

Zero Waste Models: Waste Treatment Management in DKI Jakarta Province

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Abstract

Research entitled Zero Waste Models: Waste Management in DKI Jakarta Province, Indonesia. In this research, the method used is descriptive qualitative approach. The research was conducted at the DKI Jakarta Provincial Sanitation Service. The results Apparatus and Sub Department of Cleanliness of DKI Jakarta Province totaling 3,078 people, with the proportion of the age group 30-43 years, there are 15 people, and the age group is 35-39 years amounted to 318 people, age group 40-44 years old amounted to 542 people, and the group 45-49 years old amounted to 860 people, age group 50-54 years old amounted to 1,110 people, while the age group 55 years and over amounted to 233 people. The best solution in handling waste for the future in DKI Jakarta Province, Indonesia, is to implementation a zero waste model, can be carried out properly. The concept of zero waste with the use of high technology, can overcome the accumulation of waste per day reaching 26,444 m³/days, while the the volume of waste every day continues to increase, while the waste that can be transported from the carrying capacity is divided by the number of effective vehicles as much as 25,902:1,117 unit of vehicles 23,19m³/days/vehicle. The need for waste transportation vehicles=waste piles divided by the carrying capacity of 26,444 m³:23,19x1 units=1,140 units. So there is still a shortage of operational vehicles from 1,140-1.117=23 vehicles.

Keywords

Zero Waste Model, Processing, Waste Treatment.

Introduction

Sanitation Service of DKI Jakarta Province, Indonesia, in implementing Regional Regulation Number 3 of 2001, concerning Forms of Organizational Structure and Work Procedures for Regional Apparatus and DPRD Secretariat of DKI Jakarta Province and Decree of the Governor of the Special Capital Region of Jakarta Number 15 of 2002, concerning Organization and Work Procedures The Special Area Sanitation Office of DKI

Jakarta Province, aims to improve the quality and quantity of waste handling and processing that has become entrenched in all levels of society, it is necessary to have new innovations in handling and processing waste in the DKI Jakarta Province area, so that the results achieved will can be seen and the creation of a clean, orderly beautiful and healthy and comfortable environment filled with order.

The concept of waste management in DKI Jakarta Indonesia is expected to be an alternative solution in handling waste in DKI Jakarta, through the DKI Jakarta Provincial Success Service, trying to make improvement in the field of human resources, mechanization tools and spatial planning for the final disposal of waste. Referring to the general view of the Indonesian forum for the environment (WALHI) Jakarta, regarding the waste management bill. In recent years, the problem of waste continues to occur in several big cities in Indonesia. After it happened in Surabaya, the waste problem in Bandung which has recently been crowded with people's rejection of the waste factory, using the incinerator technology in gedebage. The waste issues has also led to violations of human right, both related to the right to the environment as part of economic, social and cultural rights, as well as civil and political rights, both the which have been ratified by Indonesia since 2005.

This problem then continues and is even replicated using the same approaches by the government and the private sector, despite strong opposition from the community. The government has ignored a root problem in waste management that 85% talk about waste means talking about a lifestyle that is deliberately engineered by the market, so that the consumptive culture is so perpetuated and maintained in people's lives. It can't be then that the consumptive lifestyle can only be solved with technology more over there has never been a history that has shown Indonesia's success in managing waste, because the advanced technology offered to overcome the waste problem has also not been proven. On the basis of consideration of the interests of environmental sustainability, as the vision and mission of Indonesia's environmental vehicle, as an environmental organization, sees the need for a policy that can ensure all mechanisms and efforts to resolve the waste problem. Without a permanent legal framework that can be used as a basis for waste management, poor waste management that is currently practiced will continue to be a problem for big cities in Indonesia such as air, water and soil pollution, as well as landslides and floods that will become daily life, from a series of ecological disaster. The waste management bill was discussed and ratified by the DPR RI, to become the basis for managing waste in Indonesia. However, there are several things that we think are important to be pressed to the Special Committee on the Waste Management Bill, so that they become a concern to be discussed as input from civil society groups who have been

fighting for the right to good and healthy environment, as a mandate that must be carried out, by state administrators. Some important points for us, in general we convey as follows:

First, about community participation, which should be the most important part involved in the waste management process. This community participation includes the role of social institutions such as religious institutions, youth organizations, women's organizations and of course critical communities that have been initiating waste management in their communities. This community participation also includes the producers who have been the biggest contributors in increasing the volume of waste from the packaging of the products produced, so far, the community as consumers have always been "victims" of both government policies in the form of waste retribution, and have always been victims of producer.

Second, we firmly believe that the waste problem is not an environmental problem that stands alone. The problem of waste is closely related to the consumption patterns that exist in Indonesian society, so this reason is also a consideration for the proposer of this waste management bill. However, what must be remembered is that people's consumption patterns are shaped by a market system called the capitalism system, which carries out a series of engineering people's lifestyle so that they become very consumptive, with a number of lifestyle advertisement displayed by industry that actually become a big contributor in the midst of garbage heap. Looking at the waste problem as a whole, so far the government has always said that the most waste is from domestic (household) waste, such as data shown by the DKI Jakarta government, as the State Capital of the Republic of Indonesia, that domestic waste reaches 52,97%, whereas if we trace, most of the waste is packaging from producer products which should be counted as industrial waste, not production waste.

The alignment of this number is important to see the extent of responsibility that must be carried out by the industry, which has so far made big profits from the products it sells to consumers, which only accounted for 8.97% of waste production in Jakarta. In fact, this has been regulated in the principle of internalization, environmental costs to producers, and is part of the expansion of producer responsibility (extended producer responsibility). Therefore, in the provisions that regulate the producer's obligations in this waste management bill, actually it is not only limited to including labels or signs related to reducing and handling waste on packaging and/or production, the most important thing for producers to actually do is change the pattern of waste management. Industrial

production, which so far has been very wasteful of waste, due to people's consumption patterns, will not change as long as the production pattern is not changed.

Third, for the determination of the final waste disposal area, it must involve the community, especially those who will be directly/indirectly affected. So far, it is based on cases handled by the Indonesian environmental agency in Jakarta, that the determination of the final disposal area is determined unilaterally by the government and the private sector who manages waste. So that then gave rise to a series of conflicts, due to the absence of community involvement from the start. People whose areas are used as garbage dumps are always ignored and even often use public lies to perpetuate their desires. Many garbage dumps are still categorized as illegal, which suddenly exist in residential areas, and the worst thing is that the garbage collectors from the government are garbage officers this condition creates fear in the community. In the future, this law must also reduce the use of productive land, such as agriculture, plantations and livestock owned by the community which have been used as garbage dumps.

Fourth, in the provisions in article 24 which states that the provincial government is obliged to development an emergency response system in waste management. In our opinion, considering the many impacts of ecological disasters caused by the waste problem, what is needed is not only an emergency response system, but also a system that can ensure reducing the risk of disasters caused by waste. So that floods, landslides of garbage and pollution can be prevented to avoid victims due to piles of garbage.

Fifth, related to the licensing provisions for business entities that will manage waste, we emphasize that apart from being required to have a business license from the local regional head. It must also have an environmental permit issued by the environmental agency, with an environmental impact study that does not violate the rights to the environment and people's sources of life, and does not violate spatial planning in an area that has been violated by many private companies, manage waste. As in the case of PT. WGS in the case of the Last Garbage Disposal in Bojong-Depok, Bogor, Indonesia, which violates Law N. 23/1997 on the environment and violates the Regional Regulation No. 17/2000 on spatial planning for the district of East Bogor.

Sixth, regarding the technology used by the waste management party, which is shown not to use technology that is not friendly to the environment, such as the incinerator technology used by the Bandung City Government, or the waste incineration furnace as used by the DKI Jakarta Provincial Government, because incinerator is the worst technology available, have a negative impact on the environment and public health. So

far, technology has always been the main mouthpiece in waste management, which means opening up a waste management business area. Even through any sophisticated technology is used, it will not be able to solve the waste problem, if it does not involve the community as the front line in waste management.

Waste management is not based on capital-intensive technology but rather community-based waste management, which is actually very cheap and can be done collectively by the community, such as composting or recycling management models. Unfortunately, the government is more willing to hand over waste management to companies, rather than the community. Our big assumption is that the chances of corruption will be greater than if it was managed by the community, for example in waste management, Bantar Gebang by PT. PBB, 5 zoning should be managed using a sanitary landfill, but in practice only 2 zoning use this technology, the rest with the open dumping model. You can imagine how much budget has been corrupted with this false model of using technology.

In line with this, the empowerment of local government apparatus is a very strategic part in supporting the progress of modern public services in accordance with the various demands of the community, so that in line with the development of modernity, facilities and infrastructure in DKI Jakarta Province are increasingly complex demanding better in terms of in the field of cleaning and processing waste and waste management and the need for a systematic and programmed application of the correct concept. Through the application of the concept of waste management, it is possible that it can be an alternative in handling waste in DKI Jakarta, it can be seen as an empowerment of resources owned by the DKI Jakarta Provincial Government, trying to change the work ethic and culture of the Indonesian people to be more advanced, orderly, healthy, orderly and discipline to obey the rules established by the DKI Jakarta government, Indonesia.

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Dissemination of the concept so that the people of DKI Jakarta are aware that the importance of environmental cleanliness is a benchmark that the Indonesian nation is one step ahead and can complete with other developed countries, especially in handling cleanliness and waste management, individually and in community groups in organizations, especially in fostering, developing, and civilizing local government officials, can be a measure of success in providing public services, especially in managing environmental cleanliness. Especially those related to efforts to improve its performance. The DKI Jakarta Provincial Sanitation Service, in providing public services, and efforts to realize a clean, beautiful, healthy, comfortable and orderly city in the working area of the DKI Jakarta Provincial Sanitation Service, as organizational leaders must be willing to take responsibility for the whole process of learning to civilize, the apparatus of the DKI Jakarta Provincial Sanitation Service and the community in general.

Seeing the current conditions, that the cleanliness factor is determined by public awareness, and the quality of the local government apparatus, it is very important that it must be fostered and empowered through a learning process, which is then expected to provide information and socialize the policies of the DKI Jakarta Provincial Government. The current reality is that human resources make a very strategic part and are an asset of the local government to be able to develop and handle public service in a better way, because of the limited formation of level positions, the apparatus of the DKI Jakarta Provincial Health Service Office. The current of globalization, which is ongoing and unavoidable, not only poses challenges to national education, but also provides wider opportunities, but if the apparatus is prepared properly, global life will provide greater opportunities for work. National education must be able to prepare and create quality apparatus. The description above shows how much energy will be wasted, if only to deal with internal local government problems, rather than serving the community, as a result

many parties question the performance of the bureaucratic apparatus. This strengthens the assumption that local government officials have not carried out organizational learning well, so they have not been able to empower all the potential of local government officials.

Especially when faced with an increasingly society that demands better, flexible, efficient, fast, friendly, and inexpensive service. Efforts to improve performance, by empowering the apparatus within the DKI Jakarta Provincial Sanitation Service, are able to answer the challenges of quality community needs, it needs to be fostered and managed more professionally and efficiently which leads to the realization of a learning organization, so that the apparatus or employees in the cleaning service become sensitive, to the needs and work culture.

Review of the Literature

Definition of Waste

Waste or garbage, is dirt that is produced due the disposal of garbage or chemical substances from factories. Waste or garbage is also a material that is meaningless and worthless, but we do not know that waste can also be something useful and useful if processed properly and correctly. Waste or garbage can also mean something that is not useful and is thrown away by most people, they think of it as something that is useless and if left for too long it can cause disease even though with proper waste management it can turn this waste into an economic object.

Definition of Pollution

Pollution is a type of gas that can be harmful originating or produced by smoke from both motor vehicle fumes and fumes from combustion residues from certain factories. Rarely do we find conditions on clean roads without pollution from motor vehicle fumes. Pollution can also cause disease, because in pollution it contains disease viruses that can harm our health many residents complain because of pollution, until now there is no effective way to deal with pollution, because more and more people are driving motorized vehicles so that more and more smoke is produced and this will cause air pollution.

Types of Waste

If based on origin, waste in grouped into 2, namely:

Organic Waste, this waste consists of materials that are organic, such as from household activities, industrial activities. This waste can also be easily decomposed through natural processes. Agricultural waste in the form of residual spills or excessive spraying, for example from pesticides and herbicides, as well as excessive fertilization. This waste has stable chemical properties so that these substances will settle into the soil, riverbeds, lakes and seas and will subsequently affect the organisms that live in them. Meanwhile, household waste can be in the form of solids such as paper, plastic and others, and in the form of liquids such as washing water, used cooking oil and others. Some of these wastes have high toxicity, for example: drug residue, used batteries, and battery water. The waste is classified as (B3), i.e., hazardous and toxic materials, while washing water waste, bathroom waste, can contain germs of disease or biological contaminants such as bacteria, fungi, viruses and so on.

Inorganic Waste

This waste consists of industrial waste or mining waste. Inorganic waste comes from natural resources that cannot be decomposed and cannot be renewed. Industrial wastewater can contain various types of inorganic materials, these substances are: Inorganic salts such as magnesium sulfate, magnesium chloride originating from mining and industrial activities. Inorganic acids such as sulfuric acid are derived from the metal or processing industry and fossil fuels. There is also inorganic waste originating from household activities such as plastic bottles, glass bottles, plastic bags, cans and aluminum. Based on the source, the waste is grouped into 3, namely: 1) plant waste, this waste can be categorized as hazardous waste because this waste has toxic gas levels, in general this waste is disposed of in rivers around people's residences and it is not uncommon for people to use rivers for daily activities, such as toilets (bathing, washing, etc.) latrines), and directly the gas produced by the factory waste is consumed and used by the community, 2) household waste, household waste is waste generated by household activities. This waste can be in the form of vegetable remains such as carrots, cabbage, spinach, lettuce and others, it can also in the form of paper, cardboard or cardboard. This waste also has a high toxicity if it comes from the rest of the drug and battery.

Industrial waste, this waste is generated or derived from the results of production by certain factories or companies. This waste contains hazardous substances including inorganic acids and organic compounds, if these substances enter the water it will cause pollution that can endanger the living creatures that use the water, for example, fish, ducks, and other living creatures including humans. How to handle waste, by burning, this method is the easiest way to do because it does not require a lot of effort. This method ca

be done by burning solid wastes such as paper using kerosene and then igniting the fire. The advantages of this method of burning are: 1) it's easy and doesn't require much effort, 2) requires a fairly small space or location, 3) it can be used as an energy source for both hot waters steam generation, electricity and metal melting.

How to Deal with Pollution Due to Motor Vehicles, for many urban areas, efforts to equip vehicles, such as city transport, scooter, and cars, with sophisticated control devices, although effective, do not reduce air pollution sufficiently quickly and completely. These cities have implemented various programs ranging from the introduction of days without driving, to the prohibition of parking in cities, all of which are known as "transportation control measures" (TCM). Many TCM are focused on reducing traffic congestion, using systems that range from physical methods, such as coordinated traffic lights, one way and joint carrying roads or separate bus lanes, to methods of using economic incentives, such as "congested lane fares" that requires the driver to pay if passing through the highway during heavy traffic. In 1977 Buenos Aires, banned private vehicles from entering downtown streets from 10 am to 7 am on weekdays. Buses and taxis are allowed only on certain roads. This ban overcomes traffic congestion and air pollution caused by one million people.

Impact on the Environment

The liquid from the waste that enter the river will contaminated the water so that it contains disease viruses. Various fish can die so that over time they may become extinct. Not infrequently humans also consume or use water for daily activities, so that humans will be affected by waste either directly or indirectly. In addition to polluting, environmental water also causes flooding because many people throw their household waste into the river, so that the floodgates are clogged and during the rainy season the water cannot flow and the water rises to inundate people's houses, so that it can disturb the residents. Garbage is solid waste materials from household activities, markets, cities, industries and others. The amount of stockpiles increases from year to year in line with increasing activities and the number of urban residents. With a large amount of generation and without proper handling, municipal waste will cause serious social and environmental problems.

Waste problems must be managed in an integrated manner by emphasizing on solving waste problems by seeing waste as a resource. Therefore, the more waste that can be utilized the better. With that concept, it was developed and applied at the DKI Jakarta Provincial Sanitation Office for Integrated City Waste Management towards Zero Waste.

The technology is a combination of appropriate technology which includes technology for incineration of composting organic waste, recycling technology for non-organic waste, technology for incineration of waste and technology for sanitary landfill. Integrated city waste management systems and technologies towards zero waste, municipal waste management master plan, municipal waste composting technology and agro industrial waste, plastic and paper recycling technology, waste incinerator technology and medical waste, sanitary landfill technology, B3 processing technology, information systems waste management, agricultural waste treatment technology for animal feed etc. Development of waste management technology systems in urban areas to address and deal with waste problems. The DKI Jakarta Regional Government can immediately build a waste to energy processing plant, this can make the fulfillment of electricity needs efficient for the local community. He said a garbage factory built in the middle of a city that applies this advanced technology will not cause odor disturbances, as is the case in developed countries, such as Korea, the United States, Australia, New Zealand, Japan, Britain and China.

The construction of a waste processing plant into electrical energy, as people often say, is the best solution for handling waste in DKI Jakarta. The hope of the people of DKI Jakarta to dispose of waste to other areas, including the use of Cacing and Bantar Gebang, Bekasi. Indonesia which are increasingly critical, there is an equalization of insight, knowledge and mental models among the individual members of the organization. The new knowledge created from the learning process can help organizations adapt to change effectively. Waste processing in DKI Jakarta Province for the future should use technology so that it does not have a negative impact on environmental cleanliness and is effective, among others through the following processes: a. Waste prevention and recycling by reducing the amount of pollutants in the waste stream as well recycling certain materials (paper, glass, plastic, etc.); b. Composting reduces the amount of waste by breaking down organic waste such as food waste, kitchen waste, etc. To be used as fertilizer; c. Incineration reduces the amount of waste by burning. Now a days waste burning is equipped with energy utilization either in the form of electricity or hot steam; d. Landfill even though it has gone through the process of reduce, reuse, and recycle, some of it must still be disposed of while still applying supply standards, source: waste treatment technology in Japan, May 1996.

On the other hand, one must be willing to change and a change in the mental model of the local government apparatus will determine the effectiveness of a bureaucracy, with a good and correct mentality it will push the local government bureaucracy in a better and correct direction in carrying out its main tasks and functions, and vice versa. And understanding

of this kind of model can also be interpreted as being able to reduce the image of the local government bureaucracy in the eyes of the public for this reason, local government officials, within the DKI Jakarta Provincial Sanitation Service, need to strive to continue to learn from developed countries in handling cleanliness. It takes a strong commitment, from all levels of the apparatus, and leaders who serve as examples for shaping behavior in the organization, without this commitment, it is very difficult to realize it, because the transformation of the organization towards a learning organization has an impact on very fundamental and essential changes, namely concerning changes in mindset, work culture, work ethic, value orientation, organizational vision and structure and organizational climate that ensures the implementation better bureaucracy.

Increasing the learning capacity of developed countries (learning capacity) of the apparatus and all levels, will provide added value in the form of creativity, innovation, proactive and highly adaptive and responsible. With the maximum capacity of local government apparatus, those within the DKI Jakarta Provincial Sanitation Service in the area of autonomy will be able to empower the community so that they have a concrete competitive advantage in dealing with modern, clean, orderly, beautiful, and healthy urban management issues. The paradigm shift in the development of facilities and infrastructure in the Capital Region of DKI Jakarta Province, which was originally based on the strength of very limited natural resources, turned into relying on the strength of human resources. All of this shows that in the term investment in the field of apparatus development in the era of autonomy is very valuable, because it will make a very large contribution to the development of Indonesian society in general. This policy can be one solution that environmental sanitation facilities, waste problems need to be handled seriously, in this case it is an authority under the control of the DKI Jakarta Provincial Sanitation Service, in this case it is an authority under the control of DKI Jakarta Provincial Sanitation Service, in fostering the mentality of the apparatus, the community both cognitively and intellectually can influence attitudes and behavior that even better to integrate the duties and responsibilities as a public servant within the DKI Jakarta Provincial Sanitation Service in Indonesia.

As a public service, it is hoped that it will not only be a more executor of tasks from local government who have the authority and independence to carry out their duties, functions and responsibilities. In this case, the local government apparatus in the DKI Jakarta Provincial Sanitation Department, at least has a commitment to provide better services to the community through changes in the behavior and culture of the community to be clean, orderly, beautiful and full of order. On the other hand, technological support that includes information technology, technology-based integrated waste processing, and electronic

performance support systems will facilitate the implementation of the Zero Waste model being implemented, namely the viability of transportation equipment, vehicles equipped with electronic mechanization and advanced methods for transportation equipment, vehicles equipped with electronic mechanization and advanced methods for supporting the transportation of waste to an integrated waste management site.

Apparatus Empowerment

Empowerment, local government officials need to continue to be developed and empowered in line with the implementation of Law Number 32 of 2004 concerning Regional Government or better known as the Regional Autonomy Law. Through the decentralization of various dimensions, functions and authorities of the bureaucracy, it turns out to be a real need for today's development that is more advanced in civilization, towards civil society. Empowerment implies eliminating bureaucratic boundaries that divide people, so that organizational members are aware of what needs to be updated and what must be done appropriately, in changing new paradigms in dealing with various problems, especially the problem of waste. According to Hadari Nawawi, in his book *Leadership Makes Organizations Effective* (347).

Empowerment, local government apparatus, is part of the concepts of leadership in making organizations effective in achieving their goals, the understanding put forward by Donald F. Harvet and Donald R. Brown (1992) says that empowerment is a new technique that does not bind the potential of an employee/member of the organization, so the core of empowerment is the delegation of power and decision making to a lower level. Furthermore, Hadari cites Robert E. Coffey, Curtis W. Cok, and Philip L. Hunssaker (1994), that empowerment is a condition that allows employees/organizational members to feel competent, have the power to take the initiative and are able to carry out tasks and provide strength for personal motivation. Meanwhile, according to Oakley and Maraden (1984), it contains two tendencies, namely, first emphasizing on giving and transferring some power (power, strength, ability or power), to others so that the person is more empowered. Second: emphasizing on stimulation, encouraging or motivate to have the ability or existence. The above understanding is that the leadership has a very important function in an effort to always try to improve the skills of local government officials, so that the effectiveness of a public organization can run well. To achieve the success of an organization there needs to be excellence, the need for renewal, courage by involving the apparatus in a form of good communication.

In an effort to achieve excellence in local government organization, there are several strategies that must be taken to realize good local government there are several elements that include: (a) strategy, to achieve the identified targets, (b) structure, namely the characteristics of the structure, local government organizations, (c) the system, which is usually done to process and convey information, (d) staff, who have the skills to do the work, (e) style, which is how the leader achieves the goals of local government organizations, (f) skills, is a the most important skills that must be possessed by the apparatus, (g) the target of superiors, (superordinate goals) namely the meaning or concept, the guidance that is inspired by the organization to its apparatus can be empowered.

Furthermore, as quoted by Hadari, Stephen R Covey (2005), says that empowerment is giving greater power of power possessed by employees/ organizational members through the opportunity to convey creativity, participate in various activities, explore untapped capacity and potential and others. Then Hadari (2003). John W. Newsrom and Keith Davis (1998), who say that empowerment is a process of granting greater autonomy through the provision of relevant information and flexibility of supervision to employees/organizational members than can influences changes in employees/organizational members from a state of powerlessness to having a condition that contains the belief that they are able to carry out their duties (self-efficiency).

Another understanding is also put forward by Don Harvey and Robert Bruce Bowin (1996), saying that empowerment means that managers provide greater opportunities for workers related to their work, empowerment is very important for several reasons (1) Globalization and competition that increasingly widespread so that all require innovation that requires giving freedom to employees / organizational members as innovators, (2) increased competition requires business people to be more productive than ever before. For this reason, the quality of guidance and development of local government apparatus needs to be improved continuously, so that they are able to function the forces and work mechanism in a effort to direct community change initiatives and movements (Osborne and Gaebler, (1996). With this role repositioning, it is hoped that all government institutions including local government and technical units under them will turn into a new organism. Instilling an entrepreneurial spirit or spirit into the management of public administration will be a lever for the emergence of independence and progress of public organizations in a better direction on an ongoing basis.

In this case, Osborne and Gaebler, provide the formulation of entrepreneurial principles into the public sector, as follows: (1) catalyst government : directs rather than implements,

(2) community-owned government gives authority rather than serves, (3) competitive government: injecting competition into service delivery, (4) government driven by regulations, (5) results-oriented government; financing, results not input, (6) customer-oriented government, not bureaucracy, (7) entrepreneurial government produces rather than spends, (8) anticipatory government: prevents rather than spends treat, (9) decentralized government: from hierarchy to participation and teamwork and (1) market-oriented government: driving change through markets.

Within certain limits, the indicatives suggested by Osborne and Gaebler have certainly been pursued by government officials, especially the DKI Jakarta Regional Government, namely by continuing to try to organize government bureaucratic management towards a modern regional government system. There are various terms used to describe the transformation of science, which include, among others, high performance organization, quality organization, learning organization. The term entrepreneurial government is also often used, but basically the term describes the same core, namely, increasing the adaptive and innovative capacity of the organization to keep growing. Every organization, both government and private, is always required to provide quality apparatus, so that organizations can optimize services to stakeholders, or parties related to the public interest, in line with that, the apparatus is an absolute necessity for an organization that will maximize services the public, the needs and development and empowerment of the apparatus must be planned.

Furthermore, Nirwandar in Sarundajang, argued that the transformation should be directed at creating an organization that has the following characteristics: (1) clarity of mission and vision, (2) a flatter organization, (3) a learner organization and less divisions, (4) network organization, (5) learning organization, and (6) mostly filled by professional positions. The development of modern organizations, namely the growth of so called virtual organizations, namely temporary networks of companies, suppliers, customers, and even competitors who are actually independent from each other, but are connected by information technology, so that each companies or competitors, for example, can continuously share skills, costs and access to a particular market.

This proves that the empowerment of the apparatus is increasingly important to deal with environmental changes that are now entering the era of innovation. Empowerment of the apparatus in the era of regional autonomy should be more focused on giving responsibility and independence rather than efforts to obtain additional degrees formally or increase echelonization. As a term of reference and the various description's above, it can be concluded that the empowerment of the government organization wants to transform itself

into a learning organization, it will have high competitiveness, because in that organization there will be a rapid process of knowledge transformation.

Apparatus Position

Empowerment of local government apparatus through intensive learning can increase their competence and added value. On the other hand, they will dare to make decisions and take risks independently and responsibly in carrying out their duties and activities, as well as being able to solve the problems they face. In another dimension, organizational leaders must also be empowered so that they are able to play the role of coach, controller and engineer with the main responsibility for developing and realizing learning opportunities and opportunities for those around them. The empowerment strategy covers all levels of organizational leadership, both top middle and lower managers.

Then Peter M. Senge (1990), states that leaders can act as designers teachers and servants. As a designer, the leader plays an important role in (1) shaping the social architecture of the organization, (2) formulating policies, structures and strategies as well as creating a learning process. As a teacher, the leader helps each member of the organization so that they gain a more insightful view of the current reality, which stimulates the occurrence of Metamonia or a fundamental shift in thinking. As a servant, the leader plays a role on two levels: to be a servant to the people and to the mission goals that underlie the existence of the organization. Efforts to create a learning organizational climate, leaders are responsible for building respect, and commitment between members and organization, this encouraging individual and organizational progress. This means that leaders must be willing to (1) listen to protes group, (2) make every incident an experiment (R. Jones, 1995).

The description can be understood, that humans who learn are the driving force of the learning organization. This means that learning humans will become a great force for organizations in facing the challenges of environmental change and ensuring the success and survival of the organization. In the context of providing public services, for example, a centralized system that maintains stability over a long period of time has proven to be unsatisfactory in providing public services. Does not fulfill the sense of justice transparency and accountability. Faced with these changing demands, in general the response to the development of the government system has been very slow. Regarding this inaction. Osborne and Plastrik, provide a fairly apt description as follows: "A bureaucratic system of government is designed to be stable. But we have reached a point in history where this stability is counterproductive. In an information age that is globally

competitive and rapidly changing as it is today, systems that cannot change are bound to fail. These systems are like dinosaurs, which could not evolve quickly to maintain their survival when their environment changed”.

Efforts to anticipate these changes are treated with appropriate steps as well as being able to empower the organization. These steps always begin with: (1) diagnosis assessment, (2) organization redesign, (3) organization transformation and (4) continuous improvement. The process is directed at the dimensions of leadership, structure, process and workforce. Identification of problems and organizing to collectively carry out activities to change conditions for the better. The process of empowerment, freeing feelings of inferiority, recognition of dignity, strength, knowledge, and intelligence, as well as expertise, so that they can have independence.

Development for local government officials, in line with the application of the learning organization concept, is part of the apparatus empowerment which must go through a process, on an ongoing basis. This effort has been and will continue to run in line with the dynamics and development of public organizations, which are demanded to be better in providing services to the community. The design process is the stage of giving complete meaning, where information turns into new knowledge, so that the individual knows how to use this knowledge in everyday life. This means that the individual concerned will have a new perspective, namely “why” this can happen.

Furthermore, through the implementation process, individuals can actualize changes in attitudes and new perspectives on a problem. Through this stage, the individual can improve individual self discipline, although transforming data into knowledge values in order to increase adaptability in the long term. In this context, the leader must be able and able to act as a teacher who can translate the principle of integration through creative information. Creative tension, raised through enlightenment of the vision and explanation of the current reality, thus providing direction for members of the organization in efforts to achieve the vision that has been set. In addition to realizing the vision required culture in the organization.

Research Finding

Presentation of Research Objects. DKI Jakarta Provincial Sanitation Service. Indonesia. In an effort to realize Jakarta as the capital city of Indonesia, which is clean, orderly, beautiful, healthy, and full of order in accordance with the demands that developing and developed countries need to improve various public facilities, including waste

management system, and also must be able to empower the community, that cleanliness is a necessity of life, and can use waste as a useful material, for that the DKI Jakarta Provincial Sanitation Service, Indonesia is required to improve excellent cleaning services to the people of the Capital City of DKI Jakarta Province, Indonesia. Jakarta as the capital of the Republic Indonesia has an important role in supporting the administration of the government of the Republic of Indonesia, creating the image of the Indonesian nation in the eyes of the international community, this is also stated in the preamble to Law Number 34 of 1999. Seeing the real condition that the area of DKI Jakarta cannot be increased. However, the population continues to increase every year, even the population density reaches approximately 11,244 people/Km² with an area of DKI Jakarta of approximately 650 km².

Overview of the DKI Jakarta Provincial Sanitation Service, Indonesia. The cleanliness Service of DKI Jakarta Province in handling environmental hygiene problems in the DKI Jakarta Province area must be comprehensive and not only the responsibility of the government but also the community must also have a concern for the environment, especially the problem of cleanliness. So with high discipline and still maintain the level of community participation on an ongoing basis. Based on this, there are three components that are directly involved and interrelated, namely: a. Community in the form of non-governmental organization and private sector; b. Mayor of Camat and Lurah; c. The DKI Jakarta Provincial Sanitation Service and its Sub Department, Sub District Hygiene Section and Sub Section of Urban Cleanliness and related Agencies.

DKI Jakarta Province as the State Capital of the Republic of Indonesia has a tough task in managing and building infrastructure that can be used as a barometer of whether a country is progressing or not, one of which is cleanliness, and being able to overcome problems related to public services. DKI Jakarta Province has an area of approximately 650 km², while the population in 2006 was 10.5 million including the daytime population from around Jakarta, Bogor, Depok, Tangerang and Bekasi (JABODETABEK). According to a study by the DKI Jakarta WIJEMP consultant from January 3-11, 2005, each person generates 2.97 liters of waste/person/day, so it is estimated that the waste generation in DKI Jakarta every day reaches $\pm 26,444 \text{ m}^3$, where the volume of the waste consists of 55 organic wastes 37% of non-organic waste as much as 44.64% of the waste consists of 55 organic Wates 37% of non-organic waste as much as 44.63% of the waste generation that can be lifted on average/days in 2006 was $\pm 25,904 \text{ m}^3$ (97,92%) while the remaining 2.04% was used by the community itself and absorbed by nature.

Purpose and Objectives

The purposes and objectives of the preparation of the Hygiene information area: a. To find out about the cleanliness data that is in the work environment of the office. Hygiene and Sanitation Sub-Department in 5 municipalities, and the cleanliness sub-department of the thousand island administration, which are presented in a timely, integrated and accountable manner; b. To find out the facilities and infrastructure as well as the conditions of cleanliness in the field, c. To obtain facilities in the form of data products, d. As an input for policy making in order to improve environmental cleanliness.

Scope of Implementation of Activities, The DKI Jakarta Provincial Sanitation Service in carrying out activities includes making Hygiene information which includes Subdin, Section and UPT of the Cleanliness Service in 5 Municipalities and the Cleanliness Sub-Department of the Thousand Islands Administration District, among others: a) presenting information on Hygiene data in the form of a cleanliness processing report for DKI Jakarta Province, b) Garbage Generation and Transported Garbage Data; Data on Garbage Collecting and Transporting Facilities; Operational tools data; Operational Supporting Data and others, Hygiene Extension Data; Retribution Target Achievement Data; Budget and Realization of Absorption of Periodic and Activity Budgets.

Organizational and Management Aspects. The DKI Jakarta Provincial Sanitation Service was established based on the Decree of the Governor of the Special Capital Region of Jakarta dated December 6, 1967 Number Db. 4/1/7/1967 Jo. Decree of the Governor of the Head of the Capital Region of Jakarta Number: B.VIII/1498/a/1/1976 in the context of providing public services in the field of cleanliness. The organizational structure and work procedures of the DKI Jakarta Provincial Sanitation Service have been structured and stipulated in the Jakarta Capital Special Region Regulation Number 15 of 1981 dated 7 December 1981. In its daily implementation, the handling of cleanliness is carried out at the Municipal level where the Head of the Sanitation Sub-Department at the Regional level the municipality is administratively responsible to the local Madya Mayor, Meanwhile, spectrally, the Sanitation Department cooperates in carrying out the handling of cleanliness with related agencies, including: a. The Department of Public Works carries out the handling of the canals/rivers, b. The Department of Parks carries out the handling of cleanliness in parks and green lanes; c. PD. Pasar Jaya carries out cleaning services in markets, d. PT. BBB carries out waste processing at the final disposal site (TPA).

Operational Technical Aspect

The DKI Jakarta Provincial Sanitation Service as the operational technical person in charge of waste management in 5 areas of DKI Jakarta Province, has established a waste

management model with the following stages: a. The stage of accommodation, b. Collection stage, c. The stage of transporting from the waste source or from the temporary waste collection point to the final waste disposal site (TPA); d. Stages of the waste transfer station (SPA), e. Stage of Destruction of Waste at the TPA. Based on 2006 data, the daily waste generation reached $\pm 26,444 \text{ m}^3$, of the generated waste transported an average of $\pm 25,904 \text{ m}^3$ (97,96%), while the rest amounted to $\pm 540 \text{ m}^3$ (2.04%). According to a report from the Sanitation Department in 5 municipalities, waste generation in 2005 decreased by $\pm 26.264 \text{ m}^3$, while the volume of transported waste increased every day by $25,457 \text{ m}^3$ (96.92%) with details as shown in table 1 Data on Waste Generation and Transported Garbage in DKI Jakarta Province as follows:

Table 1 Data on Garbage Generation and Transported Garbage in The DKI Jakarta Province, Indonesia

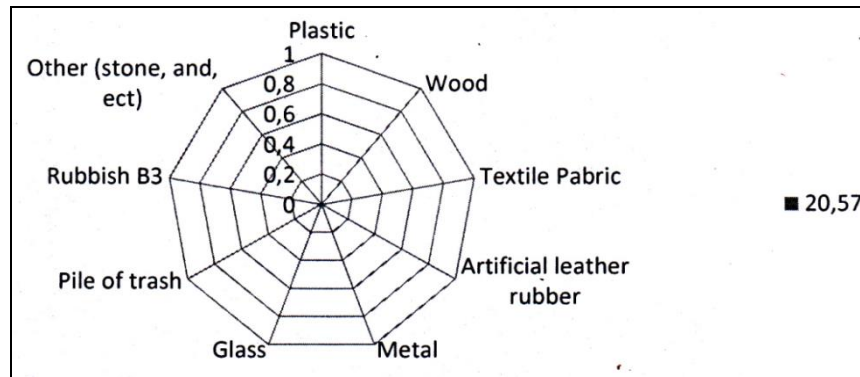
No.	Region	Pile of Trash (m ³ /days)	Transported (m ³ /days)	Not yet transported (m ³ /days)
01	Central Jakarta	5.466	5.383	83
02	North Jakarta	4.413	4.393	20
03	West Jakarta	5.500	5.279	221
04	South Jakarta	5.489	5.341	148
05	East Jakarta	5.576	5.508	68
	Total	26.444	25.904	540
	Percentage	100,00	97,96	2,04

Source: Sanitation Department of DKI Jakarta Province, Indonesia

From the data above, it can be predicted that there has been an increase in population in 5 (five) municipal areas, this is indicated by an increase in the volume of waste in each municipality area, so it can be estimated that the population of DKI Jakarta in 2006 amounted to ± 9.6 million, including the number of resident during the day who come from around Jabodetabek (Jakarta, Bogor, Depok, Tangerang and Bekasi), Indonesia. According to a JICA study in 1988, each person generates 2.97 liters of waste/person/day, so it is estimated that the waste generation in DKI Jakarta every day reaches $\pm 28,512 \text{ m}^3$, where the volume of waste consists of organic waste and non-organic waste. Of the waste generation that can be transported on average/day in 2006 as much as $\pm 97.96\%$, while the remaining 2.04% is used by the community itself and absorbed by nature.

It is predicted that there has been a change in waste generation in liters/person/day, considering that the JICA study which is used as one of the standardizations for calculating waste generation is almost ± 15 years old so it is no longer accurate. Because of this, in 2005 the DKI Jakarta Provincial Sanitation Service made a Master Plan Review and Program Development (DKI 3-11) which included the Western Java Environmental

Management Project (WJEMP) program which was a review of the master plan made by JICA. It is hoped that the WJEMP program will be able to answer all problems that arise in handling solid waste in DKI Jakarta Province, including calculating waste generation. The composition of solid waste in DKI Jakarta is still largely dominated by organic waste, namely: 55.37% organic waste and 44.63% non-organic waste, which includes.



Respondent Characteristics

Based on the Employment Sequence List, the Number of the DKI Jakarta Provincial Sanitation Service Apparatus in the active Municipality area 1 3,078 people, which are divided into group I totaling 95 people, group II totaling 2,173 people, group III amounting to 786 people and group IV totaling 24 people, this the description General information regarding the number of employees in 6 sub-districts of the Municipal Sanitation Survive can be seen in table 3 Number of Service Apparatus and Sanitation Sub-Department by Group as follows:

Table 3 Number of Service Apparatus and Sub-Department of Sanitation by Group

No	Area	Group I					Group I					Group I					Group I					Total
		A	B	C	D	Total	A	B	C	D	Total	A	B	C	D	Total	A	B	C	D	Total	
1	Service s	-	-	-	4	4	185	23	81	30	319	25	13	3	2	222	7	3	2	-	12	557
2	Central Jakarta	-	2	2	7	11	390	19	27	15	451	23	84	1	9	127	2	-	-	-	2	591
3	North Jakarta	-	-	1	7	8	162	40	21	19	242	16	38	8	7	69	3	1	-	-	4	323
4	West Jakarta	-	-	7	1	21	262	31	27	16	336	11	68	9	9	97	2	-	-	-	2	456
5	South Jakarta	-	-	2	1	42	300	51	27	17	295	45	62	6	1	126	-	1	-	-	1	564
6	East Jakarta	-	-	3	6	9	310	35	47	35	427	32	85	1	7	137	2	1	-	-	3	576
7	Kep. Seribu	-	-	-	-	0	1	-	1	1	3	-	4	2	2	8	-	-	-	-	0	11
	Grand Total	0	2	3	5	95	161	19	23	13	2173	15	47	8	7	786	1	6	7	2	24	3078

Source: Sanitation Department of DKI Jakarta Province, Indonesia.

In addition to the number of apparatus based on the groups in the ranks above, it can also be seen that the education level of the DKI Jakarta Provincial Sanitation Service apparatus is 3,078 people. DKI Jakarta According to Formal Education with the following details:

Table 4 Data on Service Apparatus and Sub-Department of Cleanliness of DKI Jakarta Province According to Formal Education

No.	Description	Non Diploma	Primary School	Junior High School	Senior High School	Baccalau-reate	Bachelor Degree	Magister Degree	Total
1	Services	-	190	52	218	17	61	19	557
2	Central Jakarta	-	377	41	144	6	18	5	591
3	North Jakarta	-	180	25	100	2	12	4	323
4	West Jakarta	-	206	69	162	1	13	4	455
5	South Jakarta	-	361	24	151	2	23	4	565
6	East Jakarta	9	321	51	160	2	27	6	576
7	Kep. Seribu	-	1	-	5	-	5	-	11
	Grand Total	9	1636	262	940	30	159	42	3078

Source: Sanitation Department of DKI Jakarta Province, Indonesia

Data from the Department of Cleanliness and sub-Department of Sanitation in 6 DKI Jakarta Regions show that the general group is 30 to d. 34 years totaling 15 people and the general group 35-39 years amounted to 318 people, age group 40-44 years old amounted to 542 people, and the age group 45-49 years old amounted to 860 people, age group 50-54 years old amounted to 1,110 people, while the age group 55 years and over amounted to 233 people, in detail it can be seen in table 5 as follows:

Table 5 Official Apparatus and Sub Department of Cleaning Service in 6 Regions by Age

No.	Wilayah	18-19 year	20-24 year	25-29 year	30-34 year	35-39 year	40-44 year	45-49 year	50-54 year	55 upper year	Total
1	Services	-	-	-	-	31	114	142	223	47	557
2	Central Jakarta	-	-	-	-	24	38	141	324	64	591
3	North Jakarta	-	-	-	-	27	38	107	132	19	323
4	West Jakarta	-	-	-	13	46	85	189	118	5	456
5	South Jakarta	-	-	-	2	28	68	181	233	53	564
6	East Jakarta	-	-	-	-	162	198	91	79	46	576
7	Kep. Seribu	-	-	-	-	-	1	9	1	-	11
	Grand Total	0	0	0	15	318	542	860	1110	233	3078

Source: Sanitation Department of DKI Jakarta Province, Indonesia

The number of officials from the Sanitation Service and Sub-Department of DKI Jakarta Province based on marital status who have married status is 2,997 people and those who

are not married are 81 people, while based on Family Dependents there are 3.649 people and Husband/Wife totaling 2.942 people, complete and detailed can be seen in table 6, the data of the DKI Jakarta Provincial Sanitation Service Apparatus and Sub Department with the following details:

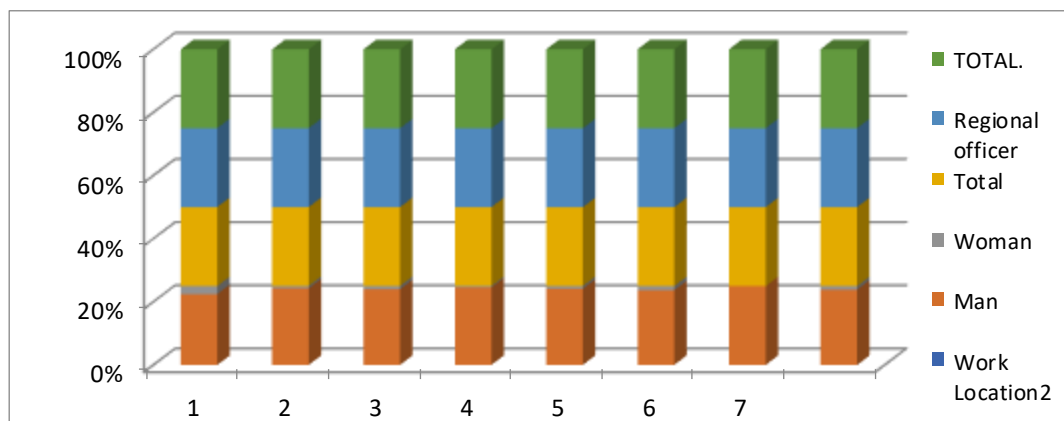
Table 6 Data on Service Apparatus and Sub Department of Cleanlines of DKI Jakarta Province by Marital Status

No.	Work Location	Employee Status		Total	Marital Status		Total	Family Responsibilities		Total	Grand Total
		PNS	Abri		Kawin	Belum		Boys	Husband /Wife		
1	Services	557	-	557	546	11	557	676	513	1.189	1.764
2	Central Jakarta	591	-	591	582	9	591	696	569	1.265	1.856
3	North Jakarta	323	-	323	309	14	323	413	305	718	1.041
4	West Jakarta	456	-	456	440	16	456	553	440	993	1.449
5	South Jakarta	564	-	564	535	29	564	639	535	1.174	1.738
6	East Jakarta	576	-	576	574	2	576	649	562	1.211	1.787
7	Kep. Seribu	11	-	11	11	-	11	23	8	31	42
	Grand Total	3.078	-	3.078	2.997	81	3.078	3.649	2.932	6.581	9.659

Source: Sanitation Department of DKI Jakarta Province, Indonesia

The total number of officials from the Office and Sub Department of Cleanliness of DKI Jakarta Province based on gender is 2.932 people and women totaling 146 people completely and in detail can be seen in table 7 data on service apparatus and sub department of cleanliness DKI Jakarta Province Based on Status as follows:

Graphic: Data on Service Apparatus and Sub-Department of Sanitation DKI Jakarta Province Indonesia by Status



Classification of Waste Treatment and Landfill

The landfill sites are classified into 5 types according to the structure as shown in table 2 and figure 1. In terms of the quality of the leachate and gas generated from the landfill site, both semi aerobic and aerobic waste collection methods, as shown in the following figure:

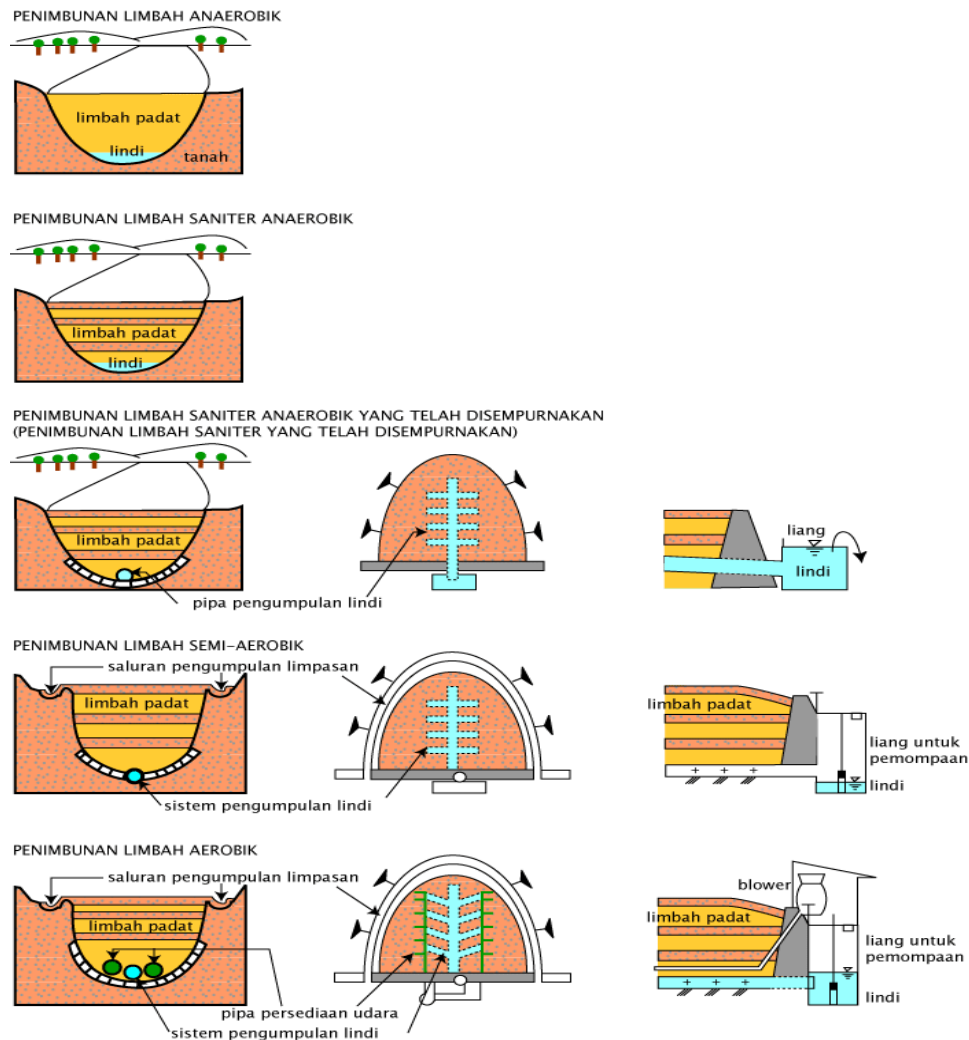


Figure 1

Semi Aerobic Waste Landfill Structure

As shown in Figure 2, the semi aerobic landfill allows air to enter through the leachate collection pipe installed at the bottom of the landfill, which helps to increase the aerobic process, and activates aerobic bacteria, and accelerates the decomposition of the waste,

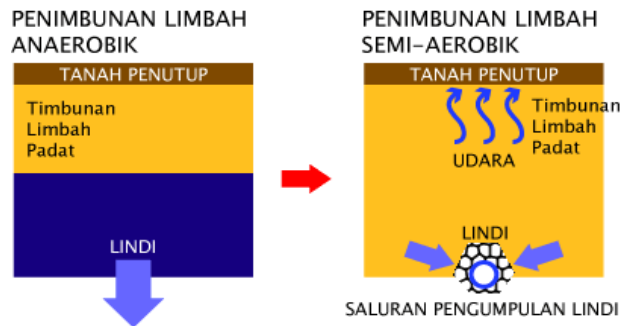


Figure 2 Types of Waste Collection Models and Leachate Collection Systems

Furthermore, this activity improves the quality of leachate by decreasing the concentration of leachate, also reduces the formation of harmful gases, all of which can cause site stabilization from landfilling to be faster. A landfill site can perform its function only if we have a good design and working method. A good design with a bad way of working or a bad design with a good way of working will not lead to good results. See Figure 3 Concept Model Location of Sanitation Landfill, as follows:

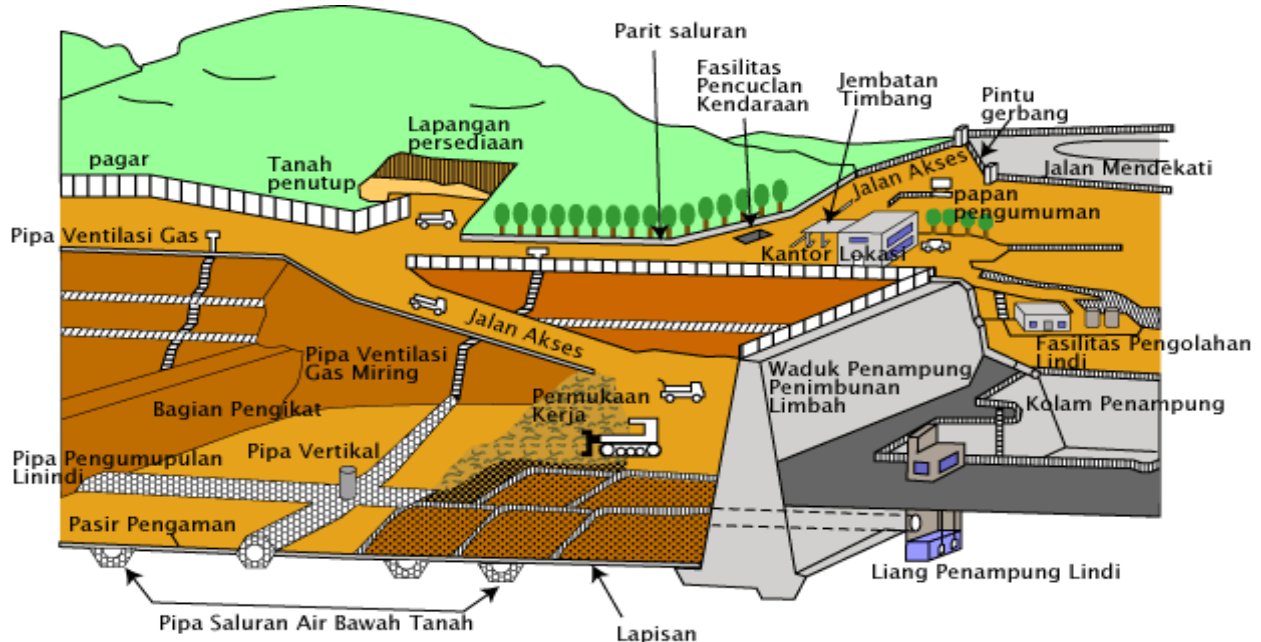


Figure 3 Sanitation Waste Landfill Location Model Concept

Source: Sanitation Department of DKI Jakarta Province, Indonesia.

Secondary Pollution Prevention

In general, people do not want the landfill site to be located close to where they live because this can have a negative impact on the environmental and local residents. Such negative impacts are called “secondary pollution” considering that the main purpose of

landfill sites is to avoid environmental pollution in urban areas by bringing waste from urban areas, and storing it in a good landfill site. Nevertheless, the landfill site is a public facility that is indispensable for every modern city in the world. Therefore, every city needs to plan and design a landfill site in a way that is acceptable to the community. In order to create a landfill site that is acceptable to the local community, secondary pollution and its negative impacts need to be minimized. It is also necessary to formulate a post closure site use plan taking into account the opinion of the local community.

Secondary pollution generated from landfill sites (a) water pollution. Leachate generated from landfill sites, if not treated will pollute rivers, seas and ground water, (b) gas formation the main gases emitted from landfill sites are methane, ammonium, hydrogen sulfide, and carbon dioxide (c) bad odors, there are two types of unpleasant odors generated from landfill sites. The first is the odor generated from the waste itself, the other is the gas generated through the decomposition of the waste. (d) pests and vectors, kitchen waste tends to become a nest for flies, and attracts rats and crows, (e) noise and vibration incoming waste transport vehicles and waste collection equipment can be a source of noise and vibration, (f) fire, fire can occur spontaneously due to the formation of methane gas or the use of chemicals. Fires can also be caused by scavenger or other people. DKI Jakarta Regional Government Waste Management Strategy and Management 2009-2015.

Referring to Regional Regulation Number 3 of 2001, the main task of the DKI Jakarta Provincial Sanitation service is to carry out efforts to create a clean, orderly, beautiful and Healthy City, and carry out the vision of making Jakarta a clean city, as clean as the capital of an Advanced Stat (Developing by empowering community), and mission (a) to make people aware that cleanliness is a necessity of life (b) utilize waste as a useful material, (c) to improve excellent hygiene services to the community. From the vision and mission of the DKI Jakarta Provincial Sanitation service above, in anticipating developments an changes that are increasingly dynamic in accordance with the demands of modern urban management, the DKI Jakarta Regional Government applies a waste management strategy towards modern management concepts in handling waste in DKI Jakarta Province, the scheme can be seen in Figure 5 of the 2009-2015 Waste Management Model as follows:

Figure 5 of the 2009-2015 Waste Management Model as follows:



Ruang Penampungan Sampah

Fasilitas (Alat alat) yang telah tersedia di Cakung Cilincing



Proses Pemilahan Sampah (Organik ~ Non Organik)



Proses Balling Residu Non Organik

Figure 5 Waste Management Model and Map of DKI Regional Government. Indonesia
Source: Sanitation Department of DKI Jakarta Province. Indonesia.

Hygiene Control

In the context of controlling cleanliness, the DKI Jakarta Provincial Cleanliness Service is given the authority to issue permits for private parties who will carry out business in the field of cleanliness (according to the decree of the Governor of DKI Jakarta Province No. Jakarta In 2005, this is in accordance with the demands of the community in the field of cleanliness which continues to increase in line with the development of the capital's progress and rapid technological advances, especially the problem of handling waste management, with all available funds and facilities the Sanitation Department has tried and implemented various methods or appropriate systems, waste management and management. Environmental Impact Analysis (EIA) and Environmental Management Plan (EMP) and Environmental Management Plan, monitor the impacts caused by the Final Disposal Site (FDS) on a regular basis at the Bantar Gebang Bekasi, Indonesia.

Monitoring of water quality at the Bantar Gebang, Bekasi Indonesia, is intended to find out as early as possible the impact caused by FDS activities on the surrounding environment, while the purpose of monitoring is to determine the extent of the effect of landfilling on the quality of groundwater and residential water (river) around the FDS and to determine the performance of the operation. Final disposal plan Bantar Gebang, Bekasi, Indonesia. Waste water quality monitoring activities at the Bantar Gebang, show that there are still parameters exceeding the quality standards for dissolved solids, total ammonia, as well as monitoring of carried out periodically throughout the year so that the impact can be identified, occurs and then preventive measures are taken if the work process and its performance are not in accordance with the procedure.

Seeing the above conditions, the DKI Jakarta Provincial Sanitation Service always follows developments and future demands that waste management must be handled with new concepts that are more efficient and visible, this is in line with the demands for better and modern urban management, as a solution to overcome various problems in handling better and environmentally friendly waste management, the need for implementing a waste management strategy with the concept of integrated management in waste processing in the DKI Jakarta Province, Indonesia.

Conclusion

Based on the results of data analysis obtained through literature study research, conclusions can be drawn:

1. Based on the results of data analysis of the DKI Jakarta Provincial Sanitation Service and sub department apparatus, Indonesia, shows that the number of apparatus is 3,078 people, with the proportion of the age group 30 to d. 34 years amounted to 15 people and groups aged 35-39 years amounted to 318 people, age group 40-44 years old amounted to 542 people, and the age group 45-49 years old amounted to 860 people, age group 50-54 years old amounted to 1,110 people, while the age group 55 years and over amounted to 233 people.
2. There is a need for socialization and handling of waste, which is managed seriously by implementing the Zero Waste Model, in waste management in the DKI Jakarta Provincial Government, Indonesia. Implementation of management for the development of integrated waste processing facilities in DKI Jakarta Province, depending on the will of the DKI Jakarta Regional Government, to realize it, and it is necessary to analyze the nature and characteristics of an area and the development of the environment that will be used as an integrated waste treatment site.
3. Establish waste water treatment facilities, with high technology required. The use of ground cover, although not perfect in preventing secondary pollution, is recommended because it is very economical and effective. Cover materials such as soil should be used to cover solid waste quickly, so that environmental conditions are more orderly and comfortable.

Suggestion

1. The best solution for handling waste in DKI Jakarta, Indonesia, for the future is to implement the Zero Waste Model, in an integrated manner in waste management, so that the expectations of the people of DKI Jakarta to dispose of waste to Cacing and Bantar Gebang, Bekasi, Indonesia, which are increasingly critical, can be anticipated. This condition requires commitment and seriousness from the DKI Jakarta Provincial Government. Learn from mistakes, failure to build a garbage disposal in the Bojong-Depok area. Programmatic changes in waste processing in DKI Jakarta Province, for the future it is better to use a zero-waste model. The use of high technology is expected to be able to realize and achieve the vision and mission of the DKI Jakarta Provincial Sanitation Service and Sub Department, Indonesia, in dealing with environmental cleanliness and order.
2. The implementation of a zero-waste model, needs to be socialized and implemented, to support all programs that will be implemented based on the predetermined planning formulation, in formulating the strategy of building an integrated waste processing facility, can absorb information on external and internal conditions, so

that the data collected can be used as a basic for consideration for making the right decision.

3. Changes in good environmental management are certain things that will happen and or will occur in the future, including within an organization, especially within the organizational environment of the DKI Jakarta Provincial Government. In Indonesia, the desire for a change to occur is expected to bring a better impact from all aspects, including in dealing with the waste problem, thus of course efforts must be made so that if possible changes are directed towards good things compared to the previous condition.

Acknowledgment

The research with the title: Zero Waste Models: Waste Treatment Management in DKI Jakarta Province Indonesia, was carried out for quite a long time from 2010 to 2014, considering that to obtain accurate data, it was carried out repeatedly, and carried out field tests in different places. Performing data analysis also a long time as a researcher, I would like to thank the DKI Jakarta Province Sanitation Service and the related team, who have helped and provided me with the opportunity to conduct research. Furthermore, the results of this study have been completed. In 2015-2018 researches continuously made direct observations to various waste processing sites, tested the model applied in dealing with waste management, and then in the following year researchers continuously carried out various dissemination activities. I as a researcher also express my gratitude to the Ministry of Education and Culture Research, Technology, Higher Education of the Republic of Indonesia, if you are willing to provide and support grants in this research. Thus, I would like to thank all parties involved.

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