

Analysis of Organic and Inorganic Waste Management Towards a Green Campus at Universitas Negeri Malang

Firda Hilma Puspitasari¹, Supriyadi Supriyadi², Muhammad Al-Irsyad^{3*}

¹ Faculty of Sport Science, Universitas Negeri Malang, 64145, Indonesia

² Faculty of Sport Science, Universitas Negeri Malang, 64145, Indonesia

³ Faculty of Sport Science, Universitas Negeri Malang, 64145, Indonesia

*Corresponding author. Email: muhammad.irsyad.fik@um.ac.id

ABSTRACT

Waste is intentionally wasted or disposed of because its benefits have been taken from the results of human activities and natural processes that have no economic value. Poor waste management will result in waste problems for the environment and have a bad impact on health. One of the efforts to overcome this problem in the campus environment is Green Campus Policy. Green campus is one of the movements carried out by various campuses to create awareness and concern for the campus community in overcoming environmental problems. The purpose of this study is to determine the description of waste management in a green campus effort implemented at the Universitas Negeri Malang (UM). This study uses a descriptive method with a qualitative approach. Determination of target uses purposive sampling technique. The target of this research is people who know waste management in UM including the UM Sub-Household Coordinator, Head of UM Yard and Garden Affairs, Head of Green Campus 2020 Program, and Chair of Green Campus 2021. The result of this study indicates that waste management carried out at UM is not following the provisions. Inappropriate waste management is caused by the absence of waste sorting and processing activities. However, there are regulations to regulate waste reduction on campus and there is a green campus program to create an environmentally friendly campus.

Keywords: *Green Campus, Organic and Inorganic Waste, Waste, Waste Management.*

1. INTRODUCTION

Activities carried out by humans to fulfill the needs of daily life will not be separated from producing waste. This makes waste in Indonesia still a very crucial problem. In-Law No. 18 of 2008, waste is the residue of human daily activities and/or natural processes in solid form [1]. Meanwhile, waste is a substance or material originating from human activities, both organic and inorganic [2]. In general, the community mostly produces waste in the form of organic and inorganic waste. Organic waste is waste that comes from organic substances and can be decomposed such as leaves, vegetable residues, food scraps, etc. While inorganic waste is waste that comes from objects that cannot be decomposed such as plastic, cans, glass bottles, etc. The amount of waste produced by the community is proportional to the level of consumption of goods used daily [3].

One of the factors that increase the amount of waste generation is the increase in population. In 2016, waste generation in Indonesia reached 65.200.000 tons per year with a population of 261.115.456 people. In 2025 the estimated population of Indonesia is 284.829.000 people or an increase of 23.713.544 from 2016. If it is assumed that the amount of waste produced per year is the same, the amount of waste that will increase is 5.928.386 tons [4]. In 2018 the waste dumped in the TPA was in Malang City as much as 473.22 tons per day and the amount of unmanaged waste was 186.66 tons per day with a total population of Malang City as many as 898.558 people [5]. The Universitas Negeri Malang produces two to four waste trucks in a day with an area of 463.992 m² [6]. The waste is in the form of food waste, paper, and leaf litter. The collected waste will be transported the next day.

The waste problem is still a phenomenal social problem that needs attention because every human being produces waste and on the other hand people do not want

to be close to waste. If waste is not handled properly and correctly, it will cause health, economic, social, and beauty problems [3]. The impact of poor waste management will result in a low level of public health because a bad environment is closely related to the source of disease for public health. The spread of disease can be through disease vectors, one of the disease vectors is flies because flies are closely related to accumulated waste [7]. Flies can spread diseases to the community such as typhus, dysentery, cholera, and others. Poor waste management will also cause an uncomfortable environment for the community, such as bad smells and bad environmental views. This also harms tourism which will ultimately have an impact on the regional economy [8]. Therefore, if the waste management is not good and correct, it will cause environmental pollution problems.

Efforts that can be made by the government to overcome these environmental problems are one of them by cooperating with the academic community to reduce the impacts of environmental problems that have occurred [9]. Efforts that can be made to overcome these problems in the campus environment are the Green Campus policy. Green campus is one of the movements carried out by the campus to help reduce environmental problems. It is hoped that in the future the existence of a green campus program can create awareness and concern for the campus community in overcoming environmental problems [10]. Universitas Indonesia (UI) sparked the idea of ranking world universities in 2010 known as the "UI GreenMetric World University Ranking" to determine the ongoing efforts of universities around the world. The UI GreenMetric assessment is based on several indicators and criteria that include the concept of a sustainable environmental framework that has three components, namely environmental, economic and social [11].

Universitas Negeri Malang is one of the participants from UI GreenMetric who joined in 2017. In 2018 Universitas Negeri Malang was ranked 617 out of 719 universities worldwide with a total score of 3125 points, but in 2019 it dropped to 717 out of 780 universities worldwide with a total score of 2525 points [12], [13]. This is because many data forms are empty, resulting in the ME ranking dropping every year [14]. In 2020, UM's ranking increased to 345th with a total score of 5900 points. This ranking increase is due to the increase in the UI GreenMetric assessment, one of which is the waste indicator. This increase is 225 or 12.5% with a score of 600 in 2019 and 825 in 2020 [15]. However, the value on the waste indicator is still not maximized because the total assessment on the waste indicator is 1800 points. Based on this information, this study aims to determine the management of organic and inorganic waste management in a green campus effort at the Universitas Negeri Malang.

2. METHOD

This type of research was descriptive research with a qualitative approach. This form of research provided detailed information on how to manage organic and inorganic waste to make a green campus at the Universitas Negeri Malang. Information was obtained in the form of speech and writing during interviews and observations in the field.

This research was conducted from March 2021 to August 2021 at Universitas Negeri Malang which is located at Jalan Semarang Number 5 Malang. The type of data used is in the form of primary data, namely the results of in-depth interviews with resource persons, the results of direct observations or observations in the field, and secondary data, namely data from the 2020 green campus program annual report and journals related to the problems studied. In this study, the selection of data sources used a purposive sampling technique which is a sampling technique by considers certain criteria to make it easier to explore the social object under study. The informants in this study were the UM Household Subsection Coordinator, the UM's Head of Yard and Garden Affairs, the Head of the 2020 Green Campus Program, and the 2021 Green Campus Chair.

Data collection techniques were carried out using structured interviews and field observations. In-depth interviews were conducted offline while still implementing health protocols and online through Google Meetings. Observations made by researchers were by observing the situation in the field regarding waste management at the Universitas Negeri Malang. The instruments used in this study were informed consent, observation guidelines, interview guidelines, and a recorder.

3. RESULTS AND DISCUSSION

3.1. Overview of Waste Management at Universitas Negeri Malang

3.1.1. Waste Management at Universitas Negeri Malang

Waste management has been regulated in the Law of the Republic of Indonesia Number 18 of 2008. Waste that is not managed properly will cause many problems including a dirty environment, river silting which results in flooding, increased disease spread, bad smell, unpleasant taste, and other problems that have an impact on the comfort and health of the community [16]. To create good waste management, it is necessary to have waste management to direct and expedite waste management activities.

Based on the results of interviews conducted by researchers, waste management at the Universitas Negeri

Malang is generally the responsibility of the MU household but in practice, it is the responsibility of the yard and garden affairs of UM because the yard and garden of UM are part of the UM household.

The role of campus residents is also very much needed to always maintain the cleanliness of the campus environment because environmental problems, especially waste problems are a shared responsibility. This is in line with research conducted by Sari et.al., the role of campus residents is needed to create a campus environment that is free from waste by applying the principle of reducing waste as much as possible [17]. Similarly, the research conducted by Sasman et al., that bad waste disposal practices will result in disruption of physical and environmental health, and the community believes that this change must start from the community level and be supported by the government to work together in solving these environmental problems [18]. This is also clarified by M. Sari et al., the role of the community is not only limited to disposing of waste in its place, but it is also expected that the community will be able to manage their waste so that it can benefit the community itself [19].

3.1.2. Waste Management Problems at Universitas Negeri Malang

The waste problem is one of the environmental problems that can influence on the lives of the wider community because the environment is one of the supporting factors for human life [20]. The problem of waste has a negative impact, both directly and indirectly, such as water, soil, and air pollution, an increase in the greenhouse effect, natural disasters such as floods, and an increase in sources of disease such as dysentery, cholera, and others [4]. Dysentery and cholera are transmitted by disease vectors carried by flies. Flies are very closely related to the waste that accumulates and smells bad, this is what invites flies to perch and breed [7]. Therefore, the waste problem must be addressed immediately because it will interfere with public health.

Based on data from interviews and observations made by the researcher, in general, the problem of waste in UM is waste like a postman, where waste that goes into the trash is directly dumped into the Supit Urang TPA without proper processing, waste sorting in UM also not evenly distributed because it is still at certain points such as in FMIPA and in the library. Waste sorting must be carried out by everyone in all activities because it will facilitate waste management in the next process [21].

Another problem is that the number of trash cans with people throwing waste is not balanced, then some departments that have laboratories are not properly and correctly processing B3 waste, then education about waste is still needed, and is less aware of waste processing. Lack of knowledge of waste management

will also lead to poor environmental conditions. This is clarified by Sari et.al., in their research, it is stated that the quality and value of the beauty of the environment will be maintained if campus residents have high knowledge of waste management [17].

Some of the waste cans were damaged and the labeling on the trash cans had also been lost and had not been updated. Inadequate infrastructure, such as waste cans that are not following with the type and condition of the place where they are dumped, greatly affect the behavior of a person throwing waste carelessly. This is in line with research conducted by Al-Irsyad, the behavior of passengers and crew members who litter or throw waste into the sea is influenced by poor quality trash cans and trash cans that are not separated between organic and inorganic [22].

The fulfillment of the infrastructure used for waste management on campus is very necessary because if it is not optimal, it will greatly affect the waste management process. This is in line with research conducted by Rahmaniah et al., the lack of waste facilities and infrastructure in waste management is a problem that occurs in various cities in Indonesia [23].

3.2. Waste Management Process at Universitas Negeri Malang

According to the Law of the Republic of Indonesia, Number 18 of 2008 concerning waste management, waste management activities include waste reduction, waste sorting, waste collection, waste transportation, waste processing, and final waste processing [1]. Therefore, the exposure of data related to waste management activities at the Universitas Negeri Malang will be described based on seven categories, namely waste reduction, waste sorting, waste collection, waste transport, waste processing, and final waste processing. The following is a description of each category.

3.2.1. Waste Reduction

Efforts made by the Universitas Negeri Malang to decompose waste on campus include the existence of an e-Office to reduce paper waste, the presence of videotron's installed at several points as information media which can reduce banner waste, providing drinking water tumblers to lecturers and staff to reducing the waste of single-use plastic bottles or cups, as well as the Rector's Decree concerning the prohibition on the use of single-use plastic in the campus environment.

Plastic waste can harm on the environment because plastic has a material that is difficult to decompose by the soil. The negative impact caused by plastic waste is that the soil becomes less fertile, clogging drains, ditches, and rivers which can eventually lead to flooding [24]. This is also confirmed by research conducted by Supriyadi et al.,

plastic waste can cause serious problems if plastic waste is not managed properly [25].

Then the effort made was with the policy of changing the format of the old thesis into an article which only saves the paper produced, then a small portion of inorganic waste is chosen by the janitor's friends to be used as economic value. This is an effort that can be done to reduce waste starting from the source. Reducing waste starting at the source can also extend the life of the landfill. This is by the research conducted by Saibah et al., the participation of the community in reducing waste from the source will cause less waste to be carried and stockpiled to the landfill, this can also provide benefits for waste producers and also extend the life of the landfill [26].

Waste reduction is carried out to create a clean environment and also bring positive benefits to the environment. Similar to research conducted by Novianty, efforts to reduce waste by conducting a waste bank program have a very positive impact on the environment. This will make the environment cleaner and can reduce the pile of waste that has been making a bad view in Binjai Village [27].

Waste reduction activities are not only carried out by the Universitas Negeri Malang but also carried out on various campuses in the world. This is by research conducted by Ali et al., The Zero Waste Campaign (ZWC) conducted by the UTHM Pagoh campus is a combination of waste recycling and waste reduction programs on campus. A successful Zero Waste Campaign (ZWC) concept will be able to show the commitment of the UTHM Pagoh campus in protecting the environment and being a role model for other sectors [28].

3.2.2. Waste Sorting

In the waste sorting process at the Universitas Negeri Malang, there used to be a waste can that was separated between organic and inorganic waste, but now there are only a few points where there are separate trash bins. Waste sorting uses different colored trash cans, namely green for the type of organic waste and yellow for the type of inorganic waste, and there is also labeled in the form of organic and inorganic writing. Trash cans made from stainless steel only use labels in the form of writing without any color difference between organic and inorganic, but at some points, the labeling on the trash can has started to disappear.

The existence of labeled trash cans will greatly facilitate campus residents to dispose of waste according to its type, with the separation of waste between organic and inorganic waste will be very helpful in subsequent waste management processes. This research is also supported by the results of research conducted by Widiarti, which states that waste sorting activities when

waste arises will greatly facilitate the subsequent waste management process [29]. If this goes well, waste management will run optimally. Availability of separate trash cans and good condition of trash cans greatly affect a person's behavior to dispose of waste in its place. This is in line with research conducted by Al-Irsyad, the behavior of passengers and crew members who litter or throw waste into the sea is influenced by the poor quality of trash cans and trash cans that are not separated between organic waste and inorganic waste [22].

3.2.3. Waste Collection

The waste collection process is carried out by the cleaning service in each building. The waste from the room or building will be collected in the morning at 7 o'clock to be collected into a container or large trash can at certain points that have been determined by the yard and garden section of the Universitas Negeri Malang.

The Waste that accumulates in temporary shelters without any transportation will also attract disease vectors such as flies and rats to come, which is very dangerous for public health. This is in line with the research conducted by Tandilangi et al., temporary disposal sites that are not closed and there is waste that accumulates will cause environmental pollution, cause unpleasant odors, and many green flies and rats that come because of the accumulated waste [30].

Waste that is not collected or left scattered will cause a slum environment, a slum environment will be very vulnerable to becoming a hotbed of disease. Diseases caused by slums are usually diarrheal diseases. This is in line with the research conducted by Nurhapida et al., the low level of waste collection in slum areas so that the public's low awareness of managing waste can increase cases of diarrheal disease [31]. This is also reinforced by research conducted by Al-Irsyad & Deniati, dysentery is closely related to the accumulation of waste because the accumulated waste will invite disease-carrying vectors such as flies [7].

3.2.4. Waste Transport

In the process of transporting waste at the Universitas Negeri Malang, the collected waste will be put into a waste truck container. Waste transportation is carried out by UM's yard and garden cleaners. Waste collection is carried out from 8 to 9 in the morning. Waste generated by UM is an average of 2 trucks per day and will increase if there are tree cutting activities, big holidays such as birthdays or concerts at Graha Cakrawala.

Organic waste is waste that decomposes quickly, if the waste is not carried out regularly it will cause a bad smell and can become a nest of disease. This is in line with the research conducted by Tandilangi et al., waste that is not transported routinely 1x24 hours will cause

environmental pollution, such as an annoying bad smell, lots of green flies, rats, and other animals around temporary dump sites [30]. Similar to research conducted by Ekawandani & Kusuma, waste transportation during the waste management process must be carried out routinely because if there is a buildup of waste it can cause environmental pollution and become a source of transmission of various diseases [32]. This is also reinforced by research conducted by Al-Irsyad & Deniati, diseases that are closely related to the accumulation of waste are dysentery and cholera because the accumulation of waste will invite disease-carrying vectors such as flies [7].

3.2.5. Waste Processing

In the waste processing process, in 2014-2015 there was waste processing carried out by the yard and garden section of UM, but now only the biology department and the library unit do waste processing because the yard and garden section of UM does not handle it because the amount of organic waste is not comparable. with the tools and energy used for processing the organic waste, but the library unit does not routinely carry out processing due to limited tools and energy and the leaf waste will be piled under the tree with the aim that the leaves will become compost for the tree naturally.

Waste processing is carried out only on organic waste where the organic waste will be processed into compost. Composting waste is one of the efforts to reduce waste starting from the source. This is supported by research conducted by Susilowati et al., composting the waste carried out is one of the efforts to reduce waste generation starting from the source and also providing organic fertilizer as nutrients for plants [33]. One of the wastes that can be used as compost is food waste, this is clarified by research conducted by Bigdeloo et al., universities can use food waste with special treatment methods and use it as plant fertilizer, thus the university has carried out waste management to create a cleaner and healthier environment [34].

On the waste indicator in the UI greenMetric assessment, Universitas Negeri Malang obtained a score of 825 with a percentage of 14% of the total score of 5,900. Of the total waste, only 5-10% is processed into compost, while another waste is directly disposed of to the Supit Urang Final Processing Site without being processed first. Inorganic waste is waste which, if disposed of directly without any prior processing, can cause damage to the environment. This is in line with the research conducted by Supriyadi et al., plastic waste that is not properly managed first can cause serious problems for the environment [25]. This is also confirmed by research conducted by Purwaningrum, plastic waste harms the environment if it is disposed of without prior processing. The impacts such as damage to soil fertility, causing blockage of ditches, drains, and rivers so that it

can lead to catastrophic floods. Meanwhile, when plastic-based waste is burned, it can produce combustion gasses and fumes that are harmful to human health [24].

3.2.6. Final Waste Processing

In the final processing process, the waste will be directly disposed of at the Supit Urang TPA where UM has collaborated with the Malang City Environment Agency to dispose of the waste at Supit Urang TPA. The location of Supit Urang TPA is 7.4 km from the Universitas Negeri Malang Campus and can be reached in 20 minutes. After the waste is handed over to the Supit Urang TPA, the final processing will be carried out by the Supit Urang TPA.

Most waste management in Indonesia is based on waste management which is based on the Final Processing Site (TPA) without going through the 3R process, namely reduce, reuse, and recycle first [35]. This is also reinforced by research conducted by Nanda & Berruti, that Final Processing Sites (TPAs) used to dispose of solid waste are preferred in many cities around the world. The 3R (reduce, reuse, and recycle) activities should be carried out by all communities because it is one of the efforts to reduce waste starting from the source which can extend the life of the landfill [36]. This is by the research conducted by Saibah et al., the participation of the community in reducing waste from the source will cause less waste to be carried and stockpiled to the landfill, this can also provide benefits for waste producers and also extend the life of the landfill [26].

Overall waste management activities at the Universitas Negeri Malang have not been maximized because they are not following the Law of the Republic of Indonesia Number 18 of 2008. The discrepancy lies in the process of sorting waste and processing waste. In waste sort activities, there is an uneven availability of separate trash cans, at least there are organic and inorganic waste bins. In addition, the contents of the labeled trash cans are still mixed between organic and inorganic waste. This makes the waste processing process also hampered. Meanwhile, in waste processing activities, the Universitas Negeri Malang has not carried out waste processing optimally because only a few units or departments carry out waste processing, this is because the waste in Malang State University has not been completely separated, then the limitations of manpower and land for processing. The waste itself and also the tools owned by the Universitas Negeri Malang have not been maximally biased to process organic waste in which the waste generated from the waste of leaves at the Universitas Negeri Malang is very much. As a result, the untreated waste will be directly disposed of by the yard and garden of UM to the TPA Supit Urang.

Waste management at the Universitas Negeri Malang according to the assessment indicators on the UI

GreenMetric is also still not optimal because the waste that is processed is only about 14%, while the category with the highest assessment of waste must be processed is >75%. This is still far from the highest rating figures. Waste is not processed optimally because there are still many obstacles in its implementation, including waste at the Universitas Negeri Malang that has not been completely separated between organic and inorganic waste, limited manpower and land to process the waste, inadequate waste processing equipment, and a lot of organic waste produced. and not commensurate with the energy and tools used.

3.3. The Role of Students and Staff in Maintaining The Cleanliness of The Campus Environment

To create a campus environment that is clean, comfortable, and healthy. All parties must play a role in protecting the environment, especially in terms of waste management. Similar to the research conducted by M. Sari et al., the role of everyone in waste management is not only limited to disposing of waste in its place but is also expected to be able to manage waste so that it can provide benefits for the community itself [19]. This is also supported by research conducted by Sasman et al., the community and the government must work together in solving environmental problems such as waste disposal which must be considered so as not to interfere with physical and environmental health [18].

In general, the role of UM residents in maintaining environmental cleanliness is by throwing waste in the trash cans that have been provided and making efforts to always keep the environment clean. However, the role of some residents of the Universitas Negeri Malang is still lacking, there is still a need for education to use drinking water tumblers and shopping bags to reduce plastic waste and it is also expected that ME residents use drinking water that has been provided by UM's without buying single-use plastic bottled drinking water. It is hoped that the internship students at the green campus can be a good example for other students to always keep the environment clean. Students need to cultivate a sense of responsibility to protect the environment and universities also need to make sustainable goals to be achieved to create a clean and healthy campus environment [37].

3.4. Green Campus Programs at Universitas Negeri Malang

Green campus programs carried out by several campuses in Indonesia and other countries are expected to be able to reduce the impact of environmental problems. The existence of a green campus program is expected to foster a sense of care and awareness of campus residents to reduce the impact of environmental problems [10]. The implementation of the green campus

program is not as easy as imagined because all campus residents, both students, and campus staff, must contribute consistently to the implementation of this green campus program. Similarly, according to research conducted by Isa et al., most state universities in Malaysia are not fully aware of sustainable development, achieving a sustainable campus is a challenge. This includes the commitment of all stakeholders and the campus community to take part in a sustainable campus program [38].

The green campus program at the Universitas Negeri Malang uses the indicators in the UI greenMetric. With this green campus program, it is hoped that the Universitas Negeri Malang will become a campus that has environmental insight by integrating environmental science into activities, management, policies, and Tridharma activities in higher education.

After the researcher conducted interviews and observations in the field, the green campus program at the Universitas Negeri Malang had not run optimally. But the green campus team has tried to always campaign for this program, it can be seen that there are many policies and programs related to this green campus program including meeting the targets in the UI greenMetric assessment indicator, doing greening every year, using lights that have switched to LED lights or energy-saving, water infiltration sources to collect rainwater, publications no longer use banner media but use Videotron, then development has started towards green building, and also activities to clean up the waste on certain days. Currently UM is also in the process of building a B3 waste storage facility, there is an E-office to save paper, then lecturers and staff are also given tumblers to reduce bottled water plastic waste, then socialization about the green campus program is carried out through online media and also competitions, as well as the existence of a policy when cutting trees must replace them with trees of the same diameter.

In general, the awareness and awareness of campus residents to protect the environment is still lacking, this will greatly affect environmental health and will hinder the implementation of the green campus program. That concern for protecting the environment can have a positive impact on the environment and increase public awareness to always keep the surrounding environment clean [39].

Environmental problems that have not become a priority will result in unequal policies regarding environmental problems. It is necessary to unify the curriculum concept regarding the environment and a real campus commitment to environmental health principles and practices to create a healthy campus environment [40].

Lack of education about how to treat waste will lead to less caring behavior towards the environment which

will increase problems for the environment. This is in line with research conducted by Saputra & Mulasari, who have good knowledge in processing waste but have bad behavior as a result of the lack of information on how to process waste properly [41]. Similar to research conducted by Dirgantara, although the person has a caring attitude towards the environment, if the information is inadequate, it will result in the person not being able to take effective action on his attitude, and a person's knowledge is influenced by the information obtained [42].

In the implementation of the green campus program at the Universitas Negeri Malang, other problems faced by the green campus team were the availability of abundant seeds but no land, planting plants that were not suitable, then the amount of vegetation in UM continued to decrease. The role of vegetation is very important for the environment, namely reducing air pollution, controlling groundwater and erosion, controlling wastewater, and others. If the amount of vegetation decreases, it will affect the balance in the environment [43]. The green campus team also faced obstacles in implementing the program, namely being constrained by the financing of the green campus program, then constrained by water management which was still the pros and cons, and also the destruction of plants by campus residents and residents outside the campus as well as plants hit by buildings.

In 2020 the green campus program at the Universitas Negeri Malang experienced an increase in the rankings in UI GreenMetric. In 2019 UM was ranked 717 out of 780 universities worldwide with a total score of 2525 points. However, in 2020 UM was ranked 345 out of 912 campuses around the world with a total score of 5900 points in UI greenMetric, and Universitas Negeri Malang was ranked number 26 out of 88 campuses in Indonesia. This ranking increase is due to the increase in the UI greenMetric assessment, one of which is the waste indicator. This increase is 225 or 12.5% with a score of 600 in 2019 and 825 in 2020 [15]. This shows UM's commitment to always strive to make the campus an environmentally friendly campus, not only at the Universitas Negeri Malang which shows progress in environmental issues but also other campuses in Indonesia. This is in line with research conducted by Binta & Maulana, the Pontianak State Polytechnic campus also shows progress in the structuring and infrastructure criteria in the UI greenMetric assessment, namely being able to meet the percentage of 50% or at the intermediate level [44].

4. CONCLUSION

Based on the results of research and discussion, it can be concluded that the waste management at the Universitas Negeri Malang as a whole is not following the provisions of the Law of the Republic of Indonesia

Number 18 of 2008. The activities that are not yet appropriate are sorting and processing activities. Waste management at the Universitas Negeri Malang according to the UI greenMetric ranking is also still not running optimally because the waste that is processed by the Universitas Negeri Malang is still low, namely, 5-10% of the total organic waste that is processed by ME itself to be used as compost. However, at the Universitas Negeri Malang, there is no visible waste that is scattered or piled up for days because every day the waste in the trash can will be directly dumped into the waste truck and the waste will be directly dumped into the Supit Urang TPA so that in the trash can already provide there is no unpleasant odor.

The green campus program at the Universitas Negeri Malang in 2020 experienced an increase in the rankings in UI GreenMetric. This is because the Malang State University green campus team has begun to work on fixing the data administration forms needed for ranking on UI GreenMetric. Programs regarding green campuses are still not optimal because the level of care and awareness to maintain environmental cleanliness is still lacking, then there is still a lack of education in processing waste and constraints on program financing. However, the green campus programs carried out by the UM green campus team have begun to have an impact on the rankings in UI GreenMetric.

AUTHORS' CONTRIBUTIONS

FHP: concept and design the study, data collection, data analysis, writing the manuscript; S & MA: validation, writing, supervision.

ACKNOWLEDGMENTS

The authors thank to Faculty of Sport Science, Universitas Negeri Malang that support this study. The authors also would like to express the gratitude to all informants.

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