

# Socialization of regional regulations regarding waste management to increase awareness of environmental cleanliness for MSMEs

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## ABSTRACT

Environmental management has become a major issue for Partner Groups, especially those in the Losari Beach area. Awareness regarding the importance of environmental cleanliness has been established with the existence of regulations that regulate environmental management, especially waste management. However, the socialization related to government programs has not touched business actors in Losari Beach. Therefore, this community service aims to provide socialization of PP No. 4 of 2011 regarding the waste management program as an effort to increase awareness of environmental cleanliness. A clean environment can attract domestic and foreign tourists which will directly have an impact on increasing the income of Micro, Small, and Medium Enterprises (MSMEs). The stages of implementing the activities are the preparation stage and the implementation stage using the socialization method. The result of the service is that the community understands the purpose of the PP Regional Regulation No. 4 of 2011 for MSMEs, one of which is protecting the environment as a tourist attraction. The high number of tourists visiting has an impact on purchasing power, thus that Micro, Small, and Medium Enterprises (MSMEs) continue to exist to maintain their business.

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## 1. INTRODUCTION

The awareness of street vendors (PKL) about cleanliness is still very low (Nurheri et al., 2018). Solving hygiene problems, especially in coastal areas, can be conducted through community empowerment (Firdaus et al., 2016). Likewise, research conducted Palutturi et al. (2021a) which conducted a mapping of healthy alleys in the City of Makassar shows that one of the indicators of a healthy city is healthy alleys along with the peaceful environmental arrangements, thus it is important to socialize the hygiene program. Based on the results of these recommendations, our team followed up on the results of this

research by conducting hygiene socialization to business actors around Losari Makassar Beach. Losari Beach, which is the pride of the city of Makassar with its beautiful natural charm, can become a problem if environmental management is not properly maintained, especially waste management.

Waste management is a major concern for countries all over the world (Babaremu et al., 2022; Igalavithana et al., 2022). Poor environmental management coupled with street vendors' awareness of low cleanliness will certainly have an effect on progress that must be jointly developed by a nation (Jumadi et al., 2019). The importance of maintaining cleanliness, especially in areas which are public spaces such as Losari Beach, will certainly bring in foreign exchange, especially in the field of tourism. For this reason, as economic actors and as good citizens, they must take a role in maintaining and preserving the nation's assets, especially tourism assets in Makassar City.

Losari Beach, Makassar City, is a major tourist asset and an icon of Makassar City. The management of public facilities located on Losari Beach, Makassar City, must be maintained so that not only the residents of Makassar City can enjoy it, but tourists visiting Makassar City as well, which will have implications for Makassar City Revenue. Makassar City is the center of the City of South Sulawesi Province, especially in Losari Beach and its surroundings, it is necessary to carry out environmental management. The large number of street vendors who carry out commercial activities selling traditional foods such as grilled banana has added the income of street vendors (Yunus, 2011). The Smart City concept initiated by the Makassar city government has not shown a direction of change yet, especially environmental awareness for street vendors. The impact of the Smart City concept policy, especially the empowerment policy, shows that the criteria for equality, responsiveness and accuracy have not been met with this policy (Ahdin, 2020).

Hygiene socialization is an alternative in conveying health messages (Nasiatin et al., 2021). This socialization was carried out with PP No. 4 2011 concerning Makassar City Waste Management. Based on PP No. 4 of 2011 Article 45 provides sanctions for people who litter, they will get 3 months in prison and a maximum fine of IDR 50,000,000. The regional regulation needs to be disseminated to the public, because it relates to legal sanctions that will be imposed to people who violate the rules.

Losari Beach reclamation has caused quite a high impact on environmental pollution (Jaya, 2012). Losari Beach, which is a tourist destination for the city of Makassar, is of concern to all parties to be managed optimally. Coordination between stakeholders is needed to reduce the impact of environmental pollution in the management of Losari Beach (Rahman, 2014). The synergy of various stakeholders who can be involved in solving various health problems, especially community hygiene (Palutturi et al., 2021b). Is indeed important. This is what drives the academic team to help in providing solutions related to cleanliness problems around Losari Makassar Beach.

Environmental management such as preparing trash bins, garbage containers placed around the Losari Beach pavilion is important in order to have a positive impact on the street vendors' economy (Akil et al., 2021). The existence of street vendors on Losari Beach is a special attraction for tourists. However, the existence of these street vendors can damage the image of public spatial planning, if the street vendors have no awareness regarding the cleanliness, tidiness and beauty of Losari beach (Jayanti, 2016).

Principles and strategies for community empowerment are awareness, ability and willingness as well as commitment to health (Palutturi et al., 2021b). Community participation is one of the concepts in organizing a healthy city (Jo et al., 2015; Palutturi, 2018). Community participation also contributes to program sustainability. Community participation is expected to be involved in keeping the environment clean. Community participation in maintaining a clean environment is the main basis for environmental problems to be resolved properly (Palutturi et al., 2021b).

Handling related to the problem of street vendors who are in Losari Makassar Beach is a special concern for the Makassar City government. In order to maximize the management of Losari Beach in relation to street vendors, the Makassar City government issued Government Regulation no. 80 of 2013 concerning delegation of some of the mayor's authority to the Ujung Pandang District government. The purpose of delegating this authority to the sub-district government is in the hope of providing space for street vendors to carry out business activities with tenants. Street vendors must also maintain public facilities and spaces at Losari Beach for mutual convenience.

Research data shows that street vendors around Losari Beach in 2013-2020 have an average income of IDR 200,000-500,000/day (Riski et al., 2021). Of course, the income potential of street vendors will be maximized, if it is supported by the environment. The awareness of the people in the Losari Beach location regarding the existence of garbage has not been able to be used as a potential for additional family income (Rukminasari et al., 2017). The community does not know and understand how to process waste to be processed into handicrafts that can be resold to add economic value. Sustainable solid waste management practices and perceptions of cleanliness in low-income cities show that the existence of community practices in waste reduction and segregation is strongly correlated with a sense of cleanliness in the community. These results implicitly indicate that by using a positive environmental image and performance in an area, the community can be enthusiastically involved and encourage sustainable waste management practices Permana et al. (2015) thereby increasing income. The Figure 1 is a framework of problems that occur related to the existence of Regional Regulation No. 4 of 2011.

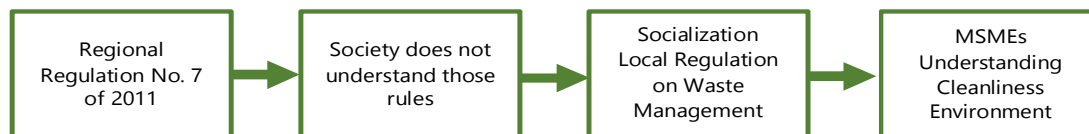


Figure 1. Problem solving framework

This service is important as a first step in providing understanding to the community regarding the regional regulations on waste management, so that the community understands the goals and sanctions for violating these rules, especially MSME actors. Based on the description above, this service program aims to provide socialization of PP No. 4 of 2011 regarding the waste management program as an effort to increase awareness of environmental cleanliness as an attraction for domestic and foreign tourists which will directly impact on increasing the income of Micro, Small and Medium Enterprises (MSMEs).

## 2. METHODS

This service activity was carried out at the Micro, Small and Medium Enterprises (MSMEs) Partner Group in the Makassar Losari Beach Location, with 35 Partners and visitors/tourists in the Losari Beach area. The schedule for implementing community service activities is divided into 3 main activities as follows:

### The Preparation

The preparation for the implementation of the activities was carried out by the Service Team by conducting discussions and understanding together the aims and objectives and reviewing the contents of the regional regulations related to Regional Regulation No. 4 of 2011. The results of the meeting with the Service Team agreed on the location of the service, namely: Around Losari Beach which is the icon of Makassar city, formulating pre-test and post-test questionnaires.

**Table 1.** Activity implementation schedule

Activities	September			
	Week I	Week II	Week III	Week IV
<b>Program Preparation</b>				
a. Team Coordination	√			
b. Questionnaire Making				
<b>Implementation Program</b>				
a. Distribution of Questionnaires (Pre-test)				
b. Local Regulation Socialization		√	√	
c. Data analysis				
<b>Program Evaluation</b>				
a. Questionnaire Distribution (Posttest)				
b. Data analysis				√

### Implementation Program

The implementation phase of community service program activities is carried out using 2 methods, namely: (1) Pre-test. The pre-test was carried out by distributing questionnaires to tenant owners (MSMEs) as well as visitors/tourists in the tourist area of Losari Makassar Beach. The pre-test is distributed before the service team socializes/provides an explanation of the regional regulations regarding waste management and the posttest is an evaluation of the results of the socialization and is distributed to MSMEs or visitors after the socialization is carried out by explaining in detail the contents of the regional regulations related to waste management. The questionnaire can be accessed at the link: [https://drive.google.com/file/d/1wvtoLWuDVa5xK7\\_lu4QsQM4mR\\_k7fEC/view?usp=sharing](https://drive.google.com/file/d/1wvtoLWuDVa5xK7_lu4QsQM4mR_k7fEC/view?usp=sharing). The pre-test is intended to determine the partner's level of knowledge regarding Regional Regulation No. 4 of 2011, how is the behavior of the people in the Losari Beach Area and to check the availability of environmental hygiene facilities and infrastructure in the Losari Beach Area. The posttest was carried out to determine the impact of community service activities carried out; (2) Socialization. Socialization activities are carried out with a number of activities, namely: (a) Visiting Micro, Small and Medium Enterprises Partners means that service activities are carried out to managers; (b) Hold discussions with the manager in charge of MSME actors in the Losari Beach location, especially the Lego-Lego Area; (c) Visiting one by one the tenants in the Lego-Lego area to socialize regulations related to PP No. 4 of 2011 concerning waste management.

### Evaluation (Post-Test)

The evaluation was carried out by distributing questionnaires (post-test) to MSME actors after the socialization was carried out with the aim of evaluating community service activities that had achieved their goals.

## 3. RESULTS AND DISCUSSION

Service partners are MSMEs located on Losari Beach, Makassar City. Losari Beach is one of the icons of South Sulawesi which is located in Makassar City. The beauty of the city of Makassar with the construction of the Losari Beach pavilion is increasingly becoming the attention of domestic and foreign tourists. Losari Beach is always crowded and is a place for visitors to take pictures. The Losari

Beach Pavilion, which has been transformed in such a way, adds to the beauty of the beach to be used as a photo spot for teenagers and families with the 99 Domes Mosque in the background. Tourists can see the statues built all over the Losari Beach pavilion which symbolize all the culture in the province. South Sulawesi. The inclusion of tribe names on Losari Beach Pavilions such as Makassar, Bugis, Mandar, Toraja further adds to the aesthetics of Losari Beach. Visitors can walk around the Losari Beach pavilion by taking pictures against the background of tribe names in South Sulawesi without having to visit the area. Losari Beach Pavilion with culinary treats typical of South Sulawesi such as banana epe'. At the end of the pavilion, visitors can enjoy the beautiful architecture of the first floating mosque in Indonesia, the Amirul Mukminim Mosque.

In 2020, the South Sulawesi provincial government has expanded the Losari Beach public space area, namely the construction of a lego-lego pavilion which was inaugurated on 23 October 2020, a breath of fresh air for MSMEs in the culinary field. The concept of a lego-lego courtyard adjacent to the 99 Domes Mosque gives visitors a romantic impression when enjoying the beach atmosphere at night. Religious nuances with the presence of the 99 Domes Mosque and the presence of MSME actors need to be managed properly, especially waste management.

In Makassar City, the existence of Micro, Small and Medium Enterprises (MSMEs), especially street vendors, has not been able to raise awareness of the environment. Regional Regulation No. 4 of 2011 which regulates waste management has not been socialized properly. The proof is that the results of waste originating from sales such as plastic bottles, food containers, plastic cups have not been able to be managed to get additional income for MSME actors. MSME actors do not have the awareness that cleanliness will affect increased income yet. One of the indicators that will be seen by tourists visiting the tenant/kios is cleanliness.

One of the strategies that can be implemented in an effort to achieve a healthy city is by creating regulations. Regulation is one strategy in health promotion. Regulation is usually carried out with a structural approach to sound public policy. Regarding the development of healthy alleys, regulations are needed to encourage healthy policies (Palutturi et al., 2021b). On this basis, socialization was carried out to MSME actors in Losari Beach, Makassar City regarding regional regulation no. 4 of 2011 concerning Waste Management. This service is carried out in 2 stages of activity, namely the preparation stage and the implementation stage. The preparation stage was carried out by the Service Team from the results of discussions with the Team, it was agreed that the place of service would be carried out in the Losari Beach Area. The pre-test was distributed in 2 ways, namely distributing it via email and distributing it directly to visitors in the Losari Beach area. The identities that have filled out the pre-test are in the Figure 2.

The identities of the respondents who had filled out the pre-test were 5 tenant owners, 2 managers, 28 tenant employees/caretakers and 15 local tourists. The identities of the respondents in the Lego-Lego courtyard are business actors with different educational backgrounds, so that their level of understanding and awareness of the environment also varies. For this reason, it is important to socialize local regulation (PERDA) number 4 of 2011 concerning Waste Management, Makassar city to target MSME players in the Losari Beach area. The total number of respondents who filled out the questionnaire was 50 people, based on the results of the pre-test related to the respondents' knowledge of Regional Regulation No. 4 of 2011, all respondents stated that they did not know, shown in the Figure 3.

The low level of knowledge in this aspect is caused by the fact that there has never been any socialization related to this regional regulation. Some of the questions posed specifically are you aware of Regional Regulation No. 14 of 2011 related to Waste Management. The results of the questionnaire show that 100% of the respondents answered no. The low level of knowledge related to Regional Regulation

No. 4 of 2011 concerning waste management is due to the lack of socialization received by respondents while carrying out activities at Losari Beach. Based on the results of the pre-test, socialization was carried out by collecting data on the number of tenants in the Losari Beach Area, especially in the Lego-Lego Area. Based on the data, there are 35 tenants in the Lego-Lego Area. The following are the Kiosks/tenants located at the Lego-Lego Location, Losari Beach, Makassar.



**Figure 2.** Respondent identity

**Figure 3.** Respondents' knowledge of Regional Regulation No. 4 of 2011 concerning Waste Management



**Figure 4.** MSME actors in Losari Beach, Makassar City

The socialization of the Regional Regulation was carried out to MSMEs managers in the Losari Beach area, this was carried out as an institution that was given the authority to manage the environment, especially the existence of MSMEs and visitors. MSME managers welcome the activities carried out by the Service Team, synergy between various parties is needed to carry out the management of a clean environment optimally.

Explanations and sanctions were explained by the Service Team to MSME managers in the Lego-Lego Area, this is conducted for the managers to know and understand the legal impact that will occur if the local regulation is violated. This understanding is needed by managers as a form of responsibility to the public and managers can also convey these rules to their members.

Regional regulations socialization material was carried out to tenant owners who are in the Losari Beach Area, Makassar City, especially tenant owners who are in Lego-Lego. Each Tenant is visited by the Service Team, to avoid disturbing the sales activities that were carried out by the stall owner. Each tenant owner was given a hard copy of PP No. 04 of 2011 as a guide to be understood. In addition to getting a copy of the regional regulation, the service team also explained the aims and objectives as well as witnesses from the Makassar mayoral regulation.

The charm of public space will be a big problem if there is no seriousness from stakeholders to protect the environment. This problem will have an impact on the low number of tourist visitors. Regional regulation socialization is carried out by conducting socialization to tenant owners by providing an explanation related to the regional regulations. One of the stalls/tenants selling plastic drinks. The impact of plastic waste, if not handled properly will damage the environment. So that one of the kiosks/tenants is the target in providing socialization related to waste management from sales.



**Figure 5.** Introduction of Regional Regulations on Waste Management to MSME managers

**Figure 6.** One of the UKM/friend managers who sells beverages

Based on the results of conversations with tenant managers who sell drinks, they stated that an average of 50-100 glasses a day are produced from the sale of drinks. The waste is immediately disposed of in the trash. Socialization related to waste management has never been carried out, so the owner just throws away the garbage. Piles of plastic waste from drinks and food places are disposed of without any further processing. It can be pictured, there are hundreds of tenants at the Losari Beach location. Lack of public awareness, both local and domestic tourists visiting Losari Beach, Makassar City, which causes piles of garbage to accumulate in a day. Activities related to waste management into craft materials have not been socialized, especially in the Losari Beach area. The main problem is the lack of knowledge and creativity in managing waste generated from plastic/plastic cups.

The dissemination of local regulations on waste management is carried out by explaining to tenant owners regarding the article, specifically the treatment of sanctions. Based on Regional Regulation No. 4 of 2011 article 45 related to criminal sanctions where the Makassar City Government will criminalize people who are caught throwing garbage anywhere in Makassar City.



**Figure 7.** Service team to socialize Regional Regulations to MSME actors

**Figure 8.** Explanation of sanctions for violating Regional Regulations to MSMEs

There is a dissemination of regional regulations and an explanation of the sanctions incurred, the intent and purpose of the regional regulations on waste management, so that people are aware and care

about environmental cleanliness. Environmental cleanliness is considered one of the main factors for the sustainability of health and the comfort of living away from various diseases (Palutturi et al., 2021a). In addition, several studies have shown that environmental cleanliness has an effect on people's income (Netrawati et al., 2022).

The results of the socialization for the service carried out, where MSME actors and managers expect the implementation of this regional regulation by conducting training for MSME actors in waste management, such as managing and transforming waste into creative products of MSME in Losari Beach, especially utilizing waste sourced from their sales as additional source of income for SMEs.

### **Evaluation Program MSME Awareness of Garbage Disposing Behaviour**

Evaluation and monitoring were carried out after the socialization by giving post-test questionnaires after the socialization was carried out. There were changes in the behaviour of MSMEs after the dissemination of regional regulations, such as the awareness of MSME actors and visitors in disposing of trash in its place. One of the question points related to the behaviour of disposing of garbage, the respondent has an awareness to separate waste from the results of sales made.



**Figure 9.** Result of respondent's behavior

The results of the socialization related to waste management, MSME actors and visitors at Losari Beach understand the local regulations. This can be seen from the number of respondents (100%) who understand the existence of regional regulations related to waste management, as evidenced by the behaviour of respondents who are not willing to be fined for littering.



**Figure 10.** Environmental conditions at Losari Beach after local regulation socialization



Apart from carrying out the post-test, the service team re-monitored the tenants' stalls in the Losari Beach area. The evaluation here is to see how far MSME actors comply with and implement Regional Regulation no. 4 of 2011 regarding waste management which was conveyed during the socialization of the local regulation. Service partners have prepared trash and writing bins in the Losari Beach area to dispose of trash in its place. The manager has prepared trash cans in spaces that are easily accessible to visitors.

A clean environment will increase the attractiveness of tourists visiting Losari Beach tourism objects which will directly impact purchasing power. If the purchasing power of tourists increases, it will automatically increase the income of MSMEs. Availability of facilities and infrastructure such as placing trash cans in areas that are easily accessible to visitors, as well as providing signs to dispose of trash in its place.

#### **4. CONCLUSION AND RECOMMENDATIONS**

Socialization PP No. 4 of 2011 concerning waste management with the aim of increasing awareness of environmental cleanliness for MSMEs. Based on the results of community service activities, it can be concluded that the MSMEs in the Losari Beach area has known and given awareness to protect the environment. However, the creativity and skills to process waste with high economic value are still low. The implication of this dedication is that there is awareness from various parties to implement Regional Regulation No. 4 of 2011, other things have a direct impact with this service, the behavior of MSMEs, especially in maintaining a clean environment, is clearly visible from a clean environment. The commitment of universities and MSME actors to follow up on the next program is to conduct training in managing waste into goods of economic value.

The recommendation from this service is that the next service will provide training to Partners in processing waste. Provision of training and skills to encourage innovation and creativity of MSME actors. Processing waste with creativity will be an additional source of income for MSMEs, such as making souvenirs or souvenirs from recycled waste. The suggestions from the results of this dedication are that MSME managers should prepare trash cans that are easily accessible to visitors. MSMEs are encouraged to always sort organic and inorganic waste. Managers who accommodate MSME actors in Losari Beach to provide simulations to utilize inorganic waste that is still suitable for recycling.

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## REFERENCES

- Ahadin, P. S. (2020). *Kebijakan penataan dan pemberdayaan pedagang kaki lima pantai Losari berbasis konsep Smart City* [Doctoral dissertation, Universitas Hasanuddin].
- Akil, A., Yudono, A., Wunas, S., Trisutomo, S., Jinca, M. Y., Ali, M., ... & Jayadi, A. N. (2021). Sosialisasi penataan Pedagang Kaki Lima (PKL) tangguh pandemi di Pantai Losari Kota Makassar. *JURNAL TEPAT: Teknologi Terapan Untuk Pengabdian Masyarakat*, 4(2), 193-206., 4(2). [https://doi.org/10.25042/jurnal\\_tepat.v4i2.208](https://doi.org/10.25042/jurnal_tepat.v4i2.208)
- Babaremu, K. O., Okoya, S. A., Hughes, E., Tijani, B., Teidi, D., Akpan, A., Igwe, J., Karera, S., Oyinlola, M., & Akinlabi, E. T. (2022). Sustainable plastic waste management in a circular economy. *Heliyon*, 8(7), e09984. <https://doi.org/10.1016/j.heliyon.2022.e09984>
- Firdaus, A. M., Pelupessy, J. M., & Tampubolon, J. R. (2016). Strategi penyelesaian masalah sosial ekonomi masyarakat pesisir di Kepulauan Banda Neira, Kabupaten Maluku Tengah. *Jurnal Sosial Ekonomi Kelautan dan Perikanan*, 11(1), 55–74. <http://dx.doi.org/10.15578/jsekp.v11i1.3172>
- Government Regulation no. 80 of 2013 concerning Delegation of Some of the Mayor's Authority to the Ujung Pandang District government.
- Igalavithana, A. D., Yuan, X., Attanayake, C. P., Wang, S., You, S., Tsang, D. C. W., Nzihou, A., & Ok, Y. S. (2022). Sustainable management of plastic wastes in COVID-19 pandemic: The biochar solution. *Environmental Research*, 212(PE), 113495. <https://doi.org/10.1016/j.envres.2022.113495>
- Jaya, A. M., Tuwo, A., & Lanuru, M. (2012). Kajian kondisi lingkungan dan perubahan sosial ekonomi reklamasi Pantai Losari dan Tanjung Bunga. *Jurnal Sains & Teknologi*, 12(1), 46-55.
- Jayanti, R. D. (2016). *Keterkaitan pedagang kaki lima terhadap kualitas dan citra ruang publik di Pantai Losari* [Thesis, Universitas Muhammadiyah Makassar].
- Jo, H. S., Moon, J. Y., Kim, B. G., & Nam, E. W. (2015). Analysis of socio-demographics, self-rated health, social capital, and happiness in a medium-sized healthy city, Republic of Korea. *Journal of Lifestyle Medicine*, 5(2), 68–75. <https://doi.org/10.15280/jlm.2015.5.2.68>
- Jumadi, J., Timang, N. ., Rachman, T., & Paotonan, C. (2019). Analisa kesadaran masyarakat tentang dampak sampah terhadap pencemaran Pantai Losari. *Riset Sains Dan Teknologi Kelautan (SENSISTEK)*, 2(1), 185–189.
- Nasiatin, T., Pertiwi, W. E., Setyowati, D. L., & Palutturi, S. (2021). The roles of health-promoting media in the clean and healthy living behavior of elementary school students. *Gaceta Sanitaria*, 35(1), S53–S55. <https://doi.org/10.1016/j.gaceta.2020.12.015>
- Netrawati, I. G. A. O., Nuada, I. W. I. G. A. D. E. P., Asari, H. Al, & Masyoung, R. I. (2022). Kebersihan lingkungan dan kaitannya terhadap peningkatan pendapatan keluarga Desa Ombe Baru Kecamatan Kediri Kabupaten Lombok Barat. *DEVOTE: Jurnal Pengabdian Masyarakat Global*, 1(2), 184–190. <https://doi.org/10.55681/devote.v1i2.417>
- Nurheri, D., Iskarni, P., & Frananda, H. (2018). Partisipasi pedagang kaki lima dalam pengelolaan kebersihan lingkungan di Kota Solok (Studi kasus di beberapa ruas Jalan Utama Kota Solok). *Jurnal Buana*, 2(4), 360–373. <https://doi.org/10.24036/student.v2i5.244>
- Palutturi, S. (2018). *Healthy cities: Global concepts, local implementation for Indonesia*. Pustaka Pelajar.
- Palutturi, S., Saleh, L. M., Rachmat, M., & Malek, J. A. (2021a). Mapping healthy aisles in Makassar city, Indonesia: implications for community empowerment. *Gaceta Sanitaria*, 35(1), S42–S45. <https://doi.org/10.1016/j.gaceta.2020.12.012>

- Palutturi, S., Saleh, L. M., Rachmat, M., Malek, J. A., & Nam, E. W. (2021b). Principles and strategies for aisles communities empowerment in creating Makassar Healthy City, Indonesia. *Gaceta Sanitaria*, 35(1), S46–S48. <https://doi.org/10.1016/j.gaceta.2020.12.013>
- Peraturan Pemerintah No 4 2011 tentang Pengelolaan Sampah.
- Permana, A. S., Towolioe, S., Aziz, N. A., & Chin Siong Ho. (2015). Sustainable solid waste management practices and perceived cleanliness in a low income city. *Habitat International*, 49(10), 197–205. <https://doi.org/10.1016/j.habitatint.2015.05.028>
- Rahman, N. (2014). *Koordinasi pengelolaan pariwisata di Pantai Losari Kota Makassar* [Thesis, Universitas Muhammadiyah Makassar].
- Riski, M., Jumadi, & Amirullah. (2021). Dinamika pedagang kaki lima di Kawasan Pantai Losari 2000-2019. *Attoriolog Jurnal Pemikiran Kesejarahan dan Pendidikan Sejarah*, 19(1), 125–133.
- Rukminasari, N., Indar, Y. N., Sitepu, F., Siang, B., Parawansa, Suharto, Irmawati, Inaku, D. F., & Yaqin, K. (2017). Pengembangan Bank Sampah sebagai upaya bersih pantai dan pemberian nilai tambah sampah daur ulang di Pantai Losari, Kota Makassar. *Jurnal Administrasi dan Kebijakan Kesehatan Indonesia*, 1(1), 67–75. <https://doi.org/10.20956/pa.v1i1.2310>
- Yunus, A. I. (2011). *Potret kehidupan sosial ekonomi Pedagang Kaki Lima di Kota Makassar (Kasus penjual Pisang Epe'di Pantai Losari)* [Thesis, Universitas Hasanuddin Makassar].
-