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BEHIND THE TRASH: A QUALITATIVE RESEARCH ON HOW TRASH PICKERS IN CIRENDEU AREA CONTRIBUTE TO RECYCLING

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Abstract

Trash is one of the most serious environmental issues. People strive to solve the problem with reducing the use of plastic and figuring out the method to recycle efficiently; however, the story of trash pickers is barely on the topic. The problems are the ignorance and underestimation of the society. People should consider the integrated solution for both the environment and those trash pickers. The ideal solution would be formalizing waste disposal system, officially hire trash pickers for their stable life, and let their children access to education for brighter future. This discussion will examine the importance of understanding the people behind the trash by investigating the trash pickers community in Cirende, Indonesia. Before doing the research, the author has visited the communities several times and had been given the impression of pity, poor and helplessness; however, since the waste management system in Indonesia is unclear, they must be playing a significant role. The author carried qualitative research including fieldwork and interview in Bahasa Indonesia, with supports from a local non-profit organization, XSProject, which has been communicating and supporting the trash pickers for a decade. The results from the research indicate that they contribute to recycle to a great extent. Their waste disposal method is quite systemized. They are also skillful, active and ambitious. There is a person who has the second job, skill to make aquarium for his children, own shops and teach sewing. All group leaders of trash pickers, called *Lapak* have a skill to build houses and carts for his men, *anak-buah*. Their skills of sorting the trash let XSProject reuse more than hundreds of kilograms of plastics including plastic packaging, grocery bags and rice sacs each year. Their contribution for Indonesian environment is underrated although it is huge.

Keywords: sustainable development; environment; human security; waste disposal; trash

1. Introduction

Environmental issues are now a hot topic. There have been many debates, meetings and summits regarding sustainable development which address to the waste management, recycling, climate change and global warming. As a result, many governments ratify protocols and treaties to protect the environment and to strive for the millennium sustainable development goals. Uncountable NGOs and NPOs also make their efforts to improve the situations; however, people who contribute to the eleventh target, sustainable cities and communities of the sustainable development goals by recycling trash at the grassroots level are barely appreciated.

A significant population in developing countries earn for the living by scavenging (Onyekwelu & Aghamelu, 2019). In 2005, it is estimated that about 350,000 to 450,000 undocumented migrants were working as trash pickers in Jakarta alone (Wizer, 2005). However, their existences are often inconspicuous and ignored although their contributions to recycling are outstanding. It is not overexaggerated to state that those people are playing the most essential roles in waste management since the law for domestic waste and recycling in Indonesia is not enacted (Naoyuki & Kojima, 2007). The specific method of the waste disposal system in Indonesia is called End of Pipe technique; after the waste is generated, it is collected, brought and dumped at the disposal site. Associated with the increase of the population, there are many critiques that it should be reformed to appropriate style respecting 4R of reduction, reuse, recycling, and recovery (Naoyuki & Kojima, 2007). There are many environmental and health issues risking human lives indeed. In 2005, 143 people died and 71 houses collapsed at the open dumping site in Bandung after heavy rain. The major causes were not only rainfall but also the low friction coefficient due to numerous plastic bags in the area and the landslides due to methane gas explosions under the waste dump which even set the fire (Lavigne et al., 2014). When looks at the data, 55% of the waste is carried to the final waste disposal site in Indonesia and what they mean by the final waste disposal site is generally landfill of open dumping (Naoyuki & Kojima, 2007). Even more unfortunately, there is only one controlled landfill located in Jakarta in Indonesia. Incinerators were installed in Jakarta around 1990 with limited scale but these are not in operating condition (Naoyuki & Kojima, 2007).

Therefore, while every human strives to achieve sustainable development goals regarding the conservation of the environment and human security, it is also essential to consider those underrated people's situation and appreciate their activities. In this paper, the author will introduce trash pickers and their lives in Cirendeu, Indonesia. Many researchers have tried to clarify trash pickers' way of waste disposal, the impact and their role in the society; however, these are mostly focusing on Bantar Gebang, Bali or other developing countries (Devi, 2017; Sasaki & Araki, 2013; Zurbrugg, Gfrerer, Ashadi, Brenner, & Küper, 2012). By investigating the community near the capital city of Indonesia, it would help further research as urban poverty. Furthermore, most of previous researches stated those trash pickers as unskilled workers due to lack of educational background (Devi, 2017; Sasaki & Araki, 2013); however, in this paper, the author illustrates their unique skills that haven't been counted. Thus, it would be a good opportunity for the audience to discover their hidden abilities that they have some options other than becoming trash pickers.

This paper will be followed by method, result and discussion, conclusion and acknowledgement. In the method section, the author describes the specific procedures of fieldwork and interview. She has conducted a quantitative interview with 24 people in the community including the trash pickers' boss, his men, trash pickers' wives, elementary to college students. Also, she interviewed the manager of XSProject who's been working with the trash pickers for a decade. As a backup reference, she has also read related researches conducted by other scientists. In the results and discussion section, the author will explain that the trash pickers' waste disposal system is actually contributing to recycling and to protect the environment. The author also points out their unique skills and characters. In the conclusion

section, the author specifies the findings and the importance of understanding and acknowledging the activities of neglected people like the trash pickers in Cirendeu. In the acknowledgement section, the author will show her appreciation to people who supported her during the research. In the reference section, the author will list the documents which the author refers in the paper. The author has read and had inspirations from many other books and documents other than those listed at the end.

2. Methods

In the research, the author uses the method of fieldwork, interview and document investigation for additional information. The fieldworks were conducted in the community of Cirendeu, located in Tangerang Selatan, Indonesia three times in August 2017, August 2018 and June 2019. The specific location is Jl. Cirendeu Indah II RT 01, RW 01, Tangerang, West Java. The entire population of the community have an estimated 200 people including 70 students from kindergarten to college. Besides trash pickers, there are other workers in the community. One is a *warung* owner, the traditional food vendor, mainly run by the wives of the trash pickers. Snacks, water in plastic bottles, packages of juice powder, rice and many others are sold at *warung*. The owner buys products from markets nearby and sells them at their *warung*. Around noon, children line to buy their snacks and parents drop by for shopping while chatting with the owner. Some parents also cook deep-fried food in front of their house and sell it to earn extra income. There is also a lady who is the only person completed a bachelor's degree in the community. She works as a communicator between XSProject and the community itself. She oversees attending the parent-teacher conference, submitting school documents, checking up the conditions of the children and the adults with XSProject, and taking care of the keys for the community center. She also supported the author by managing the interview schedule with each villager. Other than those adults, there are also 70 children living in the community. Six of them are the first generation of going to university from the community supported by XSProject. They are all enrolled in private universities, majoring various studies like technology, management, and admissions. While they study intensively, they also experience working as XSProject part-time job by tutoring the elementary students in the community. Additionally, they study English for extra learning from a foreigner volunteer visiting the community frequently. Other than the university students, there are babies to high schoolers. XSProject supports their school fees to encourage them to go to school. From a Japanese perspective, scholarship seems unnecessary for those who attend public elementary to middle school since it is compulsory education; however, the scholarship is vital for children in the community. The first reason is that they all go to private school. Indonesian public school nowadays demands a high educational standard. Families in good financial shape send their children to the academy to prepare for the entrance exam for the hard public school. On the other hand, the trash pickers family cannot scrounge up those academy's expenses. Naturally, the wealthy kids' have huge advantages and possibilities to be accepted to public schools, and the trash pickers' children have no choice but going to private schools. Private schools cost a pretty penny that the trash pickers cannot afford without the scholarship. The children also have tutor classes after school to catch up with the school curriculums and homework. XSProject invites two tutors from outside the community and the university students to the community center where students gather by their school year. Inside the community center, they built a

reading room where stores many books and toys. When the key is unlocked, the children hop into the room, sit and enjoy their favorite books with their friends. The books are either donated or purchased with the donation. The books bought with the donation were chosen by the children when XSProject took them to a bookstore in a mall. The genres vary including ethnic old tales, fairy tales, and Islamic stories. The children younger than elementary students play inside and outside the community. Besides playing, they spend their time singing and learning English with the foreigner student volunteers.

Most of the villagers migrated to the area since 2004 because they were expelled by the landowner of the area in which they used to live in Jakarta. The whole trash pickers community from Terogong (South Jakarta) was exiled and ended up moving into Cirendeu. Eventually, many others joined the community. As shown in Figure 1(a), the area is contaminated by trash and vermin such as rats, flies, mosquitoes and more. In Figure 1(b), people can see that the air is also polluted with carbon dioxide and other hazardous gases emitted by burning useless unrecyclable garbage.

Figure 1(a). Inside the community, (b). Burning garbage

There were 24 people as interviewees including trash pickers who are *Lapak* and *anak-buah*, wives of the trash pickers, children of the trash pickers from elementary school and colleges, educators from outside the community, and an NPO staff who is the only person who has graduated college in the community. The staff helped the author as a communicator with the interviewees to make appointments with them. The selection of the participants is based on the author's volunteering activity; the persons who have engaged with the author through her volunteering activities such as scholarship donation from Japan which she contributed as a middleman, and the persons who are willing to talk with her. The reason is that it is much comfortable for the participants to talk to somebody whom they've talked with before, and thus, there is a higher possibility for them to talk the truth. The second reason is that as an ethical consideration, it is essential to respect the participants' will whether they want to share their private information with this Japanese student volunteer or not. As it is an interview as a qualitative research method, the author first asks them basic mandatory questions; the name, ethnicity, age, members of the family, and work. Besides those basic questions, the author does not prepare a question sheet. The interview itself goes with free thinking based on what the interviewees answer and what they want to talk to the author. Moreover, the author interviewed with the manager of XSProject, Retno Hapsari for further information. As Hapsari is dedicated

to supporting the trash pickers in Cirendeu by running XSProject for a decade, she is a credible resource for the research. The author also read a research paper written by Ann Wizer, the founder of XSProject. She reported the situation of the trash pickers in Cirendeu in 2002 (Wizer, 2005).

3. Results and Discussion

The results are mainly three points. First, the trash picker's work is systematic. Second, they are very skillful although many papers consider them as unskilled workers. Third, their work is contributing to the environment. The specific explanation and discussion are following.

The first point is that the trash pickers' way of waste disposal is systematic. Previous researches done by Sasaki (Sasaki & Araki, 2013; Sasaki, Araki, Tambunan, & Prasadja, 2014; Sasaki, 2015) also revealed its remarkable roles shared in the society of trash pickers in Bantar Gebang; however, it is a surprising fact that a relatively small community like the one in Cirendeu also has a quite similar system to what they have in Bantar Gebang. Most of the villagers migrated to the area from Jakarta since 2004 because they were expelled by the landowner of the area in which they used to live. The whole trash pickers community from Terogong, South Jakarta, were exiled and ended up moving into Cirendeu. Eventually, other migrants joined the community. Most people living in the community work as trash pickers who collect, sort and sell trash for the livings. They operate under their specific roles which are systematic and collaborative. First, trash pickers mainly have two roles. One is called *Lapak*, and another is *anak buah*. *Lapak* is a boss of the trash pickers, and there are five *Lapak* in the community. Under a *Lapak*, *anak Buah* does their jobs. There are usually about 10 *anak buah* working under one *Lapak*, and they rely on each other under the relationship of mutual aid. When a person enters the community as an *anak buah*, his *Lapak* builds a house in the community for each *anak buah* and sometimes build carts for trash picking as well. The house rent will be paid to the *Lapak* with the trash which *anak buah* collects. When *anak buah* cannot collect trash because of the ages or injuries, they need to pay for the rent with cash to *Lapak*.

First, *anak buah* collects trash from their assigned area. According to Bedah, the NPO staff from this community, the quality of the waste from wealthy families are good so it is an advantage of living in Cirendeu where is located near an affluent neighborhood in South Jakarta. The domestic waste from a household in Indonesia is dumped at the rubbish chute of each house. They pick up the waste and carry them back to the community with their cart. At the community, they open the trash bags. Without the system of waste segregation, in most cases, plastic and raw garbage are mixed in the bags. Therefore, the next step is waste segregation. *Lapak* oversees classifying and selling the trash to the recycle shops. The waste is sorted into those which can be sold to the recycle shops, those which can be sold to XSProject, and the non-valuable waste. Those could be bought at recycle shops are plastic bottles, aluminum cans, and glass. On the other hand, XSProject buys detergent refill plastic bags, used banners of a company and those which cannot be sold to normal public recycle shops. Lastly, the waste which has no value at all is burnt. As above, the waste disposal ran by the trash pickers are quite efficient and systematic, and playing an essential role to contribute to the recycling in Indonesia. To summarize, the author created Figure 2 below.

Figure 2. Flow chart of the trash pickers work in Cirendeu

Therefore, it could be stated that although their existence is mostly invisible from the society, their work is vital to keep the area around many families from middle to upper classes clean by picking up the trash regularly; however, those people are usually not aware of the fact that their home will become a trash mountain without the trash picker's work. Sometimes, they even discriminate the trash pickers because of their dirty appearances. By clarifying the specific roles which they play, it would make all citizens, especially people in the city area who tend to consume more, realize where the trash they throw will go. It also provides the pellucid paths of how the domestic waste is managed not under the formal government-oriented system but under the people who are underappreciated and unrecognized people.

The second point of findings is that they have unique and remarkable skills other than trash picking. The lady in Figure 3(a) is a wife of a trash picker who used to teach sewing at the community center which XSProject build inside the trash picker's community in Cirendeu in 2017 summer. With her skills, she earned and saved for her family. When the author visited the community in 2018 summer, she already moved out from the community because now she earned enough to move out from the community, to live independently, and send her children to school with only scholarship support from XSProject. Another case is a trash picker who has five children, the eldest son's wife and his child living in his house. Although his work is trash picking, he is talented as a carpenter. He made a small aquarium for his children, which is shown in Figure 3 (b). According to his wife, it's his hobby. It makes sense that all *Lapak* build houses for his men, so trash pickers are somehow really good with their hands. Furthermore, two of them have skills for running a business. Inside the community, two wives of the trash pickers own their *warung*, small shops. They buy goods from supermarket and *pasar*, Indonesian traditional market, and sell them to the villagers. The goods are so varied including rice, water, vegetables to Indonesian snacks. According to one of the owners, her income is at most Rp. 200,000 per month. Another owner earns at most Rp. 700,000 per month and it is the only income of her family including two children since her husband does not work. Figure 3(c) is her *warung*. Moreover, she and one of *Lapak* have some experiences on using microfinance, organized by a volunteering club of an international school in Jakarta, successfully. They were one of the rare cases who used the microfinance to expedite their businesses as a *warung* owner and *Lapak*, and responsibly repaid borrowed money to the club. Although they are illiterate and

never been to a business school, they understand the tactics of business and the responsibility of borrowing money.

Another case of *Lapak* is that he has a second job as a gardener at a residence in Jakarta. The reason he keeps working as *Lapak* as his main job is because the income is much higher than being a gardener. According to Hapsari's data, *Lapak* earns Rp. 700,000 per month on average, and *anak-buah* earns Rp. 400,000 to Rp. 600,000 on average. It suggests that the trash pickers make a rational choice to be trash pickers based on the financial reason. Some people argue that it indicates that the trash pickers are paid enough so they should be content; however, it could be also interpreted that the society forces them to stay at the lowest hierarchy where no human security, insurances, healthy environment and education are available.

Figure 3(a). Teacher of sewing; (b). aquarium and the creator; (c). *warung* inside the community

The third point is their contribution shown in specific numbers. XSProject has recorded specific data of plastics brought from the trash pickers in each year. They do not record how much the trash pickers sell to other recycle shops; however, the data will be a good clue to estimate its scale.

Table 1. Amount of trash which XSProject bought from the trash pickers of Cirendeu Area

No.	Types of Trash	2017 in Kg	2018 in Kg	2019 up to Aug	Total in Kg
1.	Plastic Packaging	575	217	160	952
2.	Groceries Bag	0.35	15	221	237
3.	Rice Sac	36	4	34	74
	Total Amount in Each Year	612	237	414	1,263

According to an article from Bisnis.com, waste generation per capita per day in Indonesia is 0.7 kg (Baqiroh, 2019). When estimating the waste generation per capita per year very simply, it should be as Equation 1.

$$0.7 \times 365 = 255.5 \quad (1)$$

As 365 means the number of days in each year, the answer is 255.5 kg per capita per year. Regarding the number and the data, it is a big surprise that the waste brought by the trash pickers from Cirendeui almost covers waste generation per capita per year. The data of 2017 even suggests that it could cover more than the waste generation of two persons per year. It should be also noted that the table is only about the amount of recyclable waste brought to XSProject but they bring many other kinds of recyclable trash to other recycle shops as well. Thus, their real amount of contribution to recycle in Indonesia is more than those numbers shown in the table. Moreover, it should be also pointed out that the trash pickers community in Cirendeui is quite small compared to those at major dumpsites such as Bantar Gebang. If even a small community like this could make an astonishing contribution to recycling, the total contribution of all trash pickers' communities in Indonesia should be far more than people could imagine. Medina claims that those scavenging activity in Jakarta recovers one-third of the total waste generated by the city (Medina, 2010).

4. Conclusion

It could be summarized into two parts. As it has been mentioned above, people should never underestimate the works of the trash picker, the people who work behind the trash. Especially when people talk about sustainable development and environmental issues, the discussion should always include the benefits for both the environment and those under-appreciated people. Even though their activities are barely appreciated, their skills and contribution to the environment are huge. With proper supports from the government and society, their contribution in terms of recycling could be greater. The supports should include not only improving their working environment and enforce waste segregation but also enhancing their life condition, eliminating decimation among the society and protecting their human security. One solution would be formalizing their work; build clean efficient waste plants around the city, hire the trash pickers as official workers and pay them stable and fair wages. By building the appropriate building, it can also redeem soil pollution and air pollution as well.

The limitation of the research is that the number and the selection of interviewees are small, thus, the data cannot represent the entire community. Also, the suggested solution above still has to be considered whether the trash pickers truly wish to be hired by other organization which requires strict regulations and rules. The biggest problem would be how much the organization or even the government can pay for their salary; as written in the result section, the trash pickers do trash picking because the income is much higher than that of the resident's gardener which is a safer and stable job than trash picking.

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