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A Social Return on Investment Analysis on Community-Based Disaster Management to Respond to Pandemic Covid-19

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ABSTRACT

The COVID-19 pandemic has hit various aspects of life in society. Disaster management programs carried out by the government are not fully effective, and community-based disaster management is one solution for this case. One of the problems faced by community-based disaster management is the lack of funding support. Business sector involvement is needed to strengthen community-based disaster management. They invite multiple stakeholders by involving the community, the business, and the government to provide real solutions to the limitations of disaster programs. This research uses a qualitative and quantitative mixed method with a social return on investment calculation approach to facilitate analyzing the success of community-based disaster management programs. The study results stated that the *"Program Masyarakat Tanggap Bencana" ASTANA* can be feasible and replicated by other stakeholders with an SROI value of 1.60. Any stakeholders such as government, society, and the private sector can replicate this program by designing activities that involve and require the participation of the community

INTRODUCTION

The COVID-19 pandemic has become one of the triggers for the rebirth of disaster management discussions and debates. The country's failure to respond to the impact of the COVID-19 pandemic is a reason for the involvement of other actors, such as the private sector and the community, to minimize the impact of disasters. The state uses a top-down approach in disaster management activities (Akhirianto, 2019) and makes other stakeholders the object of disaster management programs or activities. This approach tends to be because the

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policies made have curative (treating), not preventive (preventing) tendencies before a disaster occurs. The government should involve the community (individuals and communities), non-governmental organizations (NGOs), and the business world (Aprilyanto et al., 2021). The involvement of the community and the business world in disaster management will accelerate the process of post-disaster management and recovery. This Method is known as "value for money". Several efforts can achieve it: (1) increasing targeted or effective services, (2) improving the quality of public services, (3) reducing public service costs due to saving in the use of inputs, (4) increasing public cost awareness as a tool for implementing accountability (Anggriawan, 2022).

Disaster management is a form of institution that has a pattern and aims to reduce the impact of disasters with existing resources (Iqbal et al., 2021). Each stakeholder has advantages and disadvantages in responding to disasters, so multi-party collaboration is needed to build good disaster management. Community-based disaster management is one of the sound patterns because it prioritizes participation in its implementation; according to (Akhirianto, 2019), a community-based approach will maximize the use of resources locally, including existing work, materials, and organizations.

Unfortunately, some previous studies have not shown the impact of CSR programs on the community (Kim & Ji, 2020). It only captured the benefit of CSR programs to the business. This study aims to examine the effectiveness of community-based disaster management governance built by PT. Cirebon Electric Power (CEP). This effectiveness is measured by the Value of social return on investment as a basis for justifying the feasibility of community-based disaster management programs. The effectiveness of this study is the efforts of business organizations to achieve the social goals they have set (Nikmawanti, 2019). The object of this study is the Disaster Response Society (ASTANA), a corporate social responsibility program by PT. Cirebon Electric Power (CEP). This research contributes to disseminating knowledge and good practices of community-based disaster management in collaboration with the private sector.

METHODS

This research was conducted using a monitoring and evaluation approach. The theory of change is one of the thinking logics appropriate for this study. The theory of change requires researchers to formulate and identify various things that influence and are

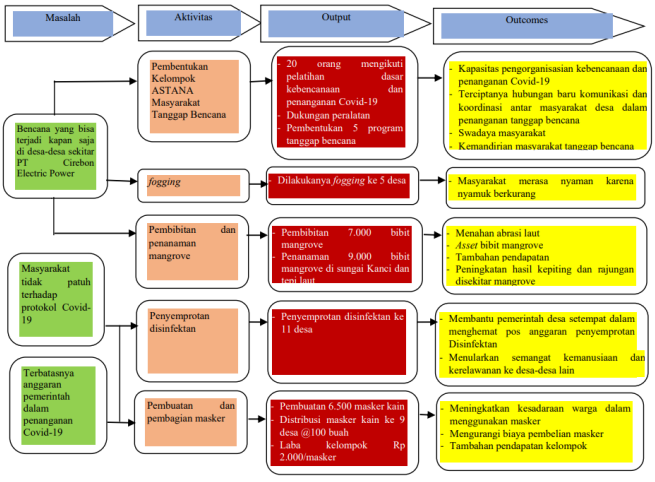

Figure 1. ASTANA Theory of Change
Source: Researcher Documentation (2021)

influenced by programs ranging from the environment, stakeholder mapping, contribution to impact, and the perceived changes (Hamdy, 2020) so that the theory of change can be formulated in this study are as follows:

The picture explains how the company desires the process of social change and what interventions are carried out as investments or activities. Social Return on Investment is a method for analyzing impact values based on cost-benefit analysis. This principle allows measuring impact from the stakeholders' perspective (Talboom-Kamp et al., 2021). There are six stages of social return on investment analysis, namely: (1) Establishing Scope and Identifying Stakeholders, (2) Mapping Outcomes, (3) Evidencing Outcomes and the Availability, (4) Establishing Impact, (5) Calculating the SROI, (6) Reporting and Embedding

The first stage begins with identifying stakeholders, both affected and impacted, and the second stage is to identify the outcomes felt by each party. The third stage is to identify evidence of change in both material and non-material forms; the next stage is the identification and calculation of deadweight, attribution, displacement, and drop-off. The fifth stage is the calculation of social returns on investment, and the last stage is report writing and dissemination (Gambhir et al., 2017).

The SROI formula is as follows (Lawlor et al., 2008):

$$[\text{SROI}] \quad \frac{[\text{Net Present Value of Benefit}]}{[\text{Net Present Valur of Investment}]}$$

SROI values are presented as a comparison between the initial Value (input) and the final Value (impact). These impacts have various economic, social, and environmental impacts. Measurement can be taken after the impact has undergone a monetization process. An example of an SROI value of 3 1 is that every 1 Rp invested gives an impact value of 3 Rp.

This evaluative SROI assessment draws on the principles and assessment guidelines of SROI Network UK (Social et al.). Evaluative calculations are based on program achievements and impacts that stakeholders have stated. The representation of critical stakeholders in the Disaster Response Community (ASTANA) group program involved in this assessment activity includes three people from PT Cirebon Electric Power (CEP), three people from the village government, one person from the Regional Disaster Management Agency (BPBD) of Cirebon Regency, one person from the Cirebon Regency Health Office, one person from Karang Taruna and 11 members of the ASTANA Group who come from representatives of the Environmental Care Community Forum group (Formas PL), Fishermen Group, Sewing Group, Miniature Boat Group, Cosmetology Group, Pawon Mimi Group, Kanci Batik Group, Terasi House Group.

This study aimed to determine the Value of returns on social investment from the Disaster Response Community (ASTANA) program conducted by PT. Cirebon Electric Power. This study used a logical framework from the evaluative social return on investment type. The calculation is carried out on the output and impact felt by stakeholders, in this case, the Disaster Response Community Group (ASTANA), PT Cirebon Electric Power (CEP), the Regional Disaster Management Agency (BPBD) of the Regency Cirebon, Cirebon Regency Health Office and Karang Taruna Kanci Kulon Village.

This research is a mixed method with a tendency to approach qualitative methods. The data collection techniques used are in-depth interviews and focus group discussions. The prinsi SROI Network UK (Social et al.) guides the social return on investment assessment. Standard documents, community consensus, government regulations, and other supporting documents reference assessment approaches to minimize the overclaim of SROI values.

RESULT AND DISCUSSIONS

Program Description

The Disaster Response Society (ASTANA) is one of the social innovation programs initiated by PT. Cirebon Electric Power (CEP). Activities carried out by ASTANA include spraying disinfectants, fogging, distributing masks, making cloth masks, and planting mangroves in the Kanci River. ASTANA was formed as a response to support the government and accelerate the prevention and mitigation of the impact of COVID-19.

Scope and Identification of Stakeholders

The SROI analysis applied to ASTANA is an evaluative type analysis. The focus of measurement is the activities period from August 2020 – November 2021. (1) Inputs are various resources invested into ASTANA. (2) Activities are various actions carried out by ASTANA, namely spraying disinfectants, fogging, distributing masks, making cloth masks, and planting mangroves. (3) Output is the output of various activities. (4) Impact is a broader benefit of activity.

ASTANA Program Theory of Change

The theory of change describes the process of social change desired by the company, intervention, or investment, including inputs, activities, outputs, outcomes, and impacts; after the enactment of the New Normal, community activities resumed by following health protocols that had been set by the government such as maintaining distance, wearing masks, and so on. However, people's negligence in following health protocols still often occurs due to economic and cultural activity factors. Some of these factors cause the need for a movement from the community in each region to help ease the burden on the government in suppressing the spread of COVID-19, especially in the east coastal area of Cirebon (Cirebon Regency). These community groups must know how to handle COVID-19, be alert, and be able to support government activities to prevent the spread of COVID-19.

PT Cirebon Electric Power (CEP), which is in the Cirebon Regency area commits to participate in order to support the government's efforts to prevent the spread of Covid-19 in Cirebon Regency, so PT Cirebon Electric Power collaborates with PT Cirebon Power Services (O&M CEP) and collaborates with the community of the fostered group, the Navy, DITPOLAIRUD, *Puskesmas* Astanajapura Subdistrict and *Karang Taruna* will form a Community Group Disaster Response (ASTANA) on July 21, 2020. One of the group's efforts in preventing the spread of COVID-19 is to spray disinfectants on public areas (public spaces, village halls, schools, places of worship, and houses of victims who died of COVID-19), make cloth masks, and distribute cloth masks to the community. Other activities are fogging and mangrove planting on the Kanci River and the seaside. The support and facilitation that has been carried out by PT Cirebon Electric Power (CEP) to support these activities are to provide basic disaster training and to handle COVID-19 to 20 ASTANA members, to make cloth masks, fogging machine tools, chemical and disinfectant spraying equipment, and fog as well as mangrove seedlings.

This group is also expected to synergize with the government and disaster agencies in other disaster prevention and response programs. The expected impacts of change in society are 1) The creation of disaster-sensitive individual alarms; 2) There is an element of communication between PT Cirebon Electric Power (CEP), ASTANA, the community, and stakeholders in disaster response; 3) the establishment of disaster management; 4) Community independence in disaster response.

Social Return on Investment (SROI) Calculation

Table 1. ASTANA Investment Value

No.	Investment Value (input)	Activity Fund
1	Spraying and *fogging* fixtures	IDR 3,805,000
2	Accommodation and consumption	IDR 8,750,000
3	Disaster capacity building and awareness	Rp12.750.000
4	*Fogging* machine	IDR 8,800,000
5	*Chemical Fogging* of Mosquitoes	IDR 1,300,000
6.	Disinfectant machine sprayer	IDR 485,000
7	Mangrove seedlings	IDR 22,500,000
8	*Chlorine*	IDR 4,500,000
9	Cloth Masks	IDR 26,000,000
	Total	IDR 88,890,000

Source: Researcher Documentation (2021)

SROI calculates two main components: the input and output components. The input component is the various contributions made by the parties involved in ASTANA. The output component includes all the consequences raised by ASTANA, whether positive or negative. Based on the results of field studies and confirmations with crucial parties, PT contributes the most significant investment. Cirebon Electric Power (CEP). The overall investment value used for ASTANA is detailed in the table (1). The results of the integration of input and output components can be seen in the following table:

Table 2. SROI Calculation

No.	Investment Value (input)	Activity Fund
A	Input	
	Disaster Response Community Program Fund (ASTANA)	IDR 88,890,000
B	Output	
	Astana Group	IDR 51,674,800
	Disinfectant Spraying Team	IDR 8,500,000
	Sewing House Group "UKM Klambi Cirebon"	IDR 41,600,000
	Environmental Care Community Forum	IDR 26,250,000
	Jelombang Selar Fishermen's Group	IDR 504,496,100
	Society of Disinfectant Beneficiaries	IDR 5,100,000
	Fogging Beneficiary Communities	IDR 1,682,050
C	**Total Output**	IDR 639,249,950
	Deadweight	13%
	Attribution	5.94%
D	**Total Outcome After Discount**	IDR 518,176,009.47
	Present Value (r=3.64%)	IDR 142,356,046.56
	SROI Ration	1,60

Source: Researcher Documentation (2021)

Based on the SROI calculation table, it can be seen that every 1 rupiah invested into ASTANA generates a social Bali return of 1.60 rupiahs. The length of time it takes to return the investment is 7.5 months by comparing the investment component (input) with the annual impact divided by twelve.

Impact Fixation

a. Attribution

Attribution is an assessment of how much the result is due to contributions from other parties. From the results of interviews with the village community, they received the distribution of masks from the village government and students who carried out social activities in the village. The village community and the village government also said the village government did disinfectant spraying and distribution of masks. The Village Government budgeted for COVID-19 handling activities, including the distribution of masks and disinfectant spraying by 10%. Based on the results of interviews and secondary data from the APBDes for the purchase of masks and disinfectants for the Kanci Kulon and Lebak Mekar Village Governments, the APBDes posture for the purchase of masks and disinfectants for Kanci Kulon and Lebak Mekar Villages is almost the same. It is similar, around 10% of the total funds for handling Covid 19. This is because there are appeals and directions from the Ministry of Rural Affairs & PDT for budgeting for handling COVID-19 19, and the portion of the purchase of masks and disinfectants is 10%. This means that the same thing happens in other villages as well.

The Value of the role of other parties in change (attribution) is determined assuming that there is a role of other parties that contribute to the impacts that occur, such as changes in public awareness to implement the COVID-19 protap due to the influence of government regulations that require wearing masks, public facilities that require wearing masks, mask raid operations and spraying disinfectants from local villages.

PT CEP's contribution is 9.09% - 10% for disinfectant spraying and 3.23% - 3.58% for the distribution of cloth masks. In order not to overclaim, the Value of the impact of mask distribution and disinfectant spraying activities is reduced by 90% by the village government so that the attribution to the total impact value in the ASTANA Community Disaster Response Group Program is assumed to be 5.94%.

b. Deadweight

Deadweight is the percentage of how much impact it continues to have without the need for a program/project. Based on the amount of contribution to masks and disinfectant spraying and interviews with stakeholders, village governments, and the wider community who revealed that they would still benefit from the distribution of masks and spraying disinfectants even though there was no program from PT Cirebon Electric Power (CEP). The village government budgets for spraying disinfectants and masks by 10% or around Rp. 9,000,000 – Rp. Ten million of the total funds are for handling Covid-19. The percentage of Village Government input to PT CEP is 32.27%, so the Value of the impact of mask distribution and disinfectant spraying activities is reduced by 32.27% contribution from the village government so that there is no overclaim.

Interviews with fishermen revealed that they still benefit from reducing sea abrasion and increasing crab and crab yields without a program from PT Cirebon Electric Power (CEP) due to the presence of ready-API plants (Avicennia sp). The assumption of 15% and 20% is based on the current condition that the mangrove plants planted are still small and will grow large and can provide continuous benefits throughout the year, as well as an increase in income from crabs and crabs by 1-2 kg/person. Some studies state that the structure and function of mangroves will change with the age of the ecosystem, which will provide optimal benefits when its age reaches ten tahun. Meanwhile, the impact of the ASTANA group formation activities, fogging, and additional income from making cloth masks and planting mangroves was only obtained by PT Cirebon Electric Power (CEP) beneficiaries. So, the deadweight for the impact obtained is assumed to be 13%.

c. Drop Off

A drop-off is a percentage of how much the impact value is reduced yearly. In this SROI analysis, the community will always benefit from the formation of the ASTANA group, the distribution of cloth masks, mangrove planting, fogging, and spraying disinfectants so that the impact felt will always appear and be felt by the community from year to year. Communities, in coordination with villages, can submit an application letter to ASTANA for these benefits. This leads to the absence of a reduction in the percentage of the Value of such impacts from year to year. Based on these considerations, it can be concluded that the drop-off is obtained by zero percent (0%).

d. Displacement

Displacement refers to the relocation of changes from the outside into the project. Displacement answers whether other positive activities are replaced after a program or project. This SROI analysis obtained displacement by zero percent (0%). This is based on interviews with the broader community and stakeholders who revealed that the ASTANA Community Disaster Response Group program replaced no positive activities.

Social Return on Investment (SROI) Analysis

a. Sensitivity Analysis

After calculating the SROI ratio, it is essential to assess the extent to which the results may change if changes are made to some of the assumptions made at the previous stage. The standard requirements for checking such changes are the estimated deadweight, attribution, drop-off and monetization, the impact quantity, and the input value. When changes are made to the existing values, it will be seen how the SROI ratio changes. Ethics made changes to the Value of financial projections from the impact of creating communication and coordination of disaster response handling in 13 villages, the emergence of independent ASTANA Group for handling Covid-19, community independence in disaster response, assisting local village governments in saving budget posts spraying disinfectants, transmitting humanitarian and volunteering spirits to other villages, increasing public awareness to use masks, reducing the cost of purchasing masks, additional income from making cloth masks, increasing the capacity of the Jelombang Selar fishing group's ability to nursery and plant mangroves, group income from the sale of mangrove seedlings, reducing concerns and providing a sense of security to the local community by 50% did not provide significant changes. However, if a change in the financial Value of the impact is made on the impact of increasing fishermen's income by 50%, the SROI ratio changes to 1.00. Based on the experiment, it can be concluded that there is a significant change when the financial Value of the impact of increasing fishermen's income on the Value of the social change ratio generated by PT Cirebon Electric Power (CEP).

b. Payback Period

The payback period describes how long it will take to return the investment. The payback period indicates the time in months or years for the impact value to exceed the investment value. This calculation is carried out to see how long the investment spent by PT Cirebon Electric Power (CEP) can be covered again with the Value of the benefits obtained. Calculating PT Cirebon Electric Power's (CEP) payback period can show how long it will take to return the investment. The payback period for social returns from investments issued is 7.5 months. This means that the return on capital for the investment of this program is relatively fast because it only takes 7.5 months.

ASTANA: Social Program Innovation According to SROI

a) Solving Social Needs/Problems

ASTANA was formed to support the government's efforts in handling COVID-19. The presence of ASTANA as a social movement is the frontline of public awareness regarding the dangers of COVID-19 by spraying disinfectants and making and distributing masks. In addition, ASTANA also does fogging to eradicate dengue mosquitoes. This is done to expand the function of ASTANA as one of the community-based disaster management social innovation programs. The activities carried out by ASTANA can reduce worry and provide a sense of security for the community to act outside the home.

ASTANA also carries out mangrove breeding and planting activities along the Cikandi River and the seaside to reduce abrasion and restrain seawater and the living place of coastal biota. The benefits of these activities are increased service income and environmental sustainability on the coast.

b) Creating New Roles and Relationship

The establishment of ASTANA is the result of collaboration between PT. Cirebon Electric Power (CEP) and PT Cirebon Power Services by involving stakeholders (BPBD, lantana, Polairud) and PT fostered groups. Cirebon Electric Power (CEP) has created a new relationship and role through coordination, communication, and integration activities between parties for disaster mitigation, especially COVID-19.

The integration of the role between ASTANA and the assisted group of PT Cirebon Electric Power (CEP) positively influences the strengthening and development of the potential of the fostered group. In addition, coordination and communication with surrounding villages in disaster and handling of COVID-19 were also created. ASTANA's disinfectant spraying and fogging activities voluntarily promote and transmit the spirit of volunteerism and humanity to other villages, triggering the self-help of other villages. This can be shown by the sprayer team, who stated that there are self-help communities in the villages that are sprayed and fogging in the form of food, drink, and transport money. The community voluntarily provides meals for the sprayer team.

The increasing intensity of spraying demand is also the impact of disaster coordination and communication and handling of COVID-19 with other villages around PT Cirebon Electric Power (CEP) operations. This indicates that the existence of ASTANA is accepted by the community and villages around PT Cirebon Electric Power (CEP) operations. The positive Value expected to occur in society with the existence of self-help is that there is a higher tendency to have pro-social behavior. This explains that the more self-help communities that participate, the higher the potential for the community to advance and develop. This condition is a prerequisite necessary to empower and develop the community because participation is one of the indicators of the success of the program. So, it can be conveyed that it is necessary to carry out socialization and promotion to introduce the existence of ASTANA as a disaster response community and its activities to other villages around the operational area of PT Cirebon Electric Power (CEP) to obtain support and participation from the community. Consolidation of internal management from PT Cirebon Electric Power (CEP) and PT Cirebon Power Services (CPS) to empower and develop the community and support each other through its programs as one of the company's social strategies.

c) Developing Assets and Capabilities

In carrying out the activities of the ASTANA Group for disaster response communities, PT Cirebon Electric Power (CEP) provides support for materials and equipment for spraying disinfectants and fogging. The ASTANA group was also given basic training to improve their knowledge and abilities in disaster management and handling of COVID-19. This knowledge

and equipment becomes an intangible and tangible asset that ASTANA can manage and develop. With its knowledge and equipment, the ASTANA group manages it for humanitarian and volunteering purposes by fulfilling the demand for disinfectant spraying and fogging in other villages around the operational area of PT Cirebon Electric Power (CEP). Starting from the intensity of spraying requests to other villages and the limited equipment and personnel that can operate, ASTANA must properly manage equipment and personnel to gain the community's trust. In spraying disinfectants and fogging, PT Cirebon Electric Power (CEP) also supports its makers, namely chlorine and chemical fogging. Meanwhile, diesel and gasoline are used as supporting materials, resulting from the ASTANA group's self-help. The impact obtained with the support of this equipment and knowledge is to bathe ASTANA in disaster and handling COVID-19.

The existence of self-help means that the ASTANA group has been able to use assets and resources better. Developing the potential of group self-help will reduce existing problems. The ability or potential of self-help owned by the community can strengthen, develop, and manage all existing natural resources. It is proved here that the self-help potential of the ASTANA group reduces dependence on the company's assistance with gasoline and diesel fuel. The ASTANA Group is also willing to spend its time and energy to carry out ASTANA activities. This means there is a potential for lost income, and it must be sacrificed to carry out ASTANA activities. The time and energy expended by this ASTANA group became self-help.

In this ASTANA group program for disaster response village communities, PT Cirebon Electric Power (CEP) optimizes its resources in the form of chlorine and chemical fogging to solve problems and answer the needs of local communities by forming the ASTANA group. The existence of ASTANA needs to be maintained in the future as a social movement for disaster response village communities in a broader sense. Because it is hoped that the existence of ASTANA will become a movement for disaster response village communities in a broad sense, it is necessary to improve the ability and knowledge of other disasters to be carried out and facilitated by PT Cirebon Electric Power (CEP).

CONCLUSION

The ASTANA Community Disaster Response Group Program has an SROI ratio value of 1.60. This means that every RP 1 invested has a benefit of 1.60. This shows that this program is categorized as feasible. The payback period of the Disaster Response Community Group Program (ASTANA) is 7.5 months. This means that the return on capital for the investment of this program is quite fast because it only takes 7.5 months. 3. The Jelombang Selar Fishermen Group felt the largest proportion of benefits due to the mangrove seedlings' assets of Rp. 17,500,000, fishermen's income of Rp. 504,496,100, an increase in crab and crab yields around mangroves of Rp. 107,028,000. In addition, the Jelombang Selar Fishermen group also received additional income from selling mangrove seedlings of Rp45,000,000.

The intervention of PT Cirebon Electric Power (CEP) by providing masks has an impact on increasing public awareness of the use of masks and reducing the cost of purchasing masks because they get cloth masks that can be worn repeatedly. The existence of disinfectant and fogging assistance positively impacts the community because it reduces community worries and gives people a sense of security to do activities outside the home. The training provided to ASTANA provides positive values, namely increasing capacity in disaster organizing and handling COVID-19, bathing the community in disaster response, the emergence of self-help ASTANA members, and the creation of new relationships so that there

is communication and coordination of disaster response handling in 13 villages. The ASTANA sprayer team also brings positive values to the community, namely transmitting the spirit of humanity and volunteerism to other villages, triggering swad a community in other villages. The increasing intensity of spraying requests to lain villages points to the impact and positive response from the community to the future existence of ASTANA as a disaster response community group in a broader sense. This study proves that an inclusive community program that involves and requires the participation of the community is a program that is sustained in the long run.

REFERENCES

Akhirianto, N. A. (2019). KONSEP DESAIN PENGURANGAN RISIKO BENCANA LONGSOR BERBASIS KOMUNITAS. Jurnal Sains Dan Teknologi Mitigasi Bencana, 12(1), 32–43. https://doi.org/10.29122/jstmb.v12i1.3698

Anggriawan, T. (2022). ASSESSING LOCAL GOVERNMENT PERFORMANCE TO MANAGE POVERTY ALLEVIATION PROGRAM BASED ON VALUE FOR MONEY APPROACH. Natapraja, 10(2), 94–104. https://doi.org/10.21831/natapraja.v10i2.48993

Aprilyanto, A., Khoirudin Apriyadi, R., Winugroho, T., Widana, I. D. K. K., & Wilopo, W. (2021). Kesiapsiagaan Bencana Berbasis Komunitas Perkotaan. PENDIPA Journal of Science Education, 5(3), 284–291. https://doi.org/10.33369/pendipa.5.3.284-291

Gambhir, V. K., Majmudar, N., Sodhani, S., & Gupta, N. (2017). Social Return on Investment (SROI) for Hindustan Unilever's (HUL) CSR initiative on livelihoods (Prabhat). Procedia Computer Science, 122, 556–563. https://doi.org/10.1016/j.procs.2017.11.406

Hamdy, M. K. (2020). THEORY OF CHANGE AND LOGICAL FRAMEWORK: A COMPARATIVE MEASURE FOR MONITORING AND EVALUATION PRACTICES. EMPATI: Jurnal Ilmu Kesejahteraan Sosial, 8(1), 1–11. https://doi.org/10.15408/empati.v8i1.14331

Iqbal, U., Perez, P., & Barthelemy, J. (2021). A process-driven and need-oriented framework for review of technological contributions to disaster management. Heliyon, 7 (11), e08405. https://doi.org/10.1016/j.heliyon.2021.e08405

Kim, D.-J., & Ji, Y.-S. (2020). The Evaluation Model on an Application of SROI for Sustainable Social Enterprises. J. Open Innov. Technol. Mark. Complex. https://doi.org/10.3390/joitmc6010007

Lawlor, E., Neitzert, E., & Nicholls, J. (2008). Measuring Value: A Guide to Social Return on Investment (SROI). The New Economics Foundation, Second edition, 56. https://commdev.org/wp-content/uploads/2015/06/Measuring-Value-A-Guide-to-Social-Return-on-Investment.pdf

Nikmawanti. (2019). Jurnal Humaniora. Jurnal Humaniora, 4(2), 244–255. http://jurnal.abulyatama.ac.id/index.php/humaniora/article/view/2190/pdf

Talboom-Kamp, E., Ketelaar, P., & Versluis, A. (2021). A national program to support self-management for patients with a chronic condition in primary care: A social return on investment analysis. Clinical EHealth, 4, 45–49. https://doi.org/10.1016/j.ceh.2021.02.001