

Research Article

Monitoring Implementation Impact of the EU-Indonesia's VPA on SME Livelihood

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The Europe Union (E.U.) has agreed to grant the Forest Law Enforcement, Governance and Trade (FLEGT) license to Indonesia as the first country in the world to receive it. FLEGT VPA (Voluntary Partnership Agreement) is a bilateral agreement between the European Union (E.U.) and wood exporting countries, to improve forest governance sector and ensure that timber and wood products imported into the E.U. are produced by the laws and regulation of partner countries. The Indonesian government has obliged to implement Article 12 relating to social safeguards. Indonesia has to periodically monitor to see the extent to which the VPA has an environmental and social impact that affect the lives and welfare of vulnerable and marginalised groups. The purpose of this study is to analyse how the effect of implementation of the Sistem Verifikasi Legalitas Kayu (SVLK) as part of VPA in the small and medium forestry industry sector. Methodology survey with focus group discussions, structured interviews, and semistructured interviews to find out the response and opinion of SME's owner and employee addressed the effect of SVLK in East Java and Central Java, Indonesia. The theory of change (ToC) was used to consider the implications of SVLK implementation on the sustainable livelihood of small and medium enterprises (SME's). The results of this study showed that SVLK had a more significant impact on livelihoods, as follows. First, the vulnerable and marginalised groups need to be supported by stakeholders to encourage readiness in faces of SVLK impact. Second, SVLK is susceptible to the effects and at risk of losing livelihoods for women and disabled groups in a short time. This group includes vulnerable groups of aspects of adaptability and sensitivity to the effect. Third, SME's worker groups who do not have a labour organisation are sensitive to the impact on the workplace company. This group is classified as a group that is quite vulnerable if the effect lasts long enough and on a large scale of impact.

1. Introduction

The Europe Union (E.U.) launched a Europe Union-Forest Law Enforcement, Governance and Trade (EU-FLEGT) action plan by improving good forest governance to combat illegal logging and promoting legal timber trade [1, 2]. One of the essential components of FLEGT is a Voluntary Partnership Agreement (VPA). The strength of the VPA is that it can go beyond international trade to consider the

development and environmental issues; and it can influence the local policies to tackle illegal logging [3, 4]. Indonesia-EU VPA framework has an agreement in 2013 and imposed the system for assurance of timber legality called as Sistem Verifikasi Legalitas Kayu (SVLK). SVLK is a mandatory policy for improving forest governance to address the problem of illegal logging [5, 6]. The E.U. agreed to provide a FLEGT license for Indonesia as the first country in the world for obtaining under the Forest Law Enforcement,

Governance and Trade-Voluntary Partnership Agreement (FLEGT VPA) [7]. The national of the timber legality assurance system as SVLK products from Indonesia guarantee the E.U. level into promoting legitimate trade, and the VPA discusses improving forest governance and law enforcement [8].

The purpose of this study is to identify and verify the indicators of SVLK implementation, focusing on the expected and unexpected impacts on the livelihood of vulnerable and marginal groups (which includes smallholder forest farmers and producers, middle-man buying from micro and small enterprises, and household artisan supplier of SME's and labour in small upstream and downstream timber industries).

The E.U. and Indonesia agreed to develop social safeguards of VPA implementation on the sustainability of livelihoods in timber-producing forests and small industries [9]. Joint Implementation Committee (JIC) mandates Indonesia to prepare an impact monitoring system (IMS) from SVLK implementation [10]. The effect of SVLK implementation is a change condition in the short, medium, and long term [11]. IMS does not monitor either the input of SVLK policies or the SVLK processes such as verification and appeal and the amount of legal timber on the market. However, IMS monitors potential expected and unexpected effects [12].

The E.U. and Indonesia made a joint commitment to monitor the social, economic, and environmental effects of the VPA [13]. Monitoring is undertaken to see whether the VPA has the desired results and informs that government policy-making reflects policy effectiveness assessments [14]. JIC established a multistakeholder technical working group to develop and test a national level VPA effect monitoring system [15].

The ratification of the two VPA documents was carried out in April 2014, and one of the articles approved for the preparation of VPA implementation was Article 12 [8, 9]. Indonesia and the E.U. will make ongoing efforts to improve the effectiveness of the implementation of SVLK, including the improvements of independent monitoring functions, law enforcement, supply chain control, disclosure of relevant data and information, and the effectiveness of VPA implementation by small and medium enterprises. To ensure ongoing legal reform and forestry governance processes, VPA also allows a review of the legality definition based on input from stakeholders [16].

The IMS agreed upon in the VPA process is a management mechanism to maintain the relevance of the SVLK in changing the dynamics of the social situation and political management of forest resources. IMS provides periodic information about the effect of SVLK as feedback for the government regarding decision-making materials to increase positive outcomes and prevent/anticipate the adverse effects of SVLK [17]. IMS will explore the experience of implementing SVLK policies from stakeholders in national and regional discussion, consultation forums, and in-depth interviews with key speakers representing the region, implementers of SVLK implementation, academics, and regulators [18].

The IMS combines several methodologies such as literature reviews of various SVLK policy rules, SVLK implementation reports, impact monitoring, and change theory [7]. The results are processed and developed in stakeholder analysis, beneficiary vulnerability analysis, and flowchart. The standard matrix is used for monitoring the effect of SVLK implementation to explain the context that will affect the development of an impact monitoring system [9, 18]. Identification of the impacts of SVLK implementation at various levels of the effect recipients so that all elements become a monitoring system for the design effect of SVLK. The effect monitoring was performed by using standards or a series of effect monitoring criteria and indicators developed through a multistakeholder process. The monitored implications cover five main aspects: (a) institutional and governance effectiveness, (b) eradication of illegal logging, (c) forest conditions, (d) economic development, and (e) livelihoods [9, 14].

FLEGT-VPA expected to encourage the playing field of small and medium enterprises to participate and get benefits from VPA implementation [19]. Previous studies in Indonesia (Maryudi and Meyers, 2018), in Ghana (Tegegne, 2014), and Vietnam (Noi, 2014) revealed that many small and medium enterprises and marginalised and vulnerable groups might be affected by VPA. The previous studies indicated that the FLEGT-VPA was unpredicted. Therefore, in the FLEGT-VPA, the need to build an IMS of social safeguards against vulnerable and marginalised groups were emphasized [20].

2. Materials and Methods

Survey with focus group discussions (FGD), structured interviews, and semistructured interviews was used to find out the responses and opinions of SME's owner and employee who addressed the effect of VPA. Theory of change (ToC) was also used to find out the effect of the VPA and the influence of vulnerable. ToC analysis was carried out by Rutt et al. [21] identifying the underlying indicators of causation related to SVLK to determine the impact of SVLK on livelihood and vulnerable. Because the ToC does not specify the assumptions about how the SVLK impacts, directly (survey, FGD, and interview) or indirectly (desk study report and statistical data analysis) methods as the IMS indicators were used to gather information on the ground.

Several data were collected to seek the effect of VPA including changes outcome in livelihoods before and after SVLK of labour welfare, protection of labour, a skill of employment, and economic conditions of work and to seek the influence for vulnerable including changes outcome of SME's perception, policies and regulations, business practices, and issue visibility. Table 1 shows the indicator of the effect of VPA and influence for vulnerable by ToC.

The interview was undertaken at East Java (Madiun and Ngawi) covering upstream areas (community forest) and Central Java (Jepara and Klaten) covering downstream areas. Several participants and respondents were involved such as artisan, labour (youth, disabled, and gender), forest farmer,

TABLE 1: The effect of the VPA and influence for vulnerable by theory of change (ToC).

Effect of VPA	Outcome	Influence for vulnerable	Outcome
Changes in welfare	The labour's welfare and implementation of career paths.	Changes in SME's perceptions	The SVLK was positive for livelihoods.
Changes in protection	Protection of labour's health, safety, and rights.	Changes in policies and regulation	Local government adopt the SVLK that support livelihood priorities.
Changes in skills	Labour appointed to participate in capacity building training.	Changes in business practice	(i) It increased export market opportunity. (ii) Increased domestic market needs for products.
Changes in economic condition	Workforce engagement of local labour (men, women, and vulnerable groups).	Changes in issue visibility	Public raises SVLK and livelihoods issue to the higher priority.

small log yard owner, and small-scale enterprises owner for gathering those data. The primary data collected were in the form of qualitative data on the perceptions of respondents from the artisan group, labour, and forest farmer about the effect of SVLK on changes in livelihood (welfare, protection, skills, and economic conditions). The other primary data were the perception of SME's owner of influence vulnerable (knowledge, policies and regulations, business practices, and issue visibility) about the SVLK. The secondary data collection was preferred to document data/information derived from the statistical agency at the national, provincial, and local levels regarding the volume of data and the export value of furniture products before and after the FLEGT license, between 2015 and 2018. These secondary data were used as supporting data for analysing and discussing the results.

All data collected will be used to analyse the impact of SVLK implementation for small and medium enterprises (SME's) by ToC. The ToC encourages adaptive strategies to SME's management units with questions about what might affect change in the context of SVLK and uses evidence and learning through evaluation during SVLK implementation [9, 22]. Understanding the SME's is important to gather knowledge on how to change resilience livelihoods after SVLK running.

Information provided at Table 1 can be used to see and analyse the forms of change and how and why changes occur due to the expected and unexpected effects of SVLK implementation [23, 24]. The use of ToC in the effect assessment involving stakeholders is a form of facilitation of the process of analysis and reflection involving practitioners and stakeholders [25]. Stakeholders also articulate the assumptions or evidence used to explain the process of unexpected changes [26]. The identification of interventions and actions that was needed to take to achieve the effect of the SVLK was found as a problem in this study. The result can be divided into short, medium, and long-term effects, namely

- (1) Short term: making changes to vulnerable and marginalised groups as a result of social change, including understanding and perceptions, attitudes and behaviours, and increasing knowledge.
- (2) Medium term: making changes in practice and skills as a result of attitudinal changes, including actions to achieve individual and group outcomes or abilities.

- (3) Long term: making changes to conditions as a result of economic reforms, including financial and physical changes in a system.

The relationship between the effect of VPA and safeguards through influence vulnerable was analysed to find out the impact of SVLK in the short, medium, and long terms.

3. Results and Discussion

The strength of the ToC approach lies in need to articulate narratives and other evidence that helps stakeholders involved in designing the relationship between activities, outputs, and the sequence of results [27]. The ToC also helps to develop a monitoring and evaluation plan to assess and adjust progress in achieving what is desired [28]. Compilation of survey results and in-depth interview monitoring effects of SVLK implementation in four districts is given in Table 2.

The ToC can figure out how the program elements run, with details on each component, and outlining necessary steps for evaluation. It recommended a logical framework model used as an illustrative tool that contains in aspect the scope and context [29]. At a higher level, the consistent framework model should illustrate the bigger picture of the broader program, which describes all the elements needed to achieve the desired program vision and shows how SVLK implementation can contribute to long-term outcomes. This model approach is a beneficial way for putting SVLK implementations in the broader context. This concept is relevant to the expected direction of change from the effect conditions of SVLK implementation identifying towards ideal terms or better conditions expected by the government through Ministry of Environment and Forest (MoEF) as an SVLK implementation regulator. ToC was designed to be a reference for a better direction of change from SVLK implementation.

Table 2 shows the effect of VPA on several indicators. First, the welfare indicator did not impact the expected changes in labour welfare and implementation of career paths. There was no increase in income and career in the short-term effect. However, a positive impact increasing welfare of labour and family was found in the medium and long-term effects. Second, the protection indicator affects changes in the guarantee of occupational health and safety

TABLE 2: The ToC analysis of the implementation effect of the SVLK on SME's livelihood.

Indicator	Expected change	Direct/short term effect		Secondary/mid-long term effect	
		Description	Level*	Description	Level*
Effect of VPA					
(i) Welfare	Labour welfare and implementation of career paths	Increased income and career	0	Increased welfare of labour and family	+
(ii) Protection	K-3 (occupational health and safety) protection	Increased K-3 implementation	+	Increased of labour health, safety, and rights	+
(iii) Skills	Labour appointed to participate in the skill training program	The increased capability of labour	0	Increased skill and salaries of labour	+
(iv) Economic condition	Workforce absorption of local labour	Improved job opportunity for local labour	+	Increased economic condition	++
Influence for vulnerable					
(i) SME's perception	The SVLK positive for livelihoods	SVLK is a guarantee of the legal product	+	SVLK is a positive effect for livelihood	++
(ii) Policies and regulation	Local government adopt SVLK that support the livelihood	Local government support SVLK regulation	+	SVLK support livelihood on SME's	++
(iii) Business practice	Export and domestic market	Reduces overhead transaction costs	+	Increased profitability	++
(iv) Issue visibility	Public raises of SVLK and livelihoods issue to the higher priority	Improved SVLK to support the livelihood	+	SVLK higher priority to effect positive of livelihood	++

Note: the level effect of the SVLK on SME's livelihood by ToC. ++, strong positive effect; +, positive effect; 0, neutral or no effect; -, negative impact; --, strongly negative effect.

protection (K-3). The application of K-3 in the short term will have a positive impact for increasing K-3 implementation and in the medium to a long time will affect the increasing of labour health, safety, and rights. This indicator can have a short-term effect because the application of K-3 is a condition that must fulfil in the certification process for timber and product legality. All management units must have a standard operational procedure (SOP) of K-3, and apply it during an audit by a certification institution. Third, the skill indicator does not affect the change in labour appointed to participate in the skills training program. In the short term, SVLK does not increase the skill of employment, but the medium to a long time will have a positive impact on the increasing labour capability and salary. Fourth, the economic condition affects changes in workforce engagement of local employment. Positive impact on job opportunities for domestic labour was found in the short-term effect. Furthermore, a very positive effect on increasing economic condition of the marginalised and vulnerable groups was also found in the medium and long-term effects.

Four indicators' influence for vulnerable were also found in this research: First, SME perception that the SVLK has positive impact for livelihoods because in the short term, the SVLK is a guaranteed legal product. Therefore, from the medium to long term, SVLK have a positive impact on livelihood. Second, policies and regulations cause changes in local government adoption of SVLK supporting livelihood. In the short term, the positive effects on SVLK local government are supported by issuing regulations at the local level. In a long time, SVLK has a very positive impact on SME's livelihood. Third, a business practicing the SVLK causes changes in the export and domestic market. In the short term, SVLK has a positive effect on reducing overhead transaction costs and in the medium to a long time, and it has a very positive impact on increasing profitability. Fourth,

the issue of visibility of the expected changes is the emergence of public awareness of SVLK and livelihood. In the short term, SVLK development will support livelihood. In the medium to a long time, it will have a very positive impact on public opinion that SVLK is a priority issue affecting livelihood.

The ultimate goal is a process of continuous improvement. In specific periods, in the process of regular monitoring, this theoretical change study needs to be updated, and the intermediate steps can be updated and implemented by the stakeholders—the logical illustration model of impact change of SVLK implementation toward expected livelihoods condition is shown in Figure 1.

3.1. Effect of VPA. The scope of the well-known livelihood framework was accessed to the control of five assets, namely humans (e.g., education, health, and food), nature (e.g., land tenure and forest resources), physical (e.g., property, infrastructure, and transportation), social (e.g., capital social), and finance (e.g., assets and income) [30, 31]. In the context of article 12 of the VPA document, livelihoods explicitly depend on access to ownership and ownership of assets. Control of these assets is the scope of the effect monitoring instruments and the interests of stakeholders to fulfil them—typically questioned in each research on livelihood based on literature reviews and survey methods. In general, the results show that the position of marginal and vulnerable groups is fragile in the forestry industry supply chain of small and medium enterprises. Most likely, this group is affected by the implementation of the SVLK. They are artisan, labour (youth, people with disabilities, and gender), forest farmers, small log yard registers, and small-scale companies.

		Enhance sustainable livelihoods of marginals and vulnerable groups after SVLK implementation				
OUTCOMES	Long-term	Increasing labours welfare (safety health, career paths, and salaries) in the industry-held SVLK.		Increasing capacity SME's, marginal, and vulnerable groups for sustainable livelihoods		
	Mid-term	Policy of K3 implementation as part of a verifier and indicator SVLK	Increasing levels, skills, and capabilities for marginal and vulnerable groups	Increasing social activities that provide alternative livelihood opportunities	Increasing transparency of workforce for vulnerable groups and local workers	
OUTPUTS	Short-term	Awareness of management K3 (occupational safety and health)	Training programmes for marginal and vulnerable groups	Implementation SVLK as mandatory	Alternative livelihood other than as a labour	Local labours and vulnerable groups have equal opportunities
		Regulation and support system of SVLK	Facilitation and training programmes	Technical assistance of SVLK	Collaborative with each other	More awareness to vulnerable, marginal, and local labours
ACTIVITIES		Policy and legislation infrastructure	Training of skill and capacity building	Develop a verifier and indicator of SVLK	Collaborations and partnership	Education and awareness

FIGURE 1: A logical model impact of a change of SVLK implementation.

In the early stages of VPA implementation, it is difficult to anticipate the effect of livelihoods on vulnerable and marginalised groups. The difficulties were divided into two groups, i.e., middle groups (good access to assets and livelihood strategies, political influence, and property ownership, such as small-scale companies (SMEs) and small yard registers) and the lower group (marginal and vulnerable groups, with poor access to livelihood assets and livelihood strategies and lack of opportunities, such as craftsmen, labour, and forest farmers).

It is widely recognised that FLEGT-VPA has the potential to have positive and negative equity effects. Implementation of VPA presents a serious risk or challenge for a small-scale forestry sector [32, 33]. One of the main risks is the issue of business legality licensing and stricter law enforcement. VPA implementation could hurt those whose livelihoods depend on the use of forest resources that do not have legality permits [34, 35]. The EU FLEGT Action Plan (European Commission 2003) emphasises that the EU-FLEGT challenge is to ensure actions to deal with illegal logging, especially increasing law enforcement without harming weak groups, such as poor rural communities, while providing a deterrent effect on illegal logging [36].

Implementing VPAs can harm the livelihoods of people in need in terms of forest needs, if there is no system for improvement. Indicators and verifier systems based on information provided and evidence are needed for a decision maker for managing the effect of VPA [36]. Countries that signed the VPA agreement understand the contents of the article on social protection. The establishment of a monitoring committee from the signatories intended to understand and reduce the adverse effects of VPA on local communities or other stakeholders. Safeguard is an effort as early as possible ensuring that the implementation of a policy or program will not cause adverse risks to the social, economic, livelihood aspects, and the environment. This effort must integrate the whole set of procedures for implementing policies or programs. Several aspects of a safeguard comparative study of several VPA participating countries with the E.U. are

- (1) Strengthening tenure aspects and access rights to land and natural resources, especially for marginalised communities and indigenous peoples;
- (2) Enhancing the active participation of stakeholders, include nongovernment actors and indigenous

TABLE 3: Vulnerable analysis of stakeholders.

Business group/ Organization	Exposure and sensitivity to the impact	Institutional capacity and adaptability	Analysis
Small and medium enterprises (SME's)	(i) Affected directly by the fulfilment of the SVLK standards and periodic surveillance obligations. (ii) Sensitive to effects and on a particular scale can be a compassionate group (e.g., verification and surveillance costs for licensing processes)	(i) Financial and skill managerial aspects are the limited abilities. (ii) Not having adequate human resources concerning meeting environmental standards. (iii) Adaptability is limited and at risk of business continuity.	This group is vulnerable and can be very weak if there is no effort to increase capacity or ease of licensing, which is not the same as the criteria for large industries.
SME's labour group	(i) Does not have a labour organisation so that it is sensitive enough to the effect on the workplace company. (ii) Exposures are higher than labour in large industries.	(i) Does not have sufficient capacity to respond to effects, both financially and managerially. (ii) Adaptability is low and requires the support of stakeholders.	This group is classified as a group that is quite vulnerable if the effect lasts long enough and on a large scale of impact.
Women's groups (labours, wives of the job)	(i) Sufficiently sensitive to effects, even though they are not directly affected. (ii) Exposure to the effect depends on the type of bond with the business actor (if the husband has terminated the contract with the business actor, then the women's group becomes very sensitive and is at risk of losing additional sources of income for the family)	(i) Does not have managerial and financial strength, unless there is a women's organisation that can facilitate cooperation and resolve conflicts with the company. (ii) Adaptability is low and usually has no expertise that makes it ready for a change.	This group includes vulnerable groups of aspects of adaptability and sensitivity to effect.
Disabled groups (who work or are a burden to working families)	Very sensitive to effects and at risk of losing livelihoods	In general, no institution can strengthen the bargaining position of the group.	This group is classified as a vulnerable group and needs stakeholder attention.

peoples regarding policy formulation and implementation;

- (3) Increased transparency regarding the provision of forest area management rights, timber harvesting, and trade; and
- (4) Engagement of the private sector in the context of reducing illegal logging.

Many factors determine the ease and availability of criteria for the impact area on VPA implementation. Those factors include time and money for setting baselines for monitoring frameworks for specific effect areas; a logic model for preparing effect baselines; and a strategy to overcome the attribution gap between the output of VPA implementation and the expected effect. Expansion of the impact areas of VPA implementation can be considered for better sustainability of forest governance [37].

The proposed important effect areas were categorised into two different dimensions: (i) resource dimensions, namely forest, market access, and livelihoods and (ii) dimensions of forest governance. The first group focused on changes in the field that cover critical effect areas such as forest sustainability conditions; economic growth; national market development; livelihoods; and poverty. The second group is in the form of elements that describe the actions and processes that make it possible to achieve the desired effect of VPA implementation in the first group. The effectiveness of stakeholder engagement; institutional effectiveness and

efficiency; accountability and transparency; illegal logging; law enforcement and compliance, access rights; and control rights to forest resources are the main effects of implementation of VPA [38].

Issues about livelihoods and poverty in affected areas are mentioned in the EU FLEGT Action Plan. The challenge to overcome this issue is to ensure that actions to deal with illegal logging, especially increasing law enforcement [39]. On the other hand, let the players of illegal logging influence without being touched by the law [40]. The five indicators proposed have been designed to measure the effect of VPA on the livelihoods of forest-dependent people. This measurement was expected to provide evidence that VPA has the potential to have positive or negative impacts on livelihoods and poverty levels [9, 34, 41]. One hypothesis of the emergence of VPA is that improving the management of forest resources will have a positive effect on socioeconomic conditions and poverty alleviation for people who depend on forest resources [1, 6]. VPAs can improve welfare and reduce poverty through creating employment opportunities, ensuring the right of access to forest resources, and VPA also make equitable distribution of income to local stakeholders better and ensuring that social agreements negotiated for the benefit of affected communities [37].

The theory of change is how to explain that VPA can side with the poor as a form of the negotiation process that empowers civil society groups [42]. In the context of the theory of change, monitoring the effect of the SVLK

implementation system is an effort to protect vulnerable and marginalised groups. They need to be prepared to ensure that the implementation of SVLK can avoid adverse risks to social, economic, livelihood, and environmental aspects. The preparation is through local employment opportunities, for better and more equitable distribution of benefits.

3.2. Influence for Vulnerable. The expected benefits of the impact monitoring system are by providing accurate effect information to encourage increasing positive effects and anticipating the negative impact. The response of stakeholders to the implications occurs differently, depending on many factors. For this reason, a vulnerability analysis is needed for SVLK stakeholders to determine the level of vulnerability in receiving the effect of SVLK implementation and become a reference for decision maker for ensuring social safeguards. Vulnerability analysis sees two main factors, namely vulnerability to the impact of SVLK implementation and vulnerability regarding institutional capacity and socioeconomic capabilities, including adaptability. Vulnerability analysis is presented in the matrix in Table 3.

Theory of change in the scope of vulnerability analysis gives an illustration of the intended effect due to SVLK implementation, both in the medium and long term. Management units such as community forests and small log yards as sources of raw materials for small and medium industries are the implementation of operational activities. This management unit has the potential to absorb much male local labour from the surrounding community. However, there were not many women and disabled groups because work in this management unit requires substantial expertise and personnel to carry out logging, bucking, skidding, loading and unloading, hauling, and log yard activities.

Effect of short-term and long-term vulnerability in artisan groups and labour (youth, disabled, and gender) who were involved in SME's production could be different in the production of industrial raw materials from forest areas. The short-term effect of the vulnerability of livelihoods and livelihoods in SME's is the guarantee of fulfilling labour rights according to gender equality and social inclusion in the implementation of occupational safety and health (K3). The effect in the long term is the opening of business opportunities for labour (youth, disabled, and gender) directly or indirectly due to increased market access and premium prices for products of SME's that have SVLK certified. The short-term effect of forest farmer and small log yard is the involvement of local personnel in the operational activities of the management unit. The percentage of gender workforce involvement and disabled groups is lower than male labour. The impact in the long term is the guarantee of fulfilment and protection of labour rights under regulations, so that it will improve the welfare of the job.

4. Conclusions

The SVLK impact monitoring system involved stakeholders who work together to build a more sophisticated understanding of SVLK implementation. Effective

communication is needed with a participatory approach to support adaptive shared learning. The use of ToC analysis provides understanding benefits with stakeholders who have different experiences in SVLK implementation. An important factor is the ToC analysis approach to identify the broader effect of SVLK implementation on livelihood as follows:

- (1) The vulnerable and marginalised groups need to support stakeholders to encourage readiness in faces of the fact of SVLK implementation;
- (2) SVLK implementation was susceptible to impact and at risk of losing livelihoods for women and disabled groups in short time. This group includes vulnerable groups of aspects of adaptability and sensitivity to the effect.
- (3) SME's worker groups do not have a labour organisation so that it is sensitive enough to the effect on the workplace company. This group is classified as a group that is quite vulnerable if the effect lasts long enough and on a large/large scale of impact.

It is necessary to involve other experts in interdisciplinary research and initiatives to develop the impact monitoring system of SVLK. A challenge in finding experts who have the skills to manage multistakeholder participation processes to conduct evaluations and planning based on the monitor of the effect of SVLK implementation.

Data Availability

1. The data used to support the findings of this study may be released upon application to <https://silk.menlhk.go.id> <https://silk.menlhk.go.id> <http://sipuhh.net/dashboard/> for who can be contacted at MoEFor and BPS. 2. Previously reported (annual report and news) data were used to support this study and are available at (<http://www.euflegt.efi.int/indonesia>). These prior studies (and datasets) are cited at relevant places within the text as references (#- #). 3. The (FGD report and questionnaire respondent) data used to support the findings of this study are available from the corresponding author upon request.

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Conflicts of Interest

The authors declare no conflicts of interest that affect the interpretation of research results that are not following the writing of this article.

Authors' Contributions

The authors contributed equally for preparing this manuscript.

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