

**INITIATION OF LOW CARBON ECONOMIC STIMULUS POLICY ON MSME WASTE
MANAGEMENT POST-COVID-19 IN INDONESIA****Mario Rosario Wisnu Aji^{1*}****Risanda Alirastra Budiantoro²****Citra Augustina Sumarsa³****Febrianur Ibnu Fitroh Sukono Putra⁴**

¹ Faculty of Business and Economics, Universitas Atma Jaya Yogyakarta, Indonesia.
Babarsari Street No. 44, Depok, Yogyakarta Special Region 55281

² Faculty of Economics, Universitas Negeri Semarang, Indonesia.

Kampus Timur Street, Sekaran, Gunung Pati, Semarang Central Java, 50229

³ Bureau of Regional Head of DKI Jakarta Provincial Government, Indonesia.

Medan Merdeka Selatan Street No.8-9, Central Jakarta, Special Capital Region of Jakarta 10110

⁴ Faculty of Economics and Business, Universitas Dian Nuswantoro Semarang, Indonesia

Nakula 1 Street No.5-11, Pendrikan Kidul, Semarang, Central Java 50131

Email: mario.wisnu@uajy.ac.id*, risanda.abe@mail.unnes.ac.id, citra.augustina@gmail.com,

fbr10@dsn.dinus.ac.id

*corresponding author

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ABSTRACT

The waste management problem has become a concern for almost all countries, including Indonesia. In addition, on the other hand, Indonesia also still needs strengthening in the direction of the MSME sector. Therefore, the Ministry of National Development Planning/Bappenas, through the Directorate of SME and Cooperative Development, established a low-carbon economic stimulus program aimed at the MSME sector to improve waste management and restore environmental damage in Indonesia as well as improve the welfare of MSME. This study aims to formulate an ideal model in providing low-carbon economic stimulus to MSME to create sustainable economic development using a secondary data approach. This study found that the low-carbon economic stimulus can be a concrete and solution step from the government as a credit risk management program in providing financing in creating MSME management based on sustainable development in waste management, provided that stakeholders can maintain coordination and seriousness in carrying out their roles and responsibilities.

Keywords: COVID-19; Low Carbon; Waste Management, Economic Stimulus

JEL: E62; H00; O38; O44; Q01; Q5

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1. INTRODUCTION

Society 5.0 itself was first raised by the Japanese prime minister's office by releasing a concept video of society 5.0 on 21 September 2018. The challenges of society 5.0 are becoming more complex than the previous generation. This challenge arises due to an increase in economic growth, people's living standards, and the explosion of the population with all their financial needs. On the other hand, the availability of a living environment is increasingly limited, coupled with worsening environmental damage making the social problems faced will become more and more severe—complex (Marlina et al., 2020). Such a condition becomes an irony for economic development; on the one hand, it is progressing financially, but on the other hand, environmental conditions are deteriorating.

The Directorate of SME and Cooperative Development (2020) took the initiative to establish a low-carbon economic stimulus program aimed at the MSME sector to improve waste management and restore environmental damage in Indonesia. The initiation process of this stimulus is proposed so that

MSME can apply for soft loans, grants and obtain assistance programs for the strategic development of infrastructure and waste management capacity. This is justified by Bebasari (2020), who emphasizes the role of MSMEs in waste management to become a comprehensive solution that is effective, efficient, and mutually beneficial and makes these MSMEs more prosperous and equitable in a sustainable manner.

1. Government Policy in Overcoming the Covid-19 Pandemic

Several short-term solutions can be implemented to maintain the existence of MSME actors by considering strict health protocols in carrying out economic activities by MSMEs, delaying debt or credit payments to maintain MSME financial liquidity, financial assistance for MSMEs, and structural policies (Pakpahan, 2020; Sugiri, 2020). This realization will be provided in the form of a financial assistance program to recover the national economy due to the impact of the Covid-19 pandemic (Soeprapto, 2020). To minimize the negative effects of Covid-19, the government has issued various policies aimed at the sustainable management of MSMEs:

Table 1.
Government Policy for MSME

Policy	Objective	Description	Example
Fiscal Stimulus	Encouraging economic growth	<ul style="list-style-type: none"> Income tax exemption (PPh Pasal 21) Delay in payment of import income (PPh Pasal 22) 60 percent tax relief so as to provide cash flow space for MSME (PPh Pasal 25) Tax exemption for MSME in the tourism sector 	Special Treatment for People's Business Credit (KUR) Recipients Affected by the COVID-19 Pandemic refers to the Regulation of the Coordinating Minister for the Economy of the Republic of Indonesia Number 3 concerning the Fourth Amendment to the Coordinating Ministerial Regulation No. 6 of 2020
Non-Fiscal Stimulus	Easing export and import activities	<ul style="list-style-type: none"> Encouraging MSME to conduct international trade Reducing restrictions on international trade activities Establishing a national logistics system 	The policy of simplification and reduction of the number of Prohibitions and Restrictions (Lartas) for export activities aims to increase the smoothness of exports and the competitiveness of export products
Financial stimulus	Encourage financial activity	<ul style="list-style-type: none"> Credit Relaxation Relaxation of social security contributions for MSMEs affected by Covid-19 	For MSME debtors, Banks can restructure MSME loans/financing with quality that can be directly secured after the credit restructuring has been carried out.

Source: Financial Service Authority (2021)

Furthermore, this research aims to formulate an ideal model in providing low-carbon economic stimulus to MSME to create sustainable economic development using a secondary data approach. This research also has an element of novelty by having a vision for the government to provide a stimulus to MSMEs affected by the COVID-19 pandemic while improving environmental conditions in terms of waste management.

2. MSME Actors

Economic development activities must be based on broad community participation, especially MSME actors (Heliantina, 2017). This is done to encourage the real sector considering that MSMEs are the foundation of the national economy that significantly influence the national economy. This is due to the ability of MSMEs to absorb labor and contribute to the National GDP. So it can be said that MSMEs are one of the economic pillars of the Indonesian people (National Research and Innovation Agency/BRIN, 2022). For this reason, it is important to define and establish criteria for MSME actors that are universally applicable. According to the World Bank, MSMEs can be grouped into three types, namely: 1. Micro Enterprises (10

employees); 2. Small Business (number of employees 30 people); and 3. Medium Enterprises (number of employees up to 300 people). From a business perspective, MSMEs are classified into four groups, namely:

- MSMEs in the informal sector, for example street vendors.
- Micro MSMEs are MSMEs with craftsmanship abilities but lack the entrepreneurial spirit to develop their businesses.
- Dynamic Small Business is a group of MSMEs capable of entrepreneurship by establishing cooperation (accepting sub-contract work) and exports.
- Fast Moving Enterprises are MSMEs that have capabilities in entrepreneurship and are ready to transform into big businesses.

3. Legal Basis

In Indonesia, the law governing Micro, Small and Medium Enterprises (MSMEs) is Law no. 20 of 2008. In that law MSMEs are explained as: "A company classified as MSME is a small company owned and managed by a person or owned by a small group of people with a certain amount of wealth and income". Law no. 20 of 2008 concerning Micro, Small and Medium Enterprises classifies this sector by considering the value of net assets owned and the value of sales proceeds, with the following details:

Table 2.
Definition and Criteria for Micro, Small and Medium Enterprises

Enterprises Scale	Definition and Criteria
Micro Business 62.106.900 unit (98,70 percent)	<ul style="list-style-type: none"> • Is a productive business owned by an individual or an individual-owned business entity that meets the applicable micro-enterprise criteria (generally a type of home industry consisting of 1-4 people) • The total net worth owned in this sector reaches a maximum of IDR 50 million (this amount does not include land and buildings from the place of business). • Get maximum sales in one year of IDR 300 million.
Small Business 757.090 unit (1,20 percent)	<ul style="list-style-type: none"> • Is a productive business with operations carried out independently by individuals or individually owned business entities that are not included in subsidiaries or branches of company branches directly or indirectly from medium or large businesses (in small businesses, the number of workers employed is approx. 5 - 19 people) • Total net worth owned in this sector with a range of IDR 50 million to a maximum of IDR 500 million (this amount does not include land and buildings from the place of business) • Get sales results in one year with a range of IDR 300 million to a maximum of IDR 2.5 billion.
Medium Business 5.627 unit (0,09 percent)	<ul style="list-style-type: none"> • Is a productive business with operations carried out independently by individuals or business entities that are not subsidiaries or other branches of companies that are a direct or indirect part of either owned or controlled by small and large businesses (in small businesses, the number of workers employed is as much as approximately 20-99 people) • Total net worth owned in this sector with a range of IDR 500 million to a maximum of IDR 10 billion (this amount does not include land and buildings from the place of business) • Get sales results in one year with a range of IDR 2.5 billion to IDR 10 billion

Source: Law Number 20 of 2008 concerning Micro, Small and Medium Enterprises

2. RESEARCH METHODOLOGY

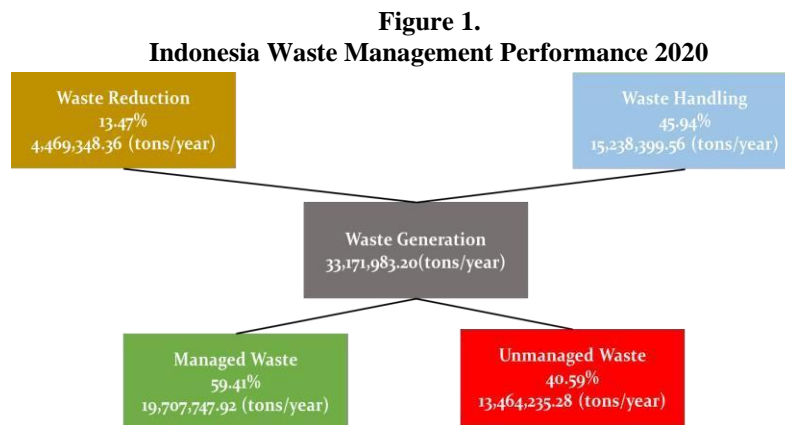
This study uses secondary data to formulate an ideal model for providing low-carbon economic stimulus to MSME to create sustainable economic development. The source of the data in this study was obtained through various reports and publications by multiple agencies that have direct policies and are technical stakeholders in the implementation of the stimulus program, such as Ministry of National Development Planning, Ministry of Public Works, Ministry of Environment and Forestry,

Ministry of Industry, Ministry of Cooperatives Small and Medium Enterprises, Investment Coordinating Board (BKPM), and Local Governments.

This study displays several figures adapted and also modified from several sources such as Figure 1 sourced from the Ministry of Environment and Forestry (2020). Waste Management Performance Achievements. <https://sipsn.menlhk.go.id/sipsn/>. Furthermore, Figure 2 is a mapping compiled based on a report from the Directorate of State Finance and Monetary Analysis (2021). Meanwhile, Figure 3 is compiled based on the Education and Training Center for Roads, Housing, Settlements, and Regional Infrastructure Development (2018) Waste Management with the Waste to Energy Concept. Ministry of Public Works and Housing. Meanwhile, Figures 4 and 5 were compiled based on the report from Perkumpulan Prakarsa (2014) Development of the Green Economy Concept. Meanwhile, Figure 6 is the result of mapping from sources from the Directorate of State Finance and Monetary Analysis (2020); Secretary General Ministry of Finance (2020b), and Secretary General Ministry of Finance, (2020a) report. Then Figure 7 is the initial scheme compiled by the Directorate of SME and Cooperative Development (2020), while Figure 8 is a proposed scheme modified by researchers based on the initial scheme from the Directorate of SME and Cooperative Development (2020).

The focus of this research is to conduct an in-depth analysis of the preparation and development of providing low-carbon economic stimulus to MSME initiated by the Ministry of National Development Planning in collaboration with various stakeholders involved. This service will be a concrete and solution step from the government as a credit risk management program in providing financing in creating MSME management based on sustainable development in waste management.

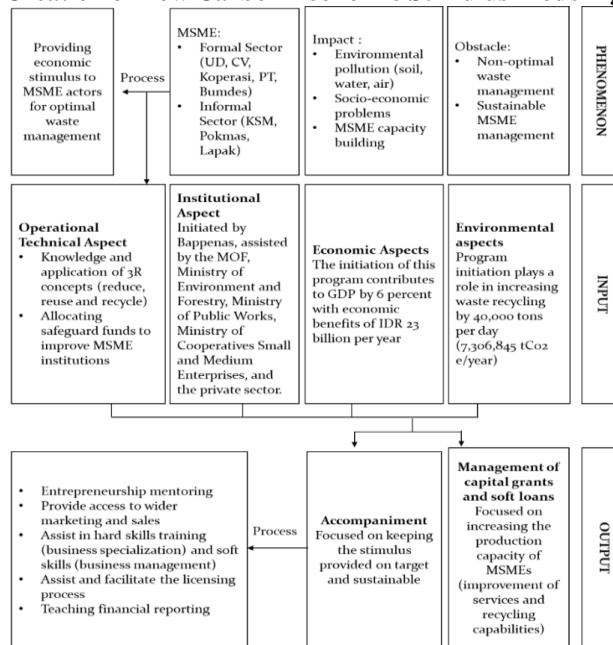
This research begins with the phenomenon that waste management is not optimal. Based on data compiled from the Ministry of Environment and Forestry in 2020, throughout Indonesia (275 districts/ cities), there were still 13.4 million tons of unmanaged waste or 40.59 percent of the total waste in 2020, which reached 33.1 million as shown in Figure 1 below:



Source: Ministry of Environment and Forestry (2020)

The Ministry of National Development Planning initiated the provision of economic stimulus to MSME, so that waste management can be optimal to support sustainable economic development through MSME and have a multiplier effect on the environment. The flow of the model for the low-carbon economic stimulus can be seen in Figure 2 below:

Figure 59
Creation of Low Carbon Economic Stimulus Modeling



Source: Directorate of State Finance and Monetary Analysis (2021)

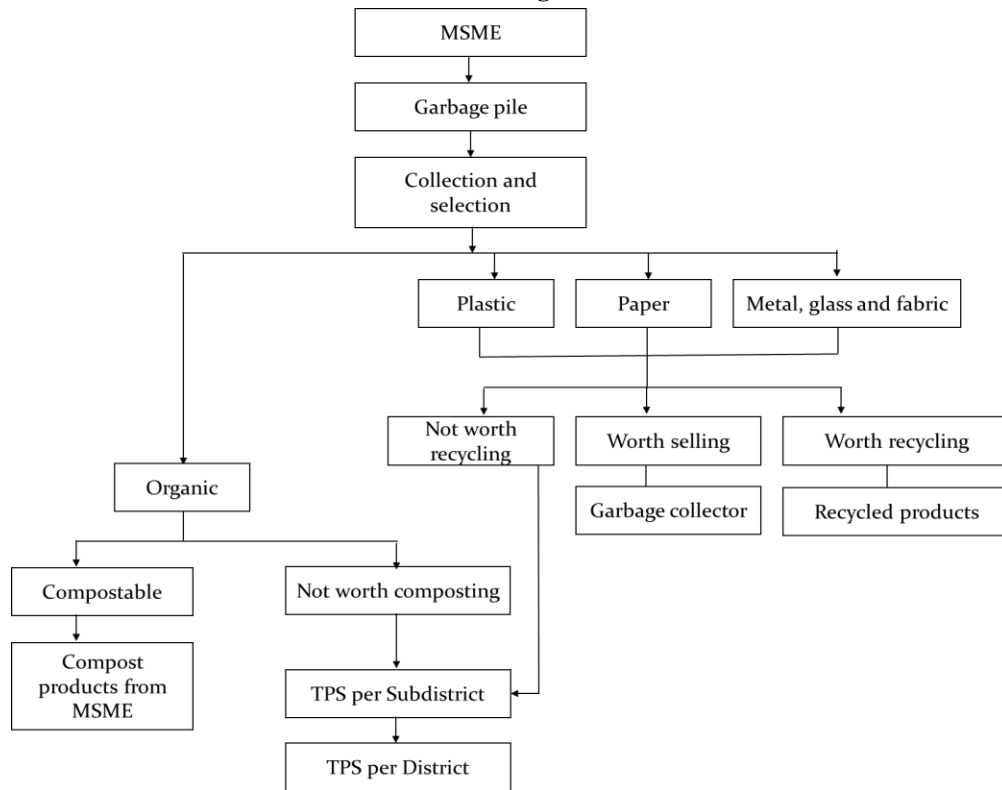
3. RESULT AND DISCUSSION

1. Waste Management

The policy initiated by the Ministry of National Development Planning is a fundamental process related to improving waste management through economic stimulus activities. This waste management needs to be done because no matter how big and good the economic stimulus is, it will not provide business incentives to the business sector if the ecosystem in waste management is not comprehensively addressed (Aziz et al., 2019). Business actors need economic stimulus in the form of financing and business assistance. The stimulus is helpful, conditions, and grows business actors to be able and willing to manage the waste system, especially in regulations and policies, partnership systems, and payment mechanisms.

In managing the waste produced based on MSMEs, the initiation carried out by the Ministry of National Development Planning becomes a technically carried out policy and program that demands an active role from MSME in waste management so that it can determine the success of its implementation (Maulida & Yunani, 2017). MSME are empowered non-instructively to increase the knowledge and ability of the community in identifying, planning, and completing their waste management (Figure 3).

Figure 60
MSME Waste Management Scheme

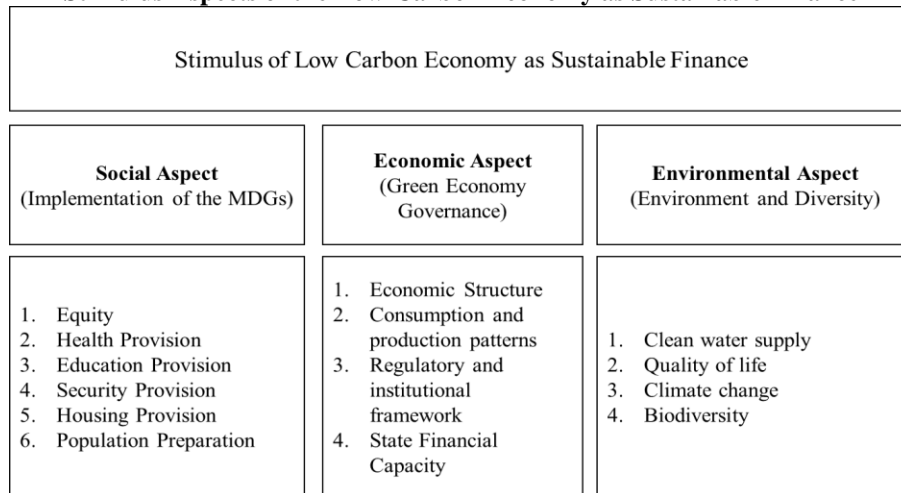


Source: Education and Training Center for Roads, Housing, Settlements, and Regional Infrastructure Development (2018), modified

2. Stimulus of Low Carbon Economy as Sustainable Finance

The Government of Indonesia is committed to fully supporting global efforts in the SDGs. So, the issue of sustainable economic development has become the focus of attention from the Government of Indonesia due to the widespread problem of declining quality of life, widening social inequality, and climate change and their inherent implications (Financial Service Authority, 2021). One of the implementations is realized by initiating this low-carbon economic stimulus. The emphasis of this low-carbon economic stimulus refers to:

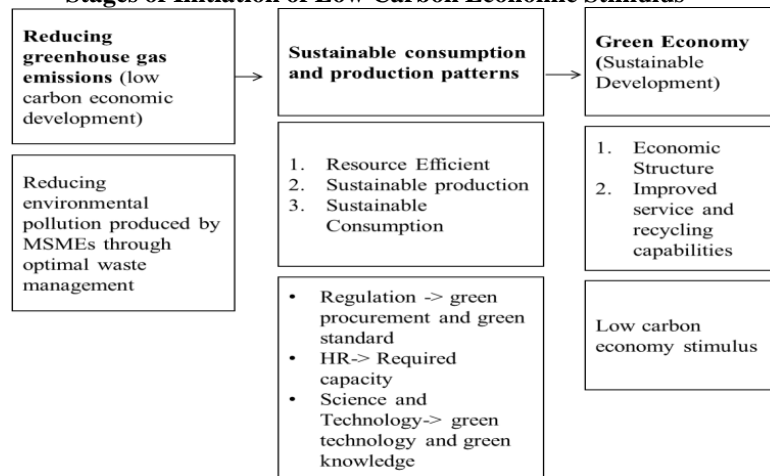
Figure 4.
Stimulus Aspects of the Low-Carbon Economy as Sustainable Finance



Source: Perkumpulan Prakarsa (2014), modified

In practice, there are still several obstacles faced in carrying out sustainable development financing, resulting in less than optimal sustainable financing, including (Financial Service Authority, 2021): (1) there is no taxonomy of the economic sector that is classified as environmentally sustainable; (2) still weak stakeholder awareness; (3) schemes and instruments of sustainable financing are still limited; (4) the cost of issuing financing instruments is relatively high. In general, the framework of sustainable development requires the seriousness of all stakeholders involved concretely and gradually, as shown in Figure 5 below:

Figure 5.
Stages of Initiation of Low Carbon Economic Stimulus



Source: Perkumpulan Prakarsa (2014), modified

3. Description of Economic Stimulus Initiation

According to the Directorate of SME and Cooperative Development (2020), the recommended economic stimulus programs to be distributed to MSME are: (1) equipment grants and soft loans, which are focused on meeting the needs of MSMEs in increasing their production capacity to improve services and expedite the recycling process; (2) MSME capacity building program through mentoring, which is focused on proposing waste collection and transportation infrastructure.

According to the Directorate of SME and Cooperative Development Bappenas (2020), the amount of this economic stimulus is included in the National Economic Recovery Program

through the Government Work Plan, with details as follows:

Table 3.
Classification of Low Carbon Economic Stimulus

Types of Economic Stimulus	Allocation	Targets
Equipment Grant funds	Rp 400 billion	Targeted to be distributed to 5,000 MSME actors (formal and informal) <ul style="list-style-type: none"> • 4,000 MSME waste bank • 500 MSME managing TPS 3R • 500 other MSMEs engaged in waste management
Soft loan funds	Rp 3 billion	Targeted to be distributed to 1,000 formal sector business activities in the middle class
Assistance funds	Rp 170 billion	It is targeted that it will be given to all MSME actors who receive equipment grants and soft loans, so that the utilization of the economic stimulus can be right on target

Source: Directorate of State Finance and Monetary Analysis (2020); Secretary General Ministry of Finance, (2020b)

In addition, the Ministry of Finance has also allocated funds to safeguard the capacity of local governments to improve their performance in law enforcement and reform of proper and equitable financing (Figure 6). The economic stimulus policy was also carried out as a form of credit risk management to create a multiplier effect for MSME. They manage waste by minimizing fears of not being able to pay loans.

Figure 6.
Low Carbon Economic Stimulus Fund Program



Source: Directorate of State Finance and Monetary Analysis (2020); Secretary General Ministry of Finance (2020b); Secretary General Ministry of Finance (2020a)

Concerning the object of the initiation of this economic stimulus, it is aimed at: (1) the informal sector (industries or waste or recycling businesses that do not yet have official business legalities following applicable regulations such as KSM, Pokmas Lapak); (2) the formal sector (industrial or waste or recycling business that already has official business legality following applicable regulations such as UD, CV, PT, etc.). The selection of MSMEs in this sector is relatively large, where the number of MSME engaged in TPS 3R management is estimated to reach 655 units and MSMEs engaged in waste bank management as many as 4,212 units (Ministry of Public Works, 2021 and Ministry of Environment and Forestry, 2021). For MSME who wish to become partners in the initiation of low

economic stimulus policies for both equipment grants and soft loans, they must meet the following requirements:

Table 4.
Requirements for MSME to Apply for Economic Stimulus

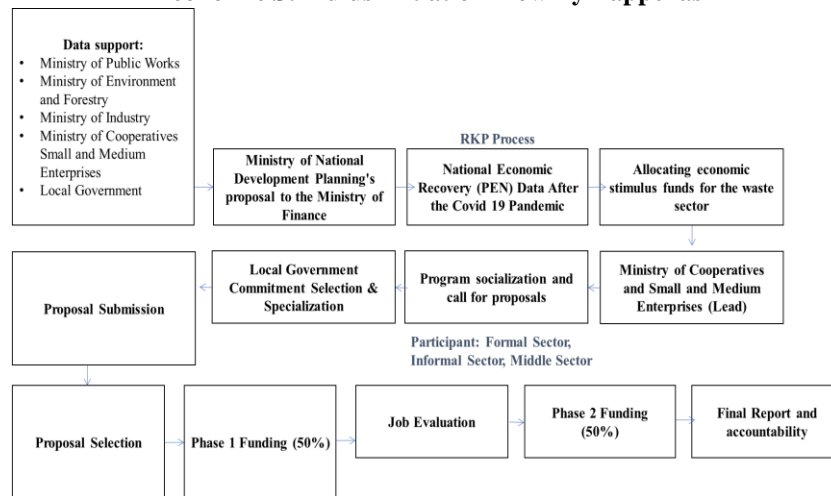
Equipment grants and soft loan funds		Assistance fund
Informal Business	Formal Business	Medium Enterprise
<ul style="list-style-type: none"> ● Create and submit proposal applications ● Submit a letter of interest and a DPA report for local government programs that support the improvement of MSME performance in waste management, especially those related to the achievements of the Jakstranas program ● Have a certificate of business truth from the Village Head ● Manage business licensing so that there is an increase in status to become a formal business actor 	<ul style="list-style-type: none"> ● Create and submit proposal applications ● Submit a letter of interest and a DPA report for local government programs that support the improvement of MSME performance in waste management, especially those related to the achievements of the Jakstranas program ● Have business legality 	<ul style="list-style-type: none"> ● Create and submit proposal applications ● Submit a letter of interest and a DPA report for local government programs that support the improvement of MSME performance in waste management, especially those related to the achievements of the Jakstranas program ● Meet the requirements of the LPDB PEN program (3 percent and are members of a cooperative) ● Meet the requirements of real cooperative loans and savings and loans (1 – 7 percent, and are members of cooperatives) ● Fulfilling strategic SME loan requirements and becoming a government priority
<ul style="list-style-type: none"> ● The business activity has been going on for at least one year ● There are recommendations from related associations 	<ul style="list-style-type: none"> ● The business activity has been going on for at least two years ● There are recommendations from related associations 	<ul style="list-style-type: none"> ● The business activity has been going on for at least one year ● There are recommendations from related associations

Source: Directorate of State Finance and Monetary Analysis (2021)

4. Economic Stimulus Initiation Mechanism

Basically, Bappenas, the initiator of the low-carbon economic stimulus program, has drawn up the mechanism scheme as shown in Figure 7.

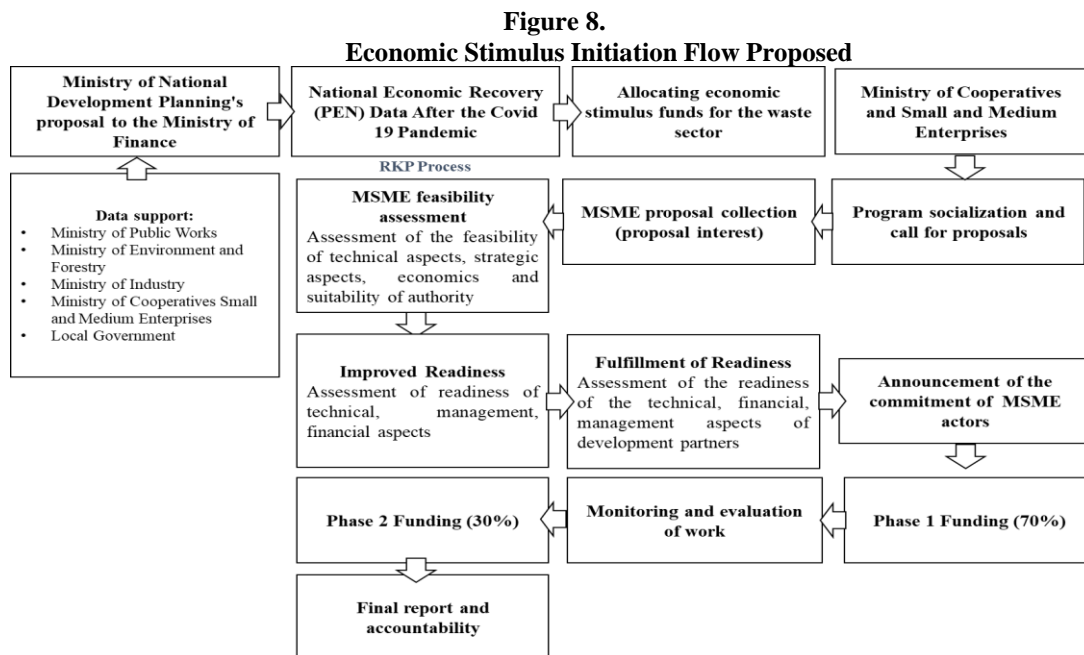
Figure 7.
Economic Stimulus Initiation Flow By Bappenas



Source: Directorate of SME and Cooperative Development (2020)

Citing the concepts in the Handbook for the Preparation of Proposed Activities financed from Foreign Loans (2020), changes need to be made. The mechanism for the low-carbon economic stimulus proposed by Bappenas is still considered general, so in this study, a more detailed modification is proposed, as shown in Figure 8. The changes are made using several detailed assessments such as feasibility assessment, improved readiness, and fulfillment of readiness. The transfer of funds was also carried out in the amount of 70-30 to provide great motivation for MSMEs to work optimally from the beginning.

The proposed mechanism in this study starts with the socialization and selection of proposals from MSME to The Ministry of National Development Planning that meet the existing criteria and requirements. The role of other stakeholders, such as the Ministry of Environment and Forestry, Ministry of Industry, Ministry of Public Works, business consultants, and local governments assisting the Ministry of National Development Planning in preparing program proposals to the Ministry of Finance as well as helping the Ministry of Cooperatives Small and the medium enterprises in carrying out socialization and selection of MSME proposals that want to become program partners. The selection process for recommendations proposed by MSMEs is selectively screened with some detailed assessment so their implementation can be right on target later. One of the considerations is the products produced by MSMEs that can support business continuity and the preparation of MSME databases per region so that the selection process can run effectively and efficiently (Figure 8).



Source: Directorate of SME and Cooperative Development (2020), modified

Expectations from the initiation of economic stimulus, in the form of (Pratiwi, 2020): (1) mentoring and evaluation of the implementation of MSME; (2) expanding access to marketing and sales so as to increase market share; (3) providing soft skills training in the form of business management and hard skills in the form of business specialization to MSME in order to increase competitiveness; (4) assisting and providing business licensing facilities for MSME. The distribution process of this economic stimulus is carried out in two stages, of which 70 percent can be disbursed at the beginning. And then after passing the monitoring and evaluation stage, the second phase of funding is 30 percent. The second stage will ends with a final report on program implementation by MSME to the Ministry of Cooperatives Small and Medium Enterprises. The benefits of initiating this stimulus are classified in:

Table 5. The Benefit of Economic Stimulus Initiation

Aspect	Benefits
Environmental Aspect	Can increase the volume of recycled waste to reach 40,000 tons per day. This value is equivalent to a reduction in emissions of 7,306,845 tCO ₂ e per year or 146 million CO ₂ e per 20 years.
Economic Aspect	From recycling waste per day, it generates economic benefits of Rp 23 trillion per year. Indirectly, the benefits are also felt by large companies related to the waste recycling supply chain originating from MSME actors
Socio Economic Aspect	It can increase job creation by 15,000 to 75,000, meaning that the waste recycling industry is able to create 1,000 new companies with 3 million workers throughout Indonesia. In addition, 850 thousand scavengers will feel an increase in welfare.
Business operational aspects	<ul style="list-style-type: none"> ● Become a means of increasing knowledge and implementing the 3R concept as an integrated waste management. ● The preparation of safeguard funds is a strategy for the government in implementing risk management programs related to law enforcement and financing reforms that are appropriate, equitable and sustainable.

Source: Azizah et al., (2020); Directorate of SME and Cooperative Development (2020)

4. CONCLUSIONS

The low-carbon economic stimulus is a sustainable economic development solution to the problem

of suboptimal waste management by MSME in Indonesia. This program is a concrete and solution step from the government as a credit risk management program in providing financing in creating MSME management based on sustainable development in waste management. The seriousness of each stakeholder determines the success of this low-carbon economic stimulus in carrying out their roles and responsibilities as well as possible. It is hoped that micro and small business actors who receive these benefits can grow and develop so that they can become more prosperous, independent, tough, and independent and run their businesses in a sustainable manner.

The broader the scope of this low-carbon economic stimulus, the better waste management by MSMEs will be to realize sustainable economic development and increase their contribution to the regional economy. In particular, considering the benefits provided by the low-carbon economic stimulus, the Ministry of Cooperatives Small and Medium Enterprises is expected to immediately realize the financial assistance needed by MSME who are experiencing sluggishness due to the Covid-19 pandemic. To optimize the low-carbon economic stimulus assistance to MSME, local governments must coordinate with the central government through the Ministry of Cooperatives Small, and Medium Enterprises.

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