



The Implementation of Environmental Communication of Reduce, Reuse and Recycle through Kangpisman Program

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Abstract

Bandung City produces roughly 1600tons per day, and 10% of it is plastic waste. This problem is quite severe for the city's environment; consequently, the government is needed. Thus, through The Environmental dan Sanitary Office (DLHK), the Bandung government develop KangPisMan Program. KangPisMan is the abbreviation of Reduce, Reuse, and Recycle in the local language. This study aims to understand the communication form, media utilization, and communication barriers in socialization and its implementation. It applies descriptive qualitative and interviews with primary sources from the government (DLHK) as data collection. The results show that this program is formed to attract people to reduce waste production. It includes reducing single-use of plastic bags, avoiding using difficult decomposes such as styrofoam, and urging people to bring their cutlery when they dine outside. It also encourages people to separate organic, inorganic, and residual waste on a household scale. Socialization and campaigns have been carried out to various society levels, including government and private offices, communities, and schools/campuses through multiple events and public areas such as car-free days. In addition to campaign events and information delivery, KangPisMan activities are carried out on various media, websites, and social media such as Instagram, Twitter, Facebook, and WhatsApp as an information center. The obstacle that occurs is the people's lack of awareness of the importance of sorting waste.

Keywords

waste production; kangpisman; reduce reuse recycle; campaign; media socialization

Introduction

Managing waste, referred to Indonesian Law No. 18 of 2008, must adequately manage to improve public health and environmental quality and turn it into a resource. According to this law, waste management means waste handling and reducing, whether from households, household waste, or a specific waste (Undang-undang Republik Indonesia, 2008).

Subekti (2010) stated that the primary waste producer is the people; therefore, it must be accountable for its waste. He also stated that the concept of proper waste management has to start from its sources. It creates a sense of belonging and responsibility to maintain the environment surrounding them. Since Indonesia still relies on a single collection method, transportation, and landfilling systems in the landfill (Sunarto & Sulistyarningsih, 2018), a waste problem continuously occurs in almost every city in Indonesia, includes Bandung.

Research on (Aunurohim et al., 2019) showed that several activities had been carried out by the Surabaya Environmental Official regarding waste reduction through Yustisi (justice) program since 2016. The movement of reducing the plastic use weekly held every Sunday on the main road of car-free day in Surabaya, referring to the appeal of the Ministry of Environment, per February 2016, as the commemoration of The National Waste Day has started operation on a trial of the paid plastic bag policy in malls, retail stores, and mini markets.

Furthermore, (Damanhuri & Padmi, 2019) portrayed waste management in big cities such as Jakarta, Surabaya, Medan, and Bandung, caused by the large population and the diversity of activities produce a large volume of waste. Therefore, only 60% of its waste can be transported to the final disposal site (TPA). However, there are possibilities that the amount of real volume is likely much higher than written data because of unsystematic data. Mostly, it counts based on the number of trucks going to the final disposal site. It does not account for waste that the community handled or even scattered and dumped anywhere in the city.

Based on McKinsey's stated in World Bank Group, it has shown that not adequately collecting waste and the low value of certain plastic types are two causes of plastic waste leakage. The study also found that 75% of the source of waste leakage was from uncollected waste, and 25% of it was from the official city waste management system (World Bank Group, 2018). Law no. 23 of 1997 on the environment in article 16 mandates states that the community has played a part in producing risky waste as a pollution source. Therefore, they have to participate in the waste management system.

The deadly landslide at Sarimukti Leuwigajah landfill near Bandung, Indonesia, struck in 2005 after three days of heavy rains, which resulted in 147

deaths and 69 houses destroyed (Macmillan, 2007). This incident impacted the accumulation of waste products that can not be transported to the final disposal site, causing environmental pollution. At that time, Bandung city is called "Bandung the Ocean of garbage" because of unsightly scent and hideous view of garbage. Various ways and efforts were made by the Bandung City government to avoid the incident from happening again in the future.

One of the programs implemented by the environmental communities in Bandung City was Reduce Reuse Recycle (3R), it was referred to the law no. 18 of 2008. Moreover, The Environmental dan Sanitary Office (DLHK) of Bandung City referred to Mayor Regulation No. 9 of 2018 on waste management, implemented 3R using local language to engage Bandung City people. Thus, DLHK initiates *Kangpisman* (Pikiran Rakyat, 2018).

The *Kangpisman* program is an abbreviation from "Kurangi: Reduce; Pisahkan: Separate; Manfaatkan: Reuse/Recycle the waste. This program is also combined with the zero-waste program, which is 5R (Refuse, Reduce, Reuse, Recycle, Rot) (Imron, 2019; *Kangpisman*, 2018). Reducing waste on the *Kangpisman* program means that every citizen has the awareness to reuse items that can still be used. Like used paper, used bottles that can still be reused are detained first and not thrown away. Separating the waste means that Bandung citizens have the awareness to separate their waste when disposing of garbage. In countries with a good awareness of segregating waste, citizens separate waste into five or more types: organic waste, paper, and plastic waste, and residual waste outside the first two groups. Meanwhile, reuse/recycling waste can be used as a composter such as food scraps, leaves, and twigs processed with a biodigester, layered bricks, the Biopore, Takakura method, and composter pipes and others. Paper and plastic waste can be channeled through the waste bank, which is planned for 1 unit in each sub-district, or through the waste charity program. Meanwhile, the other waste, garbage, will be transported to the final disposal site (TPA) by the Sanitary Office of Bandung City (*Kangpisman*, 2018).

Suyanto (2018) stated, there are waste management differences between urban and rural areas and residential and industrial areas. The management of harmless waste from settlements and institutions in metropolitan areas usually handled by the local governments. While waste processing companies usually handle waste from commercial and industrial areas. Meanwhile, residential-based waste management is the responsibility of the residents. Comprehensive knowledge of waste management through a communication technique for environmental management and protection needs to occur. Environmental communication is the exchange of information in the form of knowledge and policies related to the environment.

Flor & Cangara (2018) mentioned essential things that need to be known in communication practices for the environment, namely (1) Knowledge of environmental laws, (2) Sensitivity to cultural dimensions, (3) Ability to network effectively, (4) Efficiency in using the media for setting the social agenda, (5)

Appreciation and practice of environmental ethics and (6) resolution of environmental conflicts. All living systems require communication for survival. Environmental communication is an approach, principle, or communication technique to implement the plastic waste reduction. It also a program for environmental beauty that is free from plastic waste. In implementing the program, mass media is used to transfer ideas, concepts, or models. The media functions as a bridge to the broader world, to have robust environmental communication (Harun & Ardianto, 2012). The environment or situation affects communication in physical, socio-cultural, psychological, and time dimensions.

Media is a communication tool that carries messages from the communication process. Its development is influenced by technology. (Nasrullah, 2017, p. 4) said that dividing the media into specific criteria can make it easier for the public to obtain information. Therefore, the media is considered to have a power that contributes to culture. The power of this media implies that it does carry not only content but also contains a context.

The phrase "the medium is the message," which was popularized by McLuhan. There are three expressions about "medium" in Meyrowitz's, namely: (1) medium as a channel that carries messages so that perceptions appear in audiences are not due to devices but because of messages, (2) the medium is language (medium as language) which means that the media has something unique that can represent expressions and (3) the medium as an environment means that the media cannot be seen in the text alone but must be seen in the context itself (Meyrowitz, 1994)

Based on the introduction above, this paper tries to describe the communication form of KangPisman in utilizing media and the communication barriers that they faced in socialization and its implementation.

Method

This research applies qualitative methods; according to (Sugiyono, 2013, p. 12), this method is called a naturalistic method because the research is carried out in natural conditions (natural setting). It is interpretive because the research data is more concerned with the interpretation of the data found in the field. It also applies a constructive approach because scattered data that found can be constructed in order to have a closer and easier theme to implement.

(Sugiyono, 2013, p. 13) also states that post-positivism philosophy is mostly referred to as an interpretive and constructive paradigm that views social reality as something holistic (whole), complex, dynamic, full of meaning, and interactive (reciprocal) interactive relationships. Research is carried out on natural objects. Natural objects are objects that develop as they are, are not manipulated by the researcher, and the researcher's presence does not affect the object's dynamics. A research instrument is a person who is the researcher itself. The data technique is triangulation, using various techniques based on data/ simultaneous. Data analysis is inductive based on the facts found in the field and then constructed into a hypothesis or theory.

Creswell (2016, P. 10) mentioned that social constructivists believe individuals always try to understand the world in which they live. The researcher controls the possible views of the participants about the situation under study. In this study, to comprehend on how the KangPisMan program implements environmental communication; an interview with the person in charge on the program, which is the head of sanitation of DLHK Bandung City and the head Department of Environmental and Sanitation (DLHK) of Bandung City has been conducted.

This study also observes the website of Kangpisman, www.kangpisman.com, and KangPisman's social media, which are Instagram, Twitter, and Facebook. It is also supported by various relevant literature sources and the necessary documentation to strengthen field data. Data analysis is focused on during the research process and data processing. Data analysis is carried out before entering the field, during the field, and after completion.

Result And Discussion

Geographically, the five heaviest plastic polluters are P.R. China, Indonesia, Philippines, Vietnam, and Sri Lanka, which contribute 56% of global plastic waste. Indonesia is the second-largest contributor to plastic waste in the world after China (Rhodes, 2018). Based on data from the Ministry of Environment and Forestry (KLHK), the amount of Indonesian waste in 2019 is up to 68 million tons, and plastic waste reaches 9.52 million tons or reaches 14% of the total waste. Management of inorganic waste in bottles, paper, plastics, cans, and used electronic waste is more difficult to decompose by organisms to last a long time into the garbage (Istiqomah, Mafruhah, Gravitiani, & Supriyadi, 2019).

Thus, the mentioned above is one of the research or discussion on plastic waste. Moreover, nowadays, the oceans' plastic pollution crisis has been a considerable concern that the amount of plastic waste generated in Indonesia each year is growing at unsustainable levels (Pandjaitan, 2020). The vortex of floating marine plastic waste is increasingly expanding. It estimated that 300 million tons of plastic are produced every year. Whereas 150 million tons of that waste plastic is a floating waste in the oceans, it increases plastic volume as urbanization, production, and consumption continues. It can be seen as one of the dirtiest rivers in the world is in Bandung City, called Citarum river.

According to the Central Bureau of Statistics, Bandung city's area consist of 167.7 km² and a population in 2019 of 2. 480,464 people spread across 30 sub-districts and 151 sub-districts. Bandung has a severe problem with the waste products generated per day; it reaches 1600 tons, and 10% is plastic waste. The Bandung City Government is trying to solve this waste problem through the KangPisMan (Reduce, Separate, Recycle, and Reuse) program, launched on October 17th, 2018. The office of Environmental and Sanitary (DLHK) is the department in charge of the program. This paper shows how the government implement environmental communication through the KangPisman program.

The Socialization Form of KangPisman

The KangPisMan program is an encouragement for the residents to separate household waste into three different types:

1. Organic waste. Such as leftover foods, vegetables, or plants. This type of waste can be utilized as a composter. It can be processed through the Biopore infiltration hole method, Takakura composting method, or others; moreover, the composted product can be used as food for animals.
2. Inorganic waste. Such as paper, cans, glasses, and plastic bottles. These types of waste have economic value and can be utilized by the scavengers to sell the goods or deposit it to waste banks. The bank will withdraw it usually once a year, on Eid al-Fitr day (Islamic Celebration Day).
3. Residues waste. Namely tissue, sanitary napkins, baby diapers, and others. These types of waste can be disposed of in the temporary garbage disposal and then disposed of at the final disposal place or landfill.

The messages conveyed through this program shown the Bandung City government's efforts in communicating the environmental messages on how to handling the waste problem, especially household wasting, since it's the biggest problem occurred in Bandung city.



Figure1. KangPisman Program

Source: Annual Report of KangPisman in 2019

The Environmental and Sanitation Office held various environmental socialization events to introduce the KangPisMan program to the public. Socialization is a way of integrating people in the society by communicating values, social norms, and knowledge to new member of the group (Hanson, 2022). The socialization take place in government and private offices, communities, and schools/campuses in Bandung City.

These are the names of the events - Socialization with Mayor and Vice Mayor of Bandung City to the Bandung City's leaders and local government offices:

1. Socialization with the KangPisMan community (called 'Balad Community')
2. Meetings with all volunteers of the KangPisMan Program,
3. Socialization with the managers of commercial activities
4. Socialization with the Education Office and Transportation Office of Bandung City
5. Socialization to schools and campuses
6. Socialization on Car Free Day
7. Garbage collection movement on January 1st, 2019
8. Socialization of Zero Waste Lifestyle at Indonesian Army Industries Ltd (PINDAD), Indonesian Young Entrepreneurs Association (Hipmi), Forum Indonesia Muda (FIM), and at Pasundan University.

The form of cooperation in socializing the program is also carried out with several online transportation companies such as Grab and GoJek. Grab drivers are made as a campaigner for the KangPisMan program. Meanwhile, GoJek plays as a support system for this program. They distributed approximately 10,000 cloth bags to their partners. These cloth bags can be used to put the orders via Go-Food in the hope of reducing plastic waste.

Another cooperation was made with one of Bandung's cakes shop called "Kunafe." They made a discount program for consumers who are shopping using their bags. No less important, the City of Bandung collaborates with communities by forming volunteers of the KangPisMan called Balad forum. The number is now more than 1900 volunteers from 119 communities, and it is still growing. Referred to Flor and Cangara, it is said that environmental communication does not have to always attached with media, but the communication has to be able to engaged bigger and wider people participation (Flor & Cangara, 2018). Through KangPisman, government has done impressive approach by having communities and volunteers who has good knowledge about the environmental and actively giving information to the society.

However, based on the interviews with The Head Division of waste in the Environmental and Sanitary office, he said sadly that the socialization in every region and others was not being documented well. Nevertheless, for example, the socialization in Zero Waste Zone continued to be educated and was assisted. Informal socialization is not recorded because it is not documented. The program will continue socialization in formal and informal format to be known well by society in many subdistricts in Bandung City, primarily.

The team from the Environmental and Sanitary Office, in December 2018, recorded that they received 14 invitations as a speaker regarding the waste problem and KangPisMan program. The invitations came from various sub-districts and districts and Indonesian Army Industries Ltd (PINDAD). The material presented describing the socialization of KangPisMan in general and the establishment of waste banks in several places.

The literacy of waste is also carried out personally by the Zero Waste Zone activists from house to house. It is expected that the people in Bandung City, especially, have a better knowledge of the KangPisMan program from the smallest level, which is households. The socialization on commercial location was carried out from March to December 2019, in totals of more than 176 activities. It has proven that communication is not seen as an instrument to support environmental management, but as part of integration in managing the environmental issues.

Media Utilization

In this digital era, the form of socialization does not have to be face-to-face; by utilizing the development of technology, the socialization and campaign of KangPisMan are also carried out through various media and social media. Even though KangPisMan has its website, www.kangpisman.com, it also utilizes social media. KangPisMan uses social media to reach the millennial generations, who generally always use social media as a medium of communication, such as Twitter, Instagram, WhatsApp, and Facebook.



Figure 2. Logo of Kang Pisman in Social Media

Source : www.kangpisman.com

The logo showed above is the logo implemented in every social media of KangPisMan. The icon of KangPisMan has represented a boy from Sundanese culture by wearing a Sundanese hat, with three fingers lifted to show three ways of handling waste problem. Based on the interview conducted with Sopyan, The Head Division of waste in the Environmental and Sanitary office, he stated that the icon of KangPisMan is one of the campaign forms by the government in order to be accepted by all ages readily.

This cultural intervention, using icon that represent a culture, is a form of environmental communication. It does not have to be complicated, but it must have cultural approach with the local people (Flor & Cangara, 2018), and the Bandung government has portrayed through KangPisman logo.

Therefore, besides website www.kangpisman.com and WhatsApp number +6281278881933 as their primary medium to inform and communicate with people, they also utilize social media. Referred to wearesocial.com, 150 million people in Indonesia use the Internet as their medium to seek information, and 56% of it actively uses social media (We Are Social, 2019). Hence, the KangPisman’s team utilizes three media platforms, specifically Instagram: @kangpisman; Twitter: @kangpisman; and Facebook: @kangpismanbdg

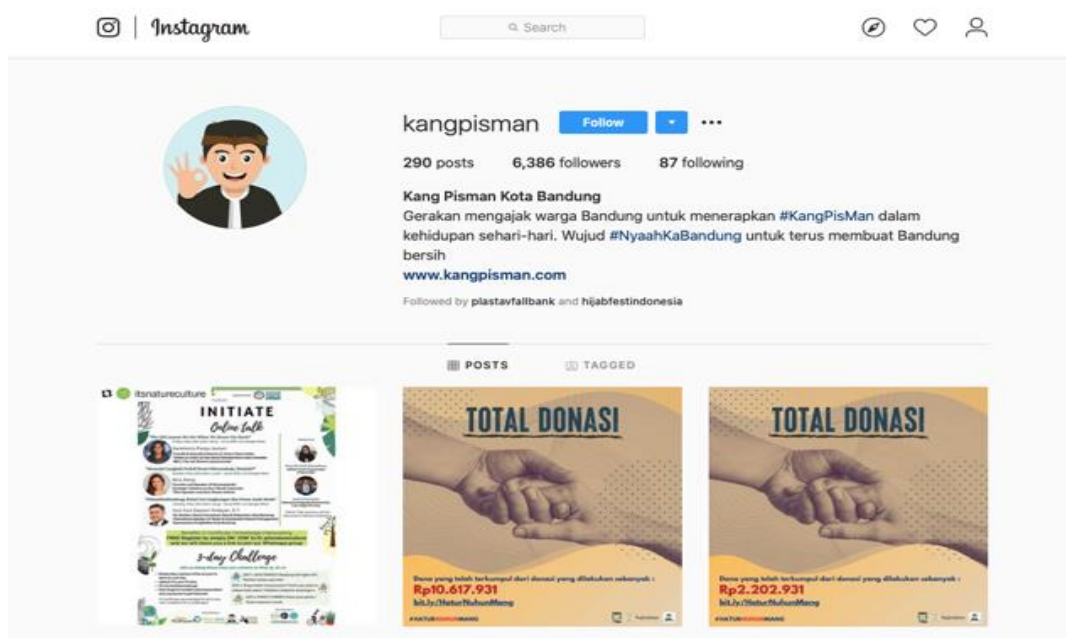


Figure 3. Instagram of KangPisman

Source: www.instagram.com/kangpisman



Figure 4. Twitter of KangPisman

Source: www.twitter.com/kangpisman



Figure 5. Facebook of KangPisman
Source: www.facebook.com/kangpismanbdg

Instagram KangPisman, per August 2020, has 6,366 followers, following by Facebook, 2,483 likes, and 2,503 followers. In contrast, Twitter has the lowest followers, which is 219 followers. In that case, there is no doubt that they use Instagram more frequently than other social media. It can be seen from the last post on Instagram was May 2020, and Facebook was January 2020, whereas Twitter was December 2019.

It is in line with the annual report 2019 by KangPisman; based on their research on impressions in their social media, Instagram is more active than two other social media. Twitter has the lowest number of followers compared to Facebook. Conversely, the activity on Twitter is more active than on Facebook (DLHK Kota Bandung, 2019). Constructed on their findings portrayed in the annual report, they undoubtedly utilize Instagram as their primary medium to spread the news and socialize about the waste management program of KangPisMan.

KangPisman is an abbreviation from Kurangi (Reduce), Pisahkan (Separate), and Manfaatkan (Reuse/Recycle). Most of the content portrayed in the three social media of KangPisMan primarily informed about reducing, reusing, and recycling. However, the terms of 3R (Reduce, Reuse and Recycle) were not accepted well by the Bandung people, so they changed the name is expected to be more welcomed.

In terms of branding, KangPisman is made to sound more familiar within society. The Head Division of waste in the Environmental and Sanitary office, stated on the interview that the word "Kang" is synonymous with Bandung's greeting for

male elder, and Pisman (read: peace man) is an easy acronym to remember. If compared to previous acronym that were used (3R), these two words are easily accepted and received well by Bandung City people.

The program try to encourage people to adapt to the situation of the waste emergency caused by plastic waste. "The Kang" program that continually focuses is to reduce plastic bags, styrofoam, and other material that difficult to be decomposed by nature. Reuse the goods that can still be used means that we have to bring our bottle and cutlery when we go out, bring our shopping bags, and not waste leftover food.

"The Pis" program encourages people to be able to separate into three groups, started from their household. Group 1, waste leftover foods and vegetables put on closed drums. Whereas group 2, paper, cans, plastic glasses, and plastic bottles are put on paper boxes. Moreover, group 3, other waste such as electronic waste, lamp, or other material are put on garbage bin.

Furthermore, "The Man" program persuades people to reuse/recycle the waste that has already been separated and utilized based on its group. Group 1 can be composed using the takakura method, biopore method, biodigester method, and brick overlay method. All the methods also portrayed in their social media started from how to do, prepare the need material, process composting, and utilize the benefit of composting. The composted product can be used to feed animals, such as chickens or ducks.

In group 2 and group 3, the waste can be used by the scavengers to sells to earn some money, or we can deposit it to waste banks nearby. At the same time, another waste is not categorized by group 1, group 2, or group 3 disposed to the final landfill to be processed by the Environmental dan Sanitary Office.

Among the three social media utilized by KangPisMan, Instagram has the most posting related to the waste plastic problem. They also cooperate with other institutions by giving webinars to present comprehensive knowledge on managing the waste problem in households.

Communication Barriers in Socialization and Implementation

The waste management program has been a concern of the Bandung City government for a long time. Especially since the landslide case of the Leuwi Gajah TPA in 2005, which killed 147 people. Since then, the government has made serious efforts to reduce waste and has started looking for alternatives to landfills besides Sari Mukti and Leuwi Gajah.

The KangPisman program is developed as the new package of the 3R (Reuse, reduce, recycle) program rolled out in the past that did not go well as planned. The English terms of 3R, which are reuse, reduce, and recycle, are not well accepted by the Bandung people. Other obstacles in enforcing the rules are a problem in itself.

The time the program started launched was received significant support within communities. They were urged not to use plastic bags when shopping. There are

suggestions to bring bags from home until minimarkets or supermarkets no longer provide free plastic bags. Plastic bags have to be paid for, hoping that the community will not pay and eventually bring their bags. However, after this program has been running, doubts have arisen. One obstacle arises in the communities when supermarkets are inconsistent, not giving free plastic bags to shoppers. They later softened up and gave back free plastic bags to buyers. Weak enforcement of regulations is one of the main problems. The socialization conducted by the government and the activist of KangPisman has not been received well by society.

Even though reducing plastic waste has been stated in the Bandung City Regional Regulation (Perda) Number 17 of 2012 concerning Reducing Plastic Bags. As a matter of course, the regional law enforcement officers (the Civil Service Police Unit) act to see a local regulation violation.

Hanson (2021) said that socialization is the process of educating people (young, adult, or new members) about the values, social norms, and knowledge of a group or society. Through the media and friends, or family or closest relative, people can learn the values of the community. KangPisman utilizes social media as well as activists that close within society. However, the annual report showed that 60% of the respondent had not followed any social media of KangPisman (DLHK Kota Bandung, 2019). It means the socialization has not to implement well. Therefore, people still lack knowledge of the program and inadequate organic waste processing. Another challenge the program faces is being consistent, persistent against boredom and despair. Despite the obstacles and challenges their face, the program has been running quite well.

Conclusion

KangPisMan program is made based on the Bandung Government waste problem worries in Bandung City. It was utilized by the government of Bandung City to encourage people to be aware of waste problems. Despite the KangPisman program running quite well, the socialization on media has not been utilized in a more significant way. The implementation of the program has not been implemented quite well. Therefore the government has to utilize social media quite massive to engage younger participation. In addition, the government has to make law enforcement regulations to make people more obey

Limitation And Study Forward

This research has not covered all of the Environmental issues in Bandung City; it is limited to plastic waste conducted by KangPisMan Program, whereas other issues have not been discussed. Moreover, it only researched in Bandung City. Therefore, for future research, programs conducted by the government or private sectors on environmental issues and how they utilize media will try to be research to have a broader knowledge of how these environmental issues should be done in other cities in Indonesia.

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