

Farmers' use of artificial fertilizers and pesticides is a problem, for it could contaminate the environment, the food supply, and other living things. As a result, the reliance on agrochemical inputs has a big impact on how people and the environment interact [22-24]. Moreover, the structure and functionality of the agroecosystem can change if synthetic inputs are suppressed. It is more important to increase the diversity and activity of the soil biota, improve the basic soil structure, and raise the organic matter content of the soil [25].

However, the political and economic clout of global-scale input suppliers has a substantial impact on the homogenization of manufacturing output. When entering the export trade, goods must be of the same quality and resistant to deterioration during sorting, shipment, and up until they are sold in the target nation. To ensure the resistance to decay, chemical fertilizers and pesticides are used in the production process [26]. Ultimately, farmers are unintentionally redirected to rely on synthetic inputs supplied by the agrochemical sector, which then enters the transnational capital flows. This issue has not been identified by the state as one that might impact farmers. Hence, the farmers do not incorporate ecologically beneficial measures into their farming methods. Control measures like environmental certification serve solely administrative needs and comply with export regulations.

For export-scale farmers, it is not a top priority to obtain social and food safety certificates. This is evident by the lack of specific social certifications held by farmers, such as SA8000 or the Fairtrade Labeling Organizations International (FLO) certification. This phenomenon reveals how ineffective the regulation has been in enhancing social protection.

The export market requires a guarantee of the commodity security. Food safety is a concern for consumers in the northern nations, particularly with regard to fresh produce imports from the southern nations. The definition of ecologically friendly practices in question according to the standards created by the northern countries is one that needs to be criticized. According to a developing perception, advanced environmental knowledge is regarded to originate from western (northern) countries, and must be shared with southern countries [27]. From the perspective of western nations, however, technical and administrative concepts tend to simplify complicated environmental challenges [28]. Therefore, technical and administrative issues are tied to the solutions offered in global governance for the environmental agenda. As an illustration, consider how many good agricultural practice guidelines and other certifications have emerged, after producers perform agricultural management in accordance with international standards. Food safety certification is one of them. The use of food safety certification is anticipated to have an impact on farmers' choices about ethical agricultural production methods.

The majority of the farmers in Bandung Metropolitan Area did not hold specific certificates in food safety. The farmers thought that they had met the GAP indicators of food safety certification, during plantation registration. Nonetheless, the GAP indicators for plantation registration are updated every 2 years. The farmers only monitor or evaluate GAP, when they need to renew or extend the plantation registration. As a result, this mechanism is less successful at reflecting ongoing manufacturing techniques that put food safety first.

The truth is that acquiring a food safety certification is viewed more as a process for gaining cross-border trading permissions than as a commitment to exhibiting sound manufacturing methods. Hence, there is still a lack of knowledge regarding the need to provide communities with safe and hygienic products. Urban farmers, meanwhile, confront a variety of challenges when trying to expand intensive agriculture. Urban farmers now have to deal with a number of issues, including soil contamination, water access, and property security [29].

It was also discovered that few farmers produce vegetables with food content quality certification. This is because export regulations do not require this certification. The food content quality certification should be mandatory, making it possible to track the number of synthetic materials used during production. Referring to Sally Eden (2011), this leniency in completing certification happened because not all customers understand the product, even when the information on the product has been completed. Customers might not accept it or decide

not to buy a certified goods [6].

To enter the export trade, urban farmers in Bandung Metropolitan Area need to fulfill the types of certifications stated in the publication of the Division of Trade and Markets, FAO (2007). However, most farmers did not apply for the certifications, which are not precisely stipulated by Indonesia for export. This situation can be explained by the theory of Jonathan Otto and Tad Mutersbaugh (2015): This is due to the fact that maintaining environmental quality requires a strong organization to facilitate compliance with standards and is time-consuming, expensive, and technically complex Otto dan Mutersbaugh (2015). To progress toward more environmentally friendly farming, a new answer should be the urgent completion of agri-food certification. These certificates may be part of a plan to change how people view farmers, food, and the environment while also ensuring the welfare of farmers as food producers.

5. Conclusions

This study concludes that the certification regulation applied to export-scale urban farmers in Bandung Metropolitan Area is a policy instrument for aligning the agenda of economic growth and environmental conservation. Indonesia has already implemented such policy tools as environmental certification, social certification, food safety certification, and food content quality certification. However, not all of these certifications have been fulfilled by export-scale urban farmers. These farmers have completed garden registration, Prima certification and phytosanitary in order to participate in export-scale trade. There is a trend that commercially-oriented urban farmers view certification schemes as a formality to gain market access, rather than a concern for environmental issues.

Data Availability

The data used to support the research findings are available from the corresponding author upon request.

Conflicts of Interest

The authors declare conflicts of interest.

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