

Evaluating The Pertamina's Waste Bank Program Using Social Return on Investment in Koja District, North Jakarta

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ABSTRACT: The findings of this study are expected to serve as an objective benchmark for determining the level of social acceptance of PT Pertamina Lubricants Production Unit Jakarta (PUJ). Moreover, this study report presents the results of calculating the impact value and SROI of the program. This program aims to improve the welfare of society and the environment in Tugu Selatan Village, Koja District, North Jakarta, through the Berkah Waste Bank program. Based on the results of the SROI study, the Berkah Waste Bank program has proven to produce more significant benefits than the costs invested in activities such as planning for the development of the Berkah Waste Bank, environmental awareness training, distribution of assistance for facilities and infrastructure, mentoring and monitoring & evaluation (Monev) of the Waste Bank socialization program, management of drum and Non-B3 waste, training and development of social media and E-Commerce, initiation of waste programs oil change, garbage pick-up service, renovation of the Garbage Bank Shelter, inauguration of the Oil Exchange Garbage Workshop, program to strengthen marketing and administration of the Garbage Bank. These programs have proven to help increase communities' capacity to manage inorganic and organic waste from industrial and household waste. Through a series of activities such as training, mentorship, and assistance, these programs aim to increase community awareness and participation in waste management and empower them by improving skills to support the local economy.

KEYWORDS: CSR, Waste Bank, SROI, PT Pertamina Lubricants Production Unit Jakarta

BACKGROUND

In recent decades, social and environmental responsibility (CSR) has become an important focus for companies around the world, including in Indonesia. This concept has developed in response to increasing awareness of sustainability issues, such as climate change, social inequality, and the need for more responsible resource management. Global companies are now expected not only to generate profits, but also to operate responsibly towards the environment and society.

Regulations regarding CSR have been stated in Law Number 40 of 2007 concerning Limited Liability Companies. In this law, every company operating in certain fields that have a major impact on the environment is required to implement a social responsibility program. This regulation is reinforced by government regulations and related ministerial decrees, which further regulate the implementation and reporting of corporate social responsibility.

In addition, other supporting regulations are the Regulation of the Minister of State-Owned Enterprises No. PER-05/MBU/2007 concerning the Implementation of Social and Environmental Responsibility of State-Owned Enterprises, which requires state-owned enterprises to integrate CSR into their business strategies. The implementation of this regulation aims to ensure that companies do not only focus on profitability, but also make positive contributions to society and the environment.

Responding to the regulatory framework in Indonesia and following global trends, PT. Pertamina Lubricants Production Unit Jakarta (PUJ), has committed to implementing social and environmental responsibility initiatives that aim to promote environmental sustainability and community empowerment. In terms of community empowerment, PUJ adopts an approach that prioritizes local capacity development, improving the quality of life through education and training, and increasing economic access through support for small and medium enterprises.

As part of its ongoing commitment to improving the welfare of society and the environment, PUJ organizes the Berkah Waste Bank (Bank Sampah Berkah) program. Located in Tugu Selatan Village, Koja District, North Jakarta, Bank Sampah Berkah is a real manifestation of Pertamina Lubricants' efforts in implementing CSR that focuses on community empowerment and maintaining a comfortable and clean environment. Through a series of activities such as training, mentorship, and assistance, these programs not only aim to increase community awareness and participation in waste management, but also to empower them through improving skills that can support the local economy.

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The Bank Sampah Berkah program implemented in Tugu Selatan Village, Jakarta, has succeeded in attracting the participation of 180 active customers, with benefits felt by 14,325 heads of families. This study aims to measure and communicate the social, economic, and environmental values generated by the Bank Sampah Berkah program. This study also seeks to assess the effectiveness of resource use in generating positive social change, as well as the sustainability impact achieved through various initiatives implemented.

In the modern business environment, the approach to CSR has undergone significant transformation. Starting from simple charitable activities, this concept has evolved into an integral part of a comprehensive business strategy. Over time, approaches such as Corporate Social Responsibility (CSR), Corporate Social Investment (CSI), and Creating Shared Value (CSV) have developed, each offering a more strategic perspective in integrating social interests into business success.

THEORETICAL FRAMEWORK

Initially, Corporate Social Responsibility often began with the basic concept of charity or philanthropy. This approach was more oriented towards providing donations or contributions to social activities or natural disasters, without direct linkage to the company's business strategy. Charity is often carried out in response to urgent community needs or as an effort to build a positive corporate image.

Charity is a complex phenomenon with various motivations and outcomes. According to Normative Theory, James S. Coleman (1990) highlighted the role of social norms and expectations in shaping behavior. People donate to charities because they are considered the right thing to do, in accordance with social norms of reciprocity and altruism. This framework emphasizes the importance of social pressure and cultural expectations in influencing charitable giving. Charities that effectively communicate their social mission and the positive impact of donations can benefit from this theory.

The next evolution was the development of the concept of Corporate Social Responsibility (CSR). CSR became more systematic and integrated into the company's business operations. CSR involves a commitment to operating ethically, while paying attention to the social and environmental impacts of business activities. This involves not only providing funds, but also managing the impact of the company's operations on the environment and community.

According to Freeman's Stakeholder Theory (1984), a company is not only responsible to its shareholders, but also to all stakeholders whose interests are affected by its actions. These stakeholders can include employees, customers, communities, suppliers, and the environment. Stakeholder theory states that companies have a responsibility to consider the impact of their decisions on all stakeholders, not just to maximize profits for shareholders. By engaging in CSR activities, companies can address stakeholder concerns and build stronger relationships, resulting in long-term success (Freeman, 1984).

The latest concept in the evolution of CSR is Creating Shared Value (CSV), proposed by Michael Porter and Mark Kramer. CSV focuses on identifying and expanding the connection between social progress and the economic success of a company. This approach not only solves social problems but also actively creates economic value in a way that also creates value for society by addressing its needs and challenges.

In order to fulfill the mandate of Ministerial Regulation No. 01 of 2021 concerning the Company Rating Assessment Program (PROPER), PT. Pertamina Lubricants Production Unit Jakarta (PUJ) has demonstrated a strong commitment to implementing social and environmental responsibility that goes beyond standard compliance. This regulation introduces the beyond compliance category, emphasizing the importance of social innovation in community development programs to achieve green and gold ratings.

In order to meet the gold criteria in the PROPER assessment scale, PUJ integrates the principles of social innovation into business operations and strategies. The paradigm adopted is Creating Shared Value (CSV) as an integral part of their business and operational strategies. This CSV approach views social and environmental responsibility activities not only as ethical commitments or regulatory responsibilities, but as opportunities to drive innovation and sustainable economic growth.

PUJ's CSV by identifying areas where the interests of the company and society can be mutually beneficial. One of the main focuses is the development of environmentally friendly and efficient technologies in lubricant production, which reduces waste and improves operational efficiency. This not only meets environmental regulatory expectations but also offers better products to customers, while reducing production costs.

PUJ is committed to improving the capacity of local communities through training and skills development. This initiative involves working with educational institutions and non-governmental organizations to create training programs that target youth and the unemployed in communities around the plant. By improving their skills, the company not only helps individuals find employment but also creates a more skilled workforce base that can support the company's operations and growth.

PUJ is also active in building collaborations with various stakeholders, including government, industry partners, and communities, to develop sustainable solutions to social and environmental issues. For example, in addressing waste management issues, the company works with local governments and community organizations to implement effective and sustainable recycling systems in local communities. In order to encourage sustainable innovation, PUJ regularly evaluates the environmental impact of its products and processes. This includes product life cycle analysis to reduce negative impacts and find new ways to improve energy

and resource efficiency. The company also invests in research and development to create new products that can meet market needs while reducing environmental impact.

RESEARCH METHOD

Social Return on Investment (SROI) is a methodology that helps measure the extra-financial value, especially the social, environmental, and economic impacts generated by a program or initiative. In the context of Creating Shared Value (CSV), SROI not only measures the output or direct results of a company's activities but also assesses how these initiatives generate sustainable and significant changes in society. This involves an in-depth assessment of how the company's programs improve the quality of life, affect community well-being, and contribute to environmental conservation.

The use of SROI allows companies to proactively involve various stakeholders in the impact assessment process. This not only increases transparency but also strengthens relationships with communities and stakeholders, creating trust and increasing the credibility of the company. Furthermore, by accommodating stakeholder feedback, companies can understand the diverse perspectives that influence the social and environmental impacts of their operations.

Furthermore, SROI takes into account time dynamics, providing insight into how the impact of an initiative may persist or increase over time, which is very important in the context of sustainability. This not only helps companies track the long-term changes they initiate but also allows them to adjust their strategies according to evolving needs and changing market conditions.

The methodology also supports a 'feedback loop' where the results of the evaluation can be used to improve or adapt the company's strategy and operations. This supports continuous innovation which is particularly relevant in the context of CSV, facilitating companies to remain responsive to emerging challenges and opportunities. The use of SROI not only assesses the effectiveness of current initiatives but also drives continuous improvement that can maximize positive impacts on society and the environment.

In addition, the adoption of SROI encourages the development of internal benchmarks and higher standardization across the industry, allowing companies to compare their social and environmental performance with others in the industry, driving continuous improvement and innovation. It can also be a tool in sustainability reporting, helping companies to report their progress to investors, shareholders and other stakeholders in a measurable and verifiable manner.

In this way, SROI becomes not only a measurement tool, but also a strategic tool in guiding companies' decisions to create economic, social and environmental value in line with their business and social objectives. This makes SROI an integral component of the CSV approach, strengthening companies' commitment to sustainable development and shared benefits.

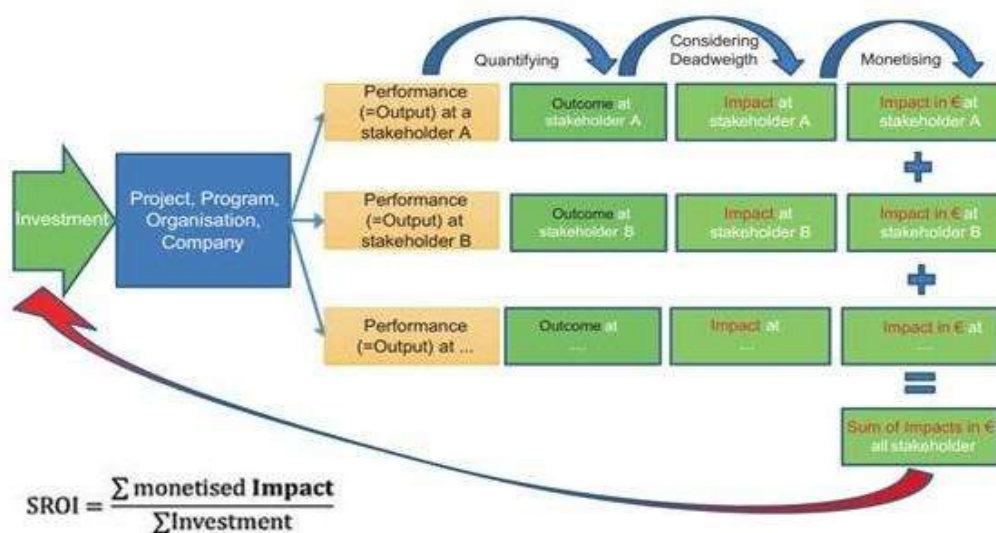


Figure 2.1 SROI Analysis
Source: V. Then et al. (2017)

SROI Calculation Steps

Determining the scope and identifying stakeholders

At this stage, it is important to set clear boundaries regarding the scope of the SROI analysis, and consider who will be involved in the process and how they will be involved. The term "Stakeholders" needs to be explained in more depth, although it has now become a common term. In explaining it, it is necessary to clarify who or what is meant by stakeholders, how to identify them, and

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why stakeholder analysis is a core part of any impact measurement. At this stage, there are several sub-steps that must be considered, including:

- Establishing the basic logic of a project or program within a theory of change framework to understand the essential cause-and-effect relationships of an intervention.
- Grouping stakeholders into categories and subgroups that tend to share similar perspectives.
- Placing all stakeholders together, along with an initial assessment of how they affect or are affected by the program, including positive and negative effects.

Mapping the outcomes of each stakeholder

In this section, we will analyze the activities that will be carried out using certain inputs that have an impact on the outcomes for stakeholders. Basically, this section will map the relationship between inputs, outputs, and outcomes within the framework of the "Theory of Change" or "Logic Model." There are five stages that will be carried out in this section, including:

- a. Starting impact mapping
- b. Identifying inputs
- c. Assessing inputs
- d. Clarifying outputs
- e. Describing outcomes

Establishing indicators and values for each outcome

Indicators are used as a way to assess whether the expected changes have occurred. Indicators are applied to each outcome before entering the next stage in developing the impact map, which is by explaining one or more indicators for each outcome. After having indicators that are relevant to stakeholders and the scope of the program, it is necessary to examine these indicators so that they can not only be measured, but also be measured within the limits of the scope and resources that have been set. There are four stages in this section, namely:

- a. Developing outcome indicators
- b. Collecting outcome data
- c. Determining how long the outcome will last
- d. Giving a value to each outcome

Impact fixation

This stage is important to reduce the risk of overclaiming the outcome. There are four parts that must be taken, including:

- a. Deadweight and Displacement
Deadweight is a measure of the amount of an outcome that would have occurred even if the activity had not been performed. The deadweight measurement result is expressed as a percentage. Meanwhile, displacement is the impact of an activity that replaces or shifts an outcome that might have occurred naturally or due to intervention from another party.
- b. Attribution
Attribution is an assessment of how much of an outcome is due to the contribution of an organization or other party. Attribution is calculated as a percentage of the proportion of the outcome that can be attributed to the organization's contribution. This helps identify the portion of the impact that can be attributed to the organization and the other portion that may be due to external factors.
- c. Drop-off
Drop-off refers to the likelihood of a decrease in the amount of an outcome in future years, because the outcome may be affected by other factors or the continuation of the intervention. Drop-off is calculated for outcomes that persist for more than one year, by subtracting a fixed percentage from the remaining level of the outcome at the end of each year.
- d. Calculating impact
All aspects of impact are usually expressed as percentages, unless the company has more accurate information. Rounding estimates to the nearest 10% is still allowed. Although in some cases there may be an assumption of increased value rather than decreased value, it is not advisable to increase or decrease the impact as a result of considering a particular issue.

By following these steps, we can make a more accurate assessment of the impact of a program or project, and avoid over-claiming the changes that occur.

Calculating SROI

There are four steps (plus one optional step) to calculating Social Return on Investment (SROI):

- a. Projecting future value
The first step in calculating the SROI ratio is to project the value. At this stage, all results achieved by the program are estimated in terms of value and impact in the future, during the duration of the program.
- b. Calculating the net present value

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In calculating the Net Present Value (NPV) of costs and benefits received or paid in different time periods, it is necessary to add them up. This process involves the process of discounting. The principle of discounting recognizes that the value of money tends to change over time. In the context of NPV, we are more likely to choose to receive money today than in the future because there are risks (for example, the money will not be paid) and opportunity costs (for example, the potential benefits of investing the money elsewhere). This principle is known as the "time value of money".

c. Calculating the ratio

The initial calculation of the SROI ratio is done by dividing the discounted value of benefits by the total investment. This produces a number that reflects how much social benefit is generated by the program compared to the total costs incurred for the program.

$$SROI\ ratio = \frac{Present\ Value}{Value\ of\ Inputs}$$

Meanwhile, an alternative calculation of the net SROI ratio is done by dividing the NPV by the investment value. NPV is the difference between the present value of cash inflows (benefits) and the present value of cash outflows (costs) of the program. By using the net SROI ratio, we can see how many times the social benefits generated exceed the investment costs, including the time value of the cash flows.

$$Net\ SROI\ ratio = \frac{Net\ Present\ Value}{Value\ of\ Inputs}$$

Both SROI calculation methods are acceptable and can be used, depending on the needs of the analysis to be carried out. The initial SROI ratio calculation can provide an overview of the effectiveness of the program in generating social benefits relative to investment costs. Meanwhile, the net SROI ratio calculation provides a more comprehensive view because it considers the time value of cash inflows and outflows, thus providing more accurate information about the economic and social impacts of the program.

d. Conducting sensitivity analysis

The purpose of sensitivity analysis is to test the effect of each assumption on the SROI calculation model. The recommended approach is to calculate how much change is needed in each estimated social impact so that the SROI reaches the breakeven point (zero) or even turns negative. In sensitivity analysis, we will calculate the social return ratio of an investment of IDR 1 for every IDR 1 change in the value of the estimated social impact. With this method, we can evaluate the sensitivity of each estimated social impact. Then, one by one the estimated social impact will be changed, and its impact on the SROI ratio will be observed. Thus, we can identify which assumption has the greatest impact on the final result of the SROI ratio. If a change in an estimate causes the SROI ratio to become negative, then the assumption is considered sensitive and needs special attention.

e. Calculating the payback period (optional stage)

'Payback period' is a measure that describes how long it takes to return or reach the break-even point of an investment, namely the time required for cash receipts (cash inflow) from the investment to equal the initial investment costs (cash outflow).

$$Payback\ Period\ in\ Months = \frac{Investment}{Annual\ Impact/12}$$

DISCUSSION

Social and Economic Conditions in Tugu Selatan Village

Tugu Selatan Village, located in Koja District, North Jakarta, faces significant challenges in terms of population density and environmental management. In 2023, data from the Village Office, Central Statistics Agency, and related Technical Ministries recorded a population of 51,950 people, with a density of 27,624 people per square kilometer. In terms of household infrastructure, 15,935 heads of families are recorded as using electricity, but there are still significant problems such as slums covering 3,924 buildings - in 2 clusters and cases of malnutrition that still occur. Economic facilities consist of 1 semi-permanent market, 6 minimarkets, 490 grocery stores, 146 food stalls, and several local craftsmen, indicating economic potential that has not been fully utilized.

This area is the main focus of the community development program by PUJ. This company, together with other entities such as PT Pertamina TBBM, has operations that have a direct impact on this sub-district. Geographical factors and company assets in this area make Tugu Selatan the closest area of PUJ operations, directly impacted by the company's operation.

Condition of Urban Waste Management in Tugu Selatan

Waste management is a critical issue in Tugu Selatan because it has an impact on cleanliness, health, and potential for economic empowerment. Previously, this urban village experienced problems in managing waste which resulted in accumulation and pollution. This prompted PTPL Production Unit Jakarta to launch the Berkah Waste Bank as part of their CSR program. The main objective is to reduce the volume of waste transported to landfills and promote a circular economy through recycling activities.

This initiative also aims to reduce the negative impacts of company operations, such as environmental pollution, which can occur through increased population density and decreased air quality. This program is expected to provide not only environmental but also social and economic benefits by opening new jobs and supporting sustainable economic activities in the community.

Prior to the implementation of the Berkah Waste Bank program by PUJ, Tugu Selatan Urban Village faced several significant environmental and economic challenges. This sub-district experienced problems in waste management that not only affected environmental cleanliness and health, but also put social and economic pressure on its residents. The lack of facilities and awareness in waste management caused waste to pile up in several areas, which had an impact on the quality of life of residents. In addition, the lack of initiative to reduce, sort, and recycle waste increased the volume of waste that needed to be transported to the final disposal site, which was often over capacity.

The Berkah Waste Bank program is designed as a pilot project that aims to not only reduce the burden of waste, but also to empower the family economy through waste saving activities. Since 2018, PUJ has taken proactive steps to address the waste problem in Tugu Selatan Village through the Berkah Waste Bank initiative. This program, which focuses on community empowerment through education, training, mentorship, and assistance. The Berkah Waste Bank in Tugu Selatan Village has become more than just a place for waste management; it has transformed into a structured social movement with the aim of educating the community about the importance of responsible waste management.

PUJ not only provides facilities for residents to collect and sort waste, but also facilitates them with the tools needed to improve the efficiency and effectiveness of waste management. Some of the operational equipment provided includes plastic shredders, digital waste scales, jute sacks, large waste sorting bins, safety gloves, and stationery. In order to support and strengthen this activity, PUJ has also implemented a series of educational and socialization activities. This includes the provision of garbage bags and waste savings books intended to inspire community participation and raise awareness of the economic and environmental benefits of good waste management. In this way, PUJ not only addresses the waste problem, but also strives to create a more knowledgeable, independent, and proactive society in maintaining the cleanliness and sustainability of its environment.

Furthermore, in order to maximize the positive impact of this program, PUJ has also initiated a waste processing program involving Public Facilities and Infrastructure Handling Workers (PPSU). This program not only focuses on traditional waste recycling but also trains PPSU to hone their skills in remodeling used Non-B3 drums into products with economic value which are then sold through e-commerce. This initiative not only opens up new economic opportunities but also supports the transition to a circular economy, where waste is converted into valuable resources.

IDENTIFICATION OF EXPECTED IDEAL CONDITIONS

To overcome the problem of waste management in Tugu Selatan Village, the vision of ideal conditions is designed based on three main pillars: Community-Based Waste Management, 3R (Reduce, Reuse, Recycle), and Zero Waste. Each of these pillars supports the development of a sustainable system, actively involves the community, and is oriented towards minimizing negative impacts on the environment.

1. Community-Based Waste Management:

The ideal conditions in Tugu Selatan Village involve the establishment of a waste management structure based on the active participation of the local community. Waste management groups in each RW will be organized to manage tasks such as waste collection, sorting, and processing. Through the Waste Bank, the community can turn waste into economic assets, thereby increasing the added value of waste management activities. Continuous education and training will be provided to strengthen the community's capacity to manage waste effectively and sustainably.

2. 3R (Reduce, Reuse, Recycle):

The application of the 3R principle will be the foundation in the daily lives of Tugu Selatan Village residents. This practice includes reducing waste generated through the use of more sustainable products, reusing materials that are still usable, and recycling waste into new products. Educational activities will continue to be increased to instill this habit in the daily routine of residents, as well as encourage local innovation in creating effective waste management solutions.

3. Zero Waste:

The Zero Waste target requires Tugu Selatan Village to reduce the volume of waste that ends up in the landfill to nearly zero. This will be achieved through optimization of recycling processes, composting of organic waste at the community level, and adoption of technologies that support the processing of waste into energy and other products that have economic value. Zero Waste does not only focus on managing existing waste, but also directs the community to design and consume in a way that minimizes waste disposal.

STRATEGIES TO ACHIEVE THE EXPECTED IDEAL CONDITIONS

Program Profile

To increase environmental awareness and promote sustainable waste management practices in Tugu Selatan Village, PUJ has launched the Sustainable Waste Management Program. This program is part of PT Pertamina Lubricants' long-term commitment to support the independence and development of communities around its operational areas, while improving environmental conditions. The following is a detailed description of several activities that have been realized in this program, covering various initiatives designed to address waste management issues through education, infrastructure provision, and community capacity building. Each of these activities displays a measured and planned approach to integrating effective waste management practices into the daily lives of communities, strengthening environmental sustainability and the local economy.

1. Joint Planning with Target Groups

This involves target groups in planning activities to ensure that the program is in line with the specific needs and aspirations of the local community. This collaborative process aims to increase the acceptance and effectiveness of the program in the community.

2. Environmental Awareness Training

This program is designed to educate residents about the importance of environmental conservation and environmentally friendly practices. This training includes waste sorting methods, composting, and reducing the use of single-use plastics.

3. Distribution of Facilities and Infrastructure Assistance

Through this distribution, assistance in the form of equipment and supporting infrastructure is provided to strengthen waste management activities in the community, such as the provision of garbage carts, separate garbage bins for organic and non-organic, and sorting tools.

4. Waste Bank Socialization

This socialization aims to increase community participation in the waste bank program, introduce the economic and environmental benefits of effective waste management, and build collective awareness of environmental cleanliness and health.

5. Drum and Non-B3 Waste Management

Focusing on special waste management such as drums and non-B3 materials, this program implements safe and sustainable recycling techniques to reduce environmental impacts.

6. Social Media and E-Commerce Training and Development

Provide training for residents to utilize social media and e-commerce in marketing recycled products, open wider market access and increase income from recycled products.

7. Initiation of Waste for Oil Program

This innovative initiative allows residents to exchange selected waste for oil, integrating recycling activities with attractive incentives, while addressing the management of used oil waste.

8. Waste Pick-up Service

This program provides door-to-door waste pick-up services to facilitate residents who do not have direct access to waste management facilities, increasing community participation in waste management.

9. Renovation of Waste Bank Shelter

This renovation aims to optimize waste bank facilities, making them more functional and comfortable for residents and officers, and increasing overall waste management capacity.

10. Inauguration of Waste for Oil Workshop

The inauguration of this workshop is an important milestone in the development of infrastructure for the waste for oil exchange program, expanding the scope and impact of the program.

11. Waste Bank Marketing and Administration Strengthening Program

Focusing on improving administration and marketing skills, this program aims to ensure the operational and financial sustainability of waste banks through the implementation of effective management.

Inputs Considered

Activities and Budget

To improve waste management in Tugu Selatan Village, PUJ has allocated a number of budgets for various activities from 2018 to 2022. The following is a summary of the activities and budgets considered during the period, which include from planning and training to socialization and development of infrastructure for sustainable waste management at Bank Sampah Berkah.

Year	Activities	Budget
2018	Joint Planning with Target Groups	IDR 3.000.000,00
	Environmental Awareness Training	IDR 5.000.000,00

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	Distribution of Facilities and Infrastructure Assistance	IDR 67.000.000,00
2019	Socialization of Waste Bank	IDR 5.000.000,00
	Drum and non-B3 Waste Management	IDR 35.000.000,00
2020	Social Media and E-Commerce Training and Development	IDR 3.000.000,00
	Socialization of Waste Bank	IDR 3.000.000,00
	Initiation of Waste for Oil Program	IDR 42.392.100,00
	Garbage Pickup Service	IDR 1.500.000,00
2021	Renovation of Garbage Bank Shelter	IDR 90.000.000,00
	Inauguration of oil exchange garbage workshop	IDR 82.000.000,00
2022	Bank Sampah Marketing and Administration Strengthening Program	IDR 5.000.000,00

Table 2.1 Activities and Amount of Activity Funds

Program Beneficiaries

In the series of activities of the Sustainable Waste Management Program in Tugu Selatan Village, there are two main groups that directly benefit from this initiative. This sub-chapter will discuss in detail about these beneficiary groups, describe the number of individuals involved and the methods used to collect information about the impact of the program on them.

No	Benefit recipients	Amount
1	Waste Bank Management Group	10 recipients
2	The Waste Bank Customers	600 recipients

Table 2.2 Program Beneficiaries

Calculation of SROI Value

The adjusted impact value is then divided by the investment value (which is the input value), so that the return on investment value can be determined. The following table shows the SROI value per year from 2022 to 2023, as well as the predictive SROI value for 2024-2025.

Table 2.3 Results of Impact Value and SROI Calculations

Years	2021	2022	2023	2024	2025
Present Value of Each Year	11.110.625	33.053.059	427.163.768	340.849.945	275.088.034
Total Present Value (PV)	11.110.625	44.163.684	471.327.453	812.177.398	1.087.265.432
Net Present Value (PV Minus The Investment)	5.560.625	32.663.684	252.277.453	593.127.398	868.215.432
Social Return (Value per-Amount Invested)	2,00	2,59	2,15	3,71	4,96

***Company's Annual Recurring Revenue (ARR) = 9.5%**

Table 2.3 shows the results of the calculation of the impact value and Social Return on Investment (SROI) of the Berkah Waste Bank program. Based on the table, in 2021, the benefit value (Present Value) of this program is IDR 11,110,625 with a total present value (Total Present Value) reaching IDR 11,110,625. After deducting the investment, the net value (Net Present Value) is 5,560,625 with a Social Return of 2.00 times the amount invested.

In 2022, the benefit value of the Present Value increased to IDR 33,053,059 with a Total Present Value reaching IDR 44,163,684. The net value after deducting investment is 32,663,684, and Social Return is 2.59 times. In 2023, it shows the Present Value benefit value of Rp. 427,163,768 with Total Present Value increasing to Rp. 471,327,453. The net value after deducting investment is Rp. 252,277,453 and Social Return is 2.15 times. In 2024, the Present Value benefit value is estimated to reach Rp. 340,849,945 with Total Present Value of Rp. 812,177,398. The net value is Rp. 593,127,398 with Social Return estimated at 3.71 times. While for 2025, the Present Value benefit value is estimated to be Rp. 275,088,034. The Total Present Value for 2025 is Rp. 1,087,265,432. The net value after deducting investment is Rp.868,215,432 with an estimated Social Return of 4.96 times.

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From these data, it can be seen that the Berkah Waste Bank program has a positive impact and provides significant added value, especially in implementing CSR that focuses on community empowerment and maintaining a comfortable and clean environment.

Payback Period

Years	2021	2022	2023
Present Value of Each Year	11.110.625	33.053.059	427.163.768
Investment	5.550.000	11.500.000	202.000.000
Payback Period	0.5 years (around 6 months)	0.34 years (around 4 months)	0.47 years (less than 6 months)

Table 2.4 Payback Period Calculation Results

Table 2.4 shows the results of the Payback Period calculation of the investment in the Berkah Waste Bank program for three years, namely 2021, 2022, and 2023. In 2021, the benefit value of the investment was IDR 11,110,625 with an investment amount of IDR 5,550,000. This results in a payback period of 0.5 years, which is equivalent to approximately 6 months. In 2022, the benefit value increased to 33,053,059 with a total investment of 11,500,000, resulting in a Payback Period of around 0.34 years or around 4 months. Meanwhile, in 2023, the benefit value reached 427,163,768 with a total investment of 202,000,000, and the payback period was 0.47 years, less than 6 months.

CONCLUSION

This study report presents the results of calculating the impact value and SROI of the program. This program aims to improve the welfare of society and the environment in Tugu Selatan Village, Koja District, North Jakarta. Based on the calculation, in 2021, this program's benefit value (Present Value) is IDR 11,110,625, with a total present value (Total Present Value) reaching IDR 11,110,625. After deducting the investment, the net value (Net Present Value) is 5,560,625 with a Social Return of 2.00 times the amount invested. In 2022, the Present Value benefit value increased to IDR. 33,053,059 with a Total Present Value reaching Rp. 44,163,684. The net value after deducting investment is 32,663,684, and Social Return is 2.59 times. In 2023, the present value benefit value of Rp is shown. 427,163,768, with the Total Present Value increasing to Rp. 471,327,453. The net value after deducting investment is Rp. 252,277,453, and Social Return is 2.15 times. In 2024, the Present Value benefit value is estimated to reach Rp. 340,849,945 with a Total Present Value of Rp. 812,177,398. The net value is Rp—593,127,398, with an estimated Social Return of 3.71 times.

Meanwhile, for 2025 and 2026, the Present Value benefit value is estimated at Rp.275,088,034 and Rp.224,416,265 respectively. The Total Present Value for the two years is Rp.1,087,265,432 and Rp.1,311,681,697. The net value after deducting investment is Rp.868,215,432 and Rp.1,092,631,697, with Social Return estimated at 4.96 times and 5.99 times, respectively. This study also calculates the Payback Period of the Berkah Waste Bank program investment for three years, namely 2021, 2022, and 2023. In 2021, the benefit value of the investment is Rp.11,110,625, with an investment amount of Rp.5,550,000. This results in a Payback Period of 0.5 years, equivalent to about six months. In 2022, the benefit value increased to 33,053,059 with a total investment of 11,500,000, resulting in a Payback Period of around 0.34 years or around four months. In 2023, the benefit value reached 427,163,768 with a total investment of 202,000,000, and the payback period was 0.47 years, less than six months. These positive and significant benefits cannot be separated from the role of PT. Pertamina Lubricants Production Unit Jakarta (PUJ) designs programs based on the characteristics and needs of the Tugu Selatan Village community, Koja District, North Jakarta. Based on the results of the SROI study, the Berkah Waste Bank program has proven to produce greater benefits than the costs invested in activities such as greenhouse infrastructure, biogas installations, water conservation assistance, and hydroponic assistance for the program. This program has proven to help increase communities' capacity to manage inorganic and organic waste from industrial and household waste. Through a series of activities such as training, mentorship, and assistance, these programs aim to increase community awareness and participation in waste management and empower them by improving skills that can support the local economy.

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