# STUDY OF ENVIRONMENTAL IMPACT ON SCHOOL BUILDING CONSTRUCTION (CASE STUDY: SDN HARJAMUKTI 5, DEPOK CITY)

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## ABSTRACT

Improvement of education building facilities and infrastructure is needed to improve services to the community. In line with the green building planning, Housing and Settlements Department, Depok City plans to build SDN Harjamukti 5 Public with due regard to environmentally friendly development. The activity is predicted to cause environmental impacts, so a study of environmental impact analysis is needed. The purpose of this study is to determine the baseline condition of the study site and analyze the environmental impacts and obtain ways to overcome the results of the analysis in an effort to minimize the impact that will then be used as a reference in order to properly protect the environment. The method used is survey method. This research uses primary data and secondary data. Primary data include water quality data, ambient air quality and noise data, and flora and fauna data while secondary data include climate data and socio-economic data. The results of the study obtained an analysis of environmental impacts that occur and how to minimize impacts with good handling in order to create a construction that is green building concept.

Keywords: environmental impact analysis; school building; how to minimize impact.

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#### INTRDUCTION

The definition of development in general means the process for making changes (Riyadi and Deddy Supriyadi Bratakusumah, 2005). Development can also be interpreted as a coordinated effort to create more legitimate alternatives for every citizen to fulfill and achieve his most human aspirations (Nugroho and Rochmin Dahuri, 2004).

All development activities basically have an impact on the environment in the form of both positive (beneficial) and negative (adverse) impacts. Based on Laws Number 32 of 2009, the environment is a spatial unit with all objects, forces, conditions, and living things, including humans and their behavior that affect nature itself, the continuity of life and the welfare of humans and other living creatures. Therefore, it is necessary to study the estimated impacts both physically and non-physically, including social, economic, cultural and biological aspects as well as an evaluation of its significant impacts. The environment is the sum of all living things and inanimate objects as well as all the conditions that exist in the environment where we live in our place (Supardi, 2003 in Alimuddin et all, 2020). Natural environment is everything that exists in nature and was created by Almighty God, Allah SWT, examples of the natural environment on the surface of the earth are rivers, lakes, seas, mountains and valleys (Rahmadi T, 2011).

Development which is expected to improve the quality of life, needs to be examined first whether a planned development activity will harm humans and the environment or not. One of the ways to manage natural resources and their environment in development is through environmental impact assessment (EIA) or it can be said that EIA can assist the implementation of development with an environmental approach, so that the negative impacts caused can be minimized or eliminated by finding techniques for resolving the impact. Environmental changes caused by development activities can be estimated before the implementation of activities, so that it can be estimated the results or impacts that will occur. Thus it can be searched for a finishing technique in anticipating the impacts that arise and minimizing the impacts.

According to Ervianto (2013) in Alimuddin (2020) states that green construction is part of sustainable construction with the main objective of reducing negative impacts on the environment during the development process. This is intended so that development objectives to increase the income and welfare of the community can be achieved. Community involvement and participation in the study of development problems, especially through the empowerment model, is actually not a new topic at all.

The Housing and Settlement Department of Depok City realizes that the construction of the SDN Harjamukti 5 building will have an impact on the environment, both positive and negative. The impact of the construction of the SDN Harjamukti 5 building, Depok City will affect the aspects of the physical-chemical environment components (water quality, ambient air), socio-economic culture, and the health of the local community.

The purpose of this research is to determine the baseline conditions of the research location and to analyze the environmental impacts and to obtain countermeasures from the results of the analysis in an effort to minimize the impacts that occur which will then be used as a reference in order to protect the environment properly.

Buildings that are adjacent to highways, especially National roads that are in direct contact with the building will contribute to road traffic. The main source of the cause of the building adjacent to the highway is noise generated by motorized vehicles, vehicles that are parked and then turn on early will result in noise too (Syaiful S, Wahid N, 2020); (Syaiful S, Sri WM, 2019); (Syaiful S, Elvir Y, 2017).

# **RESEARCH METHOD**

# Material, Equipment and Method

# Material

Material that used in this research among others air absorbance and water samples.

# Equipment

Equipment that used in this research among others digital pH Meter, digital DO Meter, Impinger, Sound Level Meter, Hygrometer, recorder tape, quesioner, and camera.

# Method

Method that used in this research is survey method. The data collected in the form of primary data and secondary data. The first step of the research carried out was literature study, namely activities related to library data collection. The second step is collecting primary and secondary data. The third step is data processing. The next stage is an analysis of environmental impact grouping. The research flow diagram is presented in Figure 1 below.

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Figure 1. Research Flow Diagram

#### **RESULT AND DISCUSSION**

Administratively, the construction of the SDN Harjamukti 5 building, Depok City is located on Jl. Raya TPU Pondok Ranggon No. 29, Harjamukti, Cimanggis District, Depok City, West Java. The location of the development plan is on vacant land which is the origin of the land from the state land with the granting of usage rights. The Housing and Settlement Department of Depok City will make the 3 (three) floor building with a function as an educational facility. Research location map is presented in the following figure.



Figure 2. Research Location Map

# **Environmental Physical - Chemical Components**

Physical - chemical component observed included rainfall, air temperature, humidity, direction and speed of wind, and duration of sun exposure. Climate data in research location presented in following table.

Month	Rainfall (mm)	Air Temperature (°C)	Humidity (%)	Wind direction	Wind velocity (m/s)	Exposure duration to the sun (hour)
Jan	8,2	25,7	81,6	North	2,1	2,4
Feb	15,4	25,6	85,4	North	1,8	3,7
March	6,8	26,0	83,3	North	1,4	5,1
April	18,7	26,3	85,3	North	1,5	5,9
May	21,9	26,6	81,9	North	1,5	7,3
June	18,6	26,2	82,5	North	1,4	6,2
July	9,1	25,8	76,3	North	1,2	8,5
Aug	7,4	25,9	74.5	North	1,7	7,9
Sept	14,4	26,1	75,4	North	1,8	7,5
Oct	13,3	26,6	79,6	North	1,4	7,0
Nov	20,4	26,4	83,3	North	1,3	4,8
Dec	15,1	26,2	84,1	North	1,6	4,5
Average	14,1	26,1	74,9	North	1,6	5,9

Table 1. Climate Data In Research Location

Source: Cimanggis District in the Figure, 2018

The average annual rainfall was 14.1 mm/month. The lowest rainfall occurred in March which is 6.8 mm and the highest rainfall occurred in May which is 21.9 mm. According to this data, in this

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research location, there was rainfall throughout the year and it was almost no significant dry season. Thus, it can be concluded that the research location did not have a dry month.

The temperature of the research location ranged around  $25.6^{\circ}$ C –  $26.6^{\circ}$ C and the average was  $26.1^{\circ}$ C. In general, the average annual air temperature had a pattern towards its monthly temperature. The minimum air temperature pattern occurred in the wet months while the maximum air temperature pattern usually increased towards the dry months.

The humidity in the location of study was ranged around 74.5%-85.4% by the average annual was 74.9%. The highest humidity occurred in rainy season while the lowest humidity occurred in the dry season. Afterwards, the humidity monthly fluctuations in the location of study were relatively small and no extreme changes confirmed. That humidity then included as relative humidity which was still able to be tolerated (80-90%).

The wind direction in the location of the study was similarly blowing to the north. Wind speeds ranged around 1.2 m/s - 2.1 m/s by the annual average speeds was 1.6 m/s. The wind direction and the wind speeds were greatly affecting the pollutants distribution pattern that caused air pollution spread in the location of study.

The duration of sun exposure in the location of study was ranged around 2.4 - 8.5 hours by the average was 5.9 hours. The lowest sun exposure was occurred in January, meanwhile the highest sun exposure was occurred in relatively dry months with the peak was in July.

#### **Biological Component**

The higher the diversity of flora and fauna species, so that higher the level of environmental sustainability of the biology or the lower the level of pollution. Likewise, vice versa. The types of vegetation in the research location are generally mango, rambutan, peanut, banana, papaya, lemongrass, and some natural vegetation (wild plants) such as nut grass, while the types of fauna in the research location are birds, butterflies, grasshoppers, chameleons and other domesticated animals, namely: cats, dogs, chickens and ducks

#### **Ambient Air and Noise Component**

Measurement of ambient air using an impinger tool and measuring noise using a Sound Level Meter were carried out at two locations, namely the study location (UA-1) and around community settlements (UA-2). The sampling products were analyzed in the accredited laboratory are presented in the following table.

No	Test Description	Regulatory	I;;	Sample	e Result
INO	Test Description	Limit **	Unit	UA-1	UA-2
	Ambient Air Quality:				
1	Sulfur Dioxide, SO <sub>2</sub>	900/1H	μg/Nm <sup>3</sup>	48,44	49,22
2	Carbon Monoxide, CO	30000/1H	μg/Nm <sup>3</sup>	440	610
3	Nitrogen Dioxide, NO <sub>2</sub>	400/1H	$\mu g/Nm^3$	28,12	29,87
4	Oxidant, O <sub>3</sub>	235/1H	μg/Nm <sup>3</sup>	<48.3	<48.3
5	Dust, Particulate	230/24H	$\mu g/Nm^3$	18,6	30,1
	<b>Odor Air Quality:</b>				
1	Ammonia, NH <sub>3</sub> *	2•	ppm	0,015	0,019
2	Hydrogen Sulfide, H <sub>2</sub> S*	0.02•	ppm	< 0.004	< 0.004
	Noise:				
1	Equivalen noise, Leq	55 - 70	dB (A)	38,5	46,4
2	Minimum Noise, L <sub>min</sub>			34,4	43,2
3	Maximum Noise, L <sub>max</sub>			42,6	49,6

Table 2. Results of Laboratory Analysis of Ambient Air Quality and Noise

- (\*\*) Ambient Air Standard Quality Regulation, PPRI No. 41/1999

- The test results relate only to the items tested

- References sampling SNI 19.7119.6 - 2005

- ( 
) The test results can not be comparised to the regulation of PPRI No. 41/1999

Meteorology Data				
No	Description	I Init	Re	sult
INU	Description	Unit	UA-1	<b>UA-2</b>
1	Temperature	°C	29,3	30,6
2	Relative Humidity	%	76,2	64,6
3	Wind Speed	m/s	0,3 - 0,8	0,1 - 0,5
4	Wind Direction	-	T - B	T - B

## Table 2. Meterorology Data

From the data in table 2 it can be seen that the dominant wind direction recorded is to the west with speeds ranging from 0.1 - 0.8 m/s. The ambient air quality at the location of the planned activity and its surroundings is still good, considering the measured parameters still meet the environmental quality standard (BML) in accordance with Government Regulation of Republic Indonesia No. 41 of 1999 for SO<sub>2</sub>, NO<sub>2</sub>, TSP, CO, and O<sub>3</sub>, Decree of the State Minister for the Environment of Republic Indonesia No. 50 of 1996 for H<sub>2</sub>S and NH<sub>3</sub>, and Government Regulation of Republic Indonesia No. 41 of 1999 concerning National Ambient Air Quality Standards. The results of the measurement of the noise level at the study location were 38.5 - 46.4 dB (A), where the results of the noise measurement were still below the quality standard.

# **Ground Water Component**

Groundwater quality measurements were carried out in two locations, namely the research location plan (AT-1) and around the community settlement (AT-2). The sampling products were analyzed in an accredited laboratory. The results of in situ measurements and laboratory analysis are briefly presented in the following table.

Table 3. Results of Laboratory Analysis of Ground Water Quality

No	Test Description	Sampe	Sampel Result		<b>U</b>
INO	Test Description	AT-1	AT-2	Limit**	Umt
	Physical Properties:				
1	Turbidity*	0,51	0,31	25	NTU
2	Color*	< 1	< 1	50	TCU
3	Total Dissolved Solid, TDS*	149		1000	mg/L
4	Temperature•*	24,9	27,8	Temperature $\pm 3$	-
5	Taste	Tasteless	Tasteless	Tasteless	-
6	Odor	Tasteless	Tasteless	Tasteless	-
	Chemical Anorganic Propertie	es:			
1	pH•*	6,49	6.52	6.5 - 8.5	mg/L
2	Iron, Fe*	0,082	0,021	1	mg/L
3	Hardness Total as CaCO <sub>3</sub> *	95,43	95,60	500	mg/L
4	Manganese, Mn*	0,021	< 0.007	0,5	mg/L
5	Nitrate as N (NO <sub>3</sub> -N)*	0,098	0,119	10	mg/L
6	Nitrite as N (NO <sub>2</sub> -N)*	0,005	0,006	1	mg/L
7	Mercury, Hg*	< 0.00009	< 0.00009	0,001	mg/L
8	Arsenic, As	< 0.00006	< 0.00006	0,05	mg/L
9	Chromium hexavalent, Cr6+*	< 0.001	< 0.001	0,05	mg/L
10	Zinc, Zn*	0,015	< 0.004	15	mg/L
11	Sulphate, SO <sub>4</sub> <sup>2-</sup> *	3,45	2,11	400	-
12	Lead, Pb*	< 0.0002	< 0.0002	0,05	mg/L
	<b>Biological Properties:</b>				

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No	Test Description	Sampe	l Result	Regulatory	Unit
INO	Test Description	AT-1	AT-2	Limit**	Unit
1	Total Coliform	<1.8	<1.8	50	CFU/100 mL
2	E. Coli	< 1.8	< 1.8	0	CFU/100 mL

- (\*) Accreditade by KAN

- (\*\*) Clean Water Standard Quality Regulation, PerMenKes No. 32/2017

- The test results relate only to the items tested

- References sampling SNI 6989.58:2008

Based on the data of groundwater quality analysis results on the table 3, all parameters were fulfilling the quality standards set in accordance with Minister of Health Regulation No. 32 of 2017 concerning Environmental Health Standard Quality and Water Health Requirements for Sanity Hygiene, Swimming Pool, Solus Per Aqua, and Public Bathing.

#### Socio - Economic and Cultural Components

#### Livelihood

Livelihood is a fundamental aspect of human life because it covers social and economic dimensions. The social dimension of work is related to the community's recognition of individual abilities and the economic dimension to the fulfillment of daily life needs.

The dominant economic activity is the livelihood of the people in the study location, mainly traders, private employees, laborers, military, and police. The building construction of the SDN Harjamukti 5 activities will have an impact on the livelihoods of the surrounding population/community because it will open up employment opportunities and business opportunities for the community to work on projects and trade in providing daily needs. Therefore, they can increase local economic activities with the increasingly crowded and developing stalls and small shops around the study location.

#### Household Income

The construction of SDN Harjamukti 5 building by the Depok City Housing and Settlement Department will provide benefits for many parties. Along with the increase in employment opportunities with the community who work in schools who will receive salaries both daily and monthly, and business opportunities people around the project to do business. Based on interviews with respondents, the value of the community income range is obtained as shown in the following table.

Based on the table above, it can be seen that 54.5% of the largest respondent income is from their main job which ranges from Rp. 1 million - Rp. 3 million/month, while the community with an income of 3 million - 5 million/month is 28.5%. From the results of this income, the community finances expenses for consumption and non-consumption, namely food and drink needs, education costs, electricity usage costs, transportation costs, costs for buying clothing, residential maintenance costs, maintenance costs for transportation equipment, costs for purchasing household appliances, travel/picnic/entertainment costs and social costs and debt repayments. The most expenditure from respondent answers is to meet consumption needs, while the smallest expenditure is for maintenance costs of transportation equipment. Especially for income that comes from selling, respondents who were interviewed specifically stated that they had a turnover of Rp. 1 million to 2.5 million per day.

Table 4. Public Income from Main Works at the Location of Stu	ıdy
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No	Income (Rp)	Percentage
1.	$\leq 1.000.000$	8,2
2.	1.000.000 - 3.000.000	54,5
3.	3.000.000 - 5.000.000	28,5
4.	$\geq 5.000.000$	2,4
5.	Uncertain	3,0

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No	Income (Rp)	Percentage
6.	No respond	3,4
	Total	100,00

Source: Survey Team, 2019

Based on the table above, it can be seen that 54.5% of the largest respondent income is from their main job which ranges from Rp. 1 million - Rp. 3 million/month, while the community with an income of 3 million - 5 million/month is 28.5%. From the results of this income, the community finances expenses for consumption and non-consumption, namely food and drink needs, education costs, electricity usage costs, transportation costs, costs for buying clothing, residential maintenance costs, maintenance costs for transportation equipment, costs for purchasing household appliances, travel/picnic/entertainment costs and social costs and debt repayments. The most expenditure from respondent answers is to meet consumption needs, while the smallest expenditure is for maintenance costs of transportation equipment. Especially for income that comes from selling, respondents who were interviewed specifically stated that they had a turnover of Rp. 1 million to 2.5 million per day.

# Perception and Community Attitude

Based on the interview results conducted with respondents, in general, 90% of respondents were aware of the plan to build SDN Harjamukti 5 to be built in their area. In general, the public's perception of the business and/or activity is positive. This positive perception is formed by the business opportunities that will be obtained, which is 40% and can open up employment as much as 50%. Based on a survey of respondents, it is known that 85% strongly agree and 15% agree. More complete about the responses of respondents regarding the information on the SDN Harjamukti 5 building construction plan, Depok City is presented in the table 5 below.

Table 5. Respondents Re	sponses to the SDN Ha	iamukti 5 Building	Construction Plan.
i abie 5. respondents ree	sponses to the SDIVIII	Juniaku 5 Dunung	

No	Description	Total (%)	Information
1	Have you ever heard about the SDN Harjamu	kti 5 construction plan?	
	a. Yes	90	
	b. No	10	
	Total	100	
2	If yes, where did the information come from?	)	
	a. Socialization	40	
	b. District/kelurahan	10	
	c. Public figure	30	
	d. Others	20	Neighbors
	Total	100	
3	How do you respond to the activity plan?		
	a. Strongly agree	85	
	b. Agree	15	
	c. Disagree	0	
	Total	100	
4	What are your expectations regarding the SD	N Harjamukti 5 construction plan?	
	a. Possibility of job opportunities	50	
	b. There is a business opportunity	40	
	c. The company's contribution to advancement of the region	the 10	
	Total	100	
5	What do you worry about from the SDN Harj	jamukti 5 construction plan	
	a. Air pollution	25	
	b. Increased noise	25	
	c. Disruption of traffic	50	
	Total	100	

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Source: Survey Team, 2019

#### **Community Health Components**

## Health Facilities and Public Health Services

Development in the health field aims to provide health services that are easy, equitable, and cheap. One of the government's efforts in order to equalize health services to the community is to provide health facilities, especially community health centers, and supporting community health centers because both facilities can reach all community layers up to the remote areas. One indicator of the welfare of an area's population is public health condition. Health facilities in Harjamukti Village are available namely 1 unit of hospital, 1 unit of community health centers, 15 unit of integrated service center, 1 unit of family plan post and 9 unit of clinic.

#### **Clean Water and Environmental Sanitation**

Clean water is an essential requirement for households in daily life, the availability in total sufficiency, especially for drinking and cooking purposes, is the goal of the clean water supply program that is aimed continuously by the government.

Community access at the location of activities to healthy drinking water is quite reliable. Based on the interview results with respondents, the percentage of households with access to drinking/clean water comes from dug well water, which is as much as 95%. In contrast, the source of water for drinking comes from bottled water/gallons.

The initial baseline condition of community environmental sanitation in the research location reflects the environmental sanitation of modern society. The behavior of most people towards environmental health management has been carried out in accordance with recommended management standards and healthy living standards, such as disposing of garbage in its place and using clean water for bathing and washing.

#### Source of Impact, Type of Impact, Significance of Impact and How to Minimize Impact.

The impact of SDN Harjamukti 5 building construction plan affects the aspects of the physicalchemical and socio-economic and cultural components of the local community. Description of the source of impact, type of impact, Significance of impact, and how to minimize impact was presented in the following table.

Source of Impact	Type of Impact	Significance of Impact	How to Minimize Impact		
A. Pre-Construction Stage					
A.1. Commu	unity Perception	l			
Registration of Licensing and Socialization of Activity Plans	The emergence of community perception both positive and negative	Communities around the location of the activity plan embrace this project	<ul> <li>Fostering good relations with community leaders, authorized institutions around the location of the project</li> <li>Immediately resolve problems that arise with the local community by deliberation and kinship</li> <li>Facilitating and accommodating the wishes and expectations of the affected community members according to the ability of the proponent</li> </ul>		
B. Construction Stage B.1 Depressed Air Quality					
Construction	Decreased air	Increase of total flue	- Using roadworthy material vehicles		

Table 6.	Source of Impact, Type of Impact, Significance of Impact and How to Minimize				
Impact for SDN Harjamukti 5 Building Construction Plan					

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Source of Impact	Type of Impact	Significance of Impact	How to Minimize Impact
activities	quality	gas discharged into the air in the form of NH <sub>3</sub> , CO, H <sub>2</sub> S, NO <sub>2</sub> , Pb, SO <sub>2</sub> , and dust	<ul> <li>Material transporter vehicles are equipped with good tarp covers.</li> <li>Cleaning the vehicle tires before leaving the project footprint</li> <li>Creating a protective fence around the project site as a windbreak to isolate gases, dust, and pollutants in order for the wind does not carry those over to other locations.</li> </ul>
B.2. Increas	sed Noise	T4 : d: .4. d 4. b	Constinue a most stime former another
activities	noise	an impact in the form of increased noise. This impact is continuous and is limited around the project site	<ul> <li>Creating a protective tence around the project site as a windbreak to reduce noise</li> <li>Not to perform noisy night work, where the surrounding community is sleeping/resting.</li> <li>Using roadworthy vehicles</li> </ul>
B.3. Emplo	wment and Busi	ness Opportunities	comground or my conteres
Workforce recruitment activities	Employment and business opportunities for residents	Labors are recruited based on need. The process of recruiting non-skilled workers will prioritize the local community at 70%	<ul> <li>Providing the primary opportunity or priority for people directly affected by the activity plan to be able to work as labor according to the qualifications and workforce requirements required</li> <li>providing information about employment opportunities to the community and village officials around the location of the activity</li> <li>Provide wages following the UMK Depok City</li> </ul>
B.4. Public	Health Disorde	rs	
Construction activities	Public health disorders	The impact of health problems is proportional to the volume of solid waste production and liquid waste from construction worker activities	<ul> <li>Provision of separate organic and inorganic waste containers, in a sufficient total</li> <li>Provision of cleaning equipment in a sufficient total and adequate types</li> <li>Provision of cleaning officers who are responsible for the cleanliness of the work environment, worker hygiene facilities, and disease vector control</li> <li>Cooperating with third parties in the transportation of waste</li> </ul>
B.5. Chang	e in Environme	ntal Sanitation	-
Construction activities	Domestic waste production	Total waste generated is 100 l/day (0.1 m3/day)	<ul> <li>Provision of separate organic and inorganic waste containers (bags), in total that is sufficient in the base camp</li> <li>Provision of cleaning equipment in a sufficient total and adequate types</li> <li>Provision of cleaning officers who are responsible for the cleanliness of the work environment, worker</li> </ul>

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Source of	Type of Impact	Significance of	How to Minimize Impact
Impact	Impact	Impact	<ul><li>hygiene facilities, and disease vector control</li><li>Collaborate with third parties in the transportation of waste</li></ul>
B.6. Comm	unity Perception	n	F
All construction activities	The emergence of community perception both positive and negative	Communities around the location of the activity plan embrace this project	<ul> <li>Fostering good relations with community leaders, authorized institutions around the location of activities</li> <li>Immediately resolve problems that arise with the local community by deliberation and kinship</li> <li>Facilitating and accommodating the hopes and expectations of the affected community members according to the ability of the initiator</li> </ul>
C. Operatio	n Stage		
C.1. Decreas Building operational activities and maintenance of buildings, facilities, and infrastructure.	sed Air Quality Decreased air quality	It is predicted to have an impact in the form of an increase in dust particles and exhaust gases from vehicles and exhaust emissions from the use of generators	<ul> <li>Planting and maintaining greenery on the lawn or garden</li> <li>Optimization of greening in the environment and green open spaces with plants that can function to reduce dust and pollutant gases, such as a pole of godogan, walnut, mahogany, cape, and ornamental hamboo/needles</li> </ul>
C 2 Increas	ed Noise		bamboo/needies
Building operational activities and maintenance of buildings, facilities, and infrastructure	Increased noise	It is predicted to have an impact in the form of increased noise. This impact is continuous and is limited around the project site	<ul> <li>Creating a generator set particular room (soundproof) to minimize noise from the engine generator set.</li> <li>Installing the silencer on the generator to reduce noise.</li> </ul>
C.3. Employ	ment and Busin	ess Opportunity	
Building operational activities and maintenance of buildings, facilities, and infrastructure.	Employment and business opportunities for residents	Labors are recruited based on need. The process of recruiting non-skilled workers will prioritize the local community at 70%	<ul> <li>Providing the first opportunity or priority for people directly affected by the activity plan to be able to work as labor according to the qualifications and workforce requirements required.</li> <li>Providing information about employment and business opportunities to the community and village officials around the location of the activity.</li> <li>Providing wages following the Depok City UMK</li> </ul>
Building operational	Public health disorders	Total waste generated during operation is	- Provision of separate organic and inorganic waste containers, in a

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Source of Impact	Type of Impact	Significance of Impact	How to Minimize Impact
activities and maintenance of buildings, facilities, and infrastructure.		1.550 l/hari (1,55 m3/day)	<ul> <li>sufficient total</li> <li>Provision of cleaning equipment in a sufficient total and adequate types</li> <li>Provision of cleaning officers who are responsible for the cleanliness of the work environment, worker hygiene facilities, and disease vector control</li> <li>Cooperating with third parties in the transportation of waste</li> </ul>
C.5. Change i	in Environmenta	al Sanitation	
Solid and liquid waste management.	Change in environmenta l sanitation.	Changes in environmental sanitation that trigger various kinds of disease vectors	<ul> <li>Preparing trash bins on each floor and separate organic and non- organic waste.</li> <li>Implementing the 3R principle (reduce, reuse, and recycle)</li> <li>Providing and disposing of waste at a temporary dumpsite and transport it according to the schedule and requirements to the landfill in collaboration with relevant agencies</li> </ul>
C.6. Traffic I	Disruption		
School building operational activities	disruption.	Iraffic disruptions will remain during operational activities and are cumulative, which can trigger traffic congestion and accidents	<ul> <li>Providing security unit to manage vehicle traffic at the entrance/exit</li> <li>Installation of road equipment such as traffic signs and road markings as needed and crossing facilities in the form of zebra cross.</li> <li>Follow and comply with traffic technical advice provided by relevant agencies</li> </ul>
C.7. Commu	nity Perception		
School building operational activities	The emergence of community perception both positive and negative	The community around the activity plan site expects that at this stage of the operation, the negative impact can be minimized. In contrast, the positive impact can be maximized.	<ul> <li>Fostering good relations with community leaders, authorized institutions around the location of activities</li> <li>Immediately resolve problems that arise with the local community by deliberation and kinship</li> <li>Facilitating and accommodating the desires and expectations of the affected community members according to the ability of the initiator</li> </ul>

# CONCLUSION

Based on the results and discussion of the environmental impact analysis, the reconstruction of SDN Harjamukti 5 building, Depok City can be concluded as follows, Environmental baseline at the research location shows that the environmental quality at the research location is in a good category, both in terms of components of ambient air quality and noise as well as components of groundwater quality. Obtaining an analysis of the environmental impacts that occur and how to minimize the negative impacts that occur and develop positive impacts with good handling.

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