



Linguistic Ecology of Makassar's Green Spaces: Navigating Environmental Awareness through Language

Sardian Maharani Asnur^{1*}, Junardin Djamaluddin²

^{1*} UIN Alauddin, Makassar, ²Universitas Hasanuddin, Makassar

email: sardian.maharani@uin-alauddin.ac.id

ABSTRACT

This research investigates the linguistic ecology of Makassar's green spaces and its role in navigating environmental awareness through language. Focusing on popular landmarks in Makassar City, including Losari Beach, Fort Rotterdam, Taman Macan, and Lapangan Karebosi, the study examines the language used in signage (signs and information boards) related to environmental conservation and green space management. This research comprises documentation and surveys to gather data through a combination of linguistics analysis and qualitative research method. There are 60 respondents contributed in the survey (visitors, residents who live around the public green spaces, stakeholders, and groups of the community). The findings identify that there are prevalent language patterns used in signage related to environmental awareness and green space management in Makassar's popular landmarks; language influences people's perception, attitudes, and behavior towards environmental conservation and sustainability practices in Makassar's green spaces through several mechanisms including narratives and framing, cultural relevance, accessibility and inclusivity, targeted communication, education, and awareness, as well as social norms and peer influence. In conclusion, this research contributes to understanding the intricate relationship between language, environment, and society, with implications for environmental education, communication strategies, and policy interventions aimed at fostering greater environmental consciousness in urban settings like Makassar.

Keywords: Environmental Awareness, Green Spaces, Linguistics Ecology, Makassar City, Urban Sustainability.

First Receive:

24 April 2024

Revised:

17 May 2024

Accepted:

2 June 2024

Final Proof Received:

28 June 2024

Published:

31 June 2024

How to cite (in APA style):

Asnur, S. M., & Djamaluddin, J. (2024). Linguistic Ecology of Makassar's Green Spaces: Navigating Environmental Awareness through Language. *ELITE Journal*, 6(1), 1-22.

INTRODUCTION

Makassar, situated in Indonesia's South Sulawesi province, represents a vibrant urban center celebrated for its rich cultural heritage and historical prominence (Adnan, 2017). In recent years, however, the city has undergone rapid urbanization and population expansion, resulting in significant challenges related to environmental sustainability (Nurseto, 2020). Amidst this urban transformation, the green spaces scattered throughout Makassar have emerged as essential components of the city's ecological and social framework (Widyastuti et al., 2019). These green areas, encompassing public parks, green belts, and urban forests, serve

multifaceted roles beyond their ecological function. While they undoubtedly act as lungs for the city, mitigating pollution and providing essential greenery (Supriono et al., 2018), they also serve as vital hubs for social interaction and cultural expression (Prayitno et al., 2021). Makassar's green spaces are not mere physical entities but dynamic landscapes where the intersection between human culture and environmental consciousness is vividly manifested (Suhartono et al., 2017). These spaces offer opportunities for recreation, relaxation, and connection with nature, fostering a sense of community and belonging amidst the urban hustle (Wicaksono et al., 2022). Moreover, they serve as platforms for environmental education and awareness initiatives, facilitating dialogues and actions towards sustainability and conservation. Thus, Makassar's green spaces represent vital nodes in the urban ecosystem, where the intricate relationship between human society and the natural environment unfolds.

The concept of "Linguistic Ecology" provides a theoretical framework for understanding the intricate interplay between language and the environment, drawing parallels between linguistic diversity and ecological health (Grenoble & Whaley, 2021). Initially proposed by Haugen (1972) and later expanded upon by Mühlhäusler (2002), Linguistic Ecology posits that just as biodiversity is crucial for ecological balance, linguistic diversity is essential for maintaining a healthy social and cultural environment (Gazzola, 2023). Within this framework, language is viewed not only as a means of communication but also as a dynamic element that shapes and is shaped by its ecological context. In the context of Makassar's green spaces, the principles of Linguistic Ecology offer valuable insights into how language practices influence and reflect community attitudes and behaviors towards these environments (Fill & Penz, 2018). By examining linguistic diversity within Makassar's diverse linguistic landscape, researchers can gain a deeper understanding of the social and cultural dimensions of environmental awareness and stewardship.

This framework offers a valuable lens through which to examine Makassar's green spaces. By investigating the language used in signage (signs and information boards) plays, public discourse, and community engagement initiatives, we can gain insights into how language shapes and reflects community attitudes and behaviors towards these vital environmental resources. Recent studies in linguistic ecology highlight the power of language in fostering environmental awareness and stewardship. For instance, Indriyani, et al (2024) demonstrates how being multiliterate, or having skills in various forms of communication, is essential for students, especially in dealing with environmental issues. Similarly, Bilandzic & Sukalla (2019) explore how framing environmental issues in culturally relevant narratives can lead to more effective behavior change.

Moreover, scholars have also emphasized the importance of understanding the role of language in environmental discourse and management practices. Research has shown that language used in environmental signage, public speeches, and community engagement initiatives significantly impacts public awareness and behaviors towards conservation efforts (Döring & Trampe, 2008; Saud et al, 2023). Effective communication can foster a deeper connection with nature, promote sustainable practices, and encourage community involvement in environmental stewardship (Pakarinen, S., & Björklund, S., 2018).

Exploring the linguistic dimensions of environmental awareness and management within Makassar's green spaces is imperative for several reasons. Firstly, the city's linguistic diversity presents a rich tapestry of cultural and linguistic perspectives, each potentially influencing attitudes and behaviors towards the environment in unique ways. Understanding how different language communities perceive and interact with urban nature can offer valuable insights into the complex dynamics between language, culture, and environmental

consciousness. Secondly, by examining linguistic practices within these spaces, researchers can identify effective communication strategies that can be leveraged to enhance sustainable urban planning and environmental stewardship efforts. By tailoring messages to resonate with diverse linguistic communities, policymakers and urban planners can foster greater engagement and participation in environmental initiatives. Finally, this research contributes to the broader field of ecolinguistics and urban ecology by shedding light on the role of language in shaping human interactions with urban environments (Pietikäinen & Holmes, 2013). By bridging the gap between linguistics and environmental studies, scholars can develop holistic approaches to address pressing environmental challenges in urban settings. Focused on some of Makassar's most iconic landmarks, those are Losari Beach, Fort Rotterdam, Taman Macan, and Lapangan Karebosi; this study aims to explore the intricate relationship between language and environmental consciousness within the city's urban fabric. These prominent landmarks not only serve as focal points for recreation and cultural expression but also as dynamic arenas where the interaction between language, culture, and the environment unfolds. Through meticulous linguistic analysis and qualitative research methods, this study endeavors to shed light on how language shapes perceptions, attitudes, and behaviors towards urban sustainability and environmental stewardship in Makassar's green spaces.

The investigation into linguistic patterns or signage used and community perception on Makassar city public open space signage in relation with environmental conservation offers invaluable insights into the efficacy of environmental messaging and the challenges faced in fostering greater environmental consciousness among residents and visitors alike. By unraveling the linguistic ecology of Makassar's green spaces, this research aims to contribute to a deeper understanding of the complex interplay between language, environment, and society in urban contexts, with implications for environmental education, communication strategies, and policy interventions aimed at fostering greater environmental stewardship in cities like Makassar.

LITERATURE REVIEW

The study of linguistic ecology in urban green spaces is a rapidly growing field that combines linguistics, environmental studies, and urban planning. This literature review presents a comprehensive summary of pertinent studies and theoretical frameworks that contribute to the investigation of the linguistic ecology of Makassar's green spaces and its impact on the development of environmental consciousness through language.

1. Linguistic Ecology and Environmental Awareness

Linguistic ecology looks into the complicated connection between language and the environment. It looks at how language practices affect and are affected by environmental conditions and how people deal with nature. Linguistic ecology is based on the idea that language, as an important part of human society, changes and adapts to its surroundings, just like living things do in an ecosystem (Haugen, 1972; Mühlhäusler, 1995).

Language diversity within groups and how it affects attitudes and behaviors in the environment is one of the most important parts of linguistic ecology. Gazzola, Templin, & McEntee (2020) say that different languages often hold different cultural views and ways of knowing about the environment, which affects how people see and connect with nature. Additionally, linguistic ecology looks into how language use affects and strengthens efforts to protect and care for the environment. Environmental discourse, which includes the words used in public speaking, education programs, and policymaking, is very important for shaping

how people think about environmental problems and getting them to take action (Döring & Trampe, 2008).

The impact of language on human-nature interactions and environmental decision-making is another area of study in linguistic ecology (Pakarinen, S., & Björklund, S., 2018). Environmental policy, resource use, and protection are all influenced by people's perceptions of and interactions with nature, which are in turn shaped by language. Within the framework of environmental consciousness, linguistic ecology places an emphasis on the ways in which language may influence attitudes and actions related to environmental issues. One way in which linguistic diversity enriches society and culture is through the ways in which it influences people's views on environmental protection and their sense of personal accountability to see it through (Gazzola, Templin, & McEntee; 2020).

Linguistic analysis enables scholars to discern the ways in which language reinforces and reflects environmental awareness in a particular community or setting. The manner in which environmental issues are presented and the stories that are told can influence how the public perceives and reacts to environmental problems (Döring & Trampe, 2008). Furthermore, the influence of linguistic practices among members of a community can either promote or inhibit engagement and environmental consciousness (Saud, et.al, 2023).

It is imperative to comprehend the intricacies of linguistic ecology and its correlation with environmental awareness in order to facilitate impactful environmental education and communication. By acknowledging the impact that language has on attitudes and actions, professionals have the ability to create customized communication tactics that effectively connect with linguistically diverse communities. This, in turn, can facilitate the advancement of environmental awareness and the encouragement of sustainable practices (Pakarinen, S., & Björklund, S., 2018). In essence, linguistic ecology offers a significant perspective for scrutinizing the convergence of language, society, and the environment. Through an investigation into the linguistic aspects of environmental consciousness, scholars can acquire knowledge regarding the manner in which language influences sentiments and actions concerning the natural world. This, in turn, can supplement endeavors that seek to foster environmental stewardship and sustainability.

2. Language and Environmental Communication

Language is of utmost importance in environmental communication, as it serves as a means to transfer information and as a structure to influence perceptions and behaviors related to the environment. The dual function of language plays a crucial role in how cultures comprehend and address environmental challenges. Language enables the widespread distribution of environmental knowledge and information. Language is employed across several media platforms such as public signage, educational materials, policy documents, and digital communications to effectively convey important environmental themes and issues. The efficacy of this communication can greatly impact the public's comprehension and involvement in environmental concerns (Pezzullo and Liu, 2021). The manner in which environmental issues are presented in communication endeavors can significantly influence the public's reaction. Language facilitates the creation of stories that have the power to either galvanize public sentiment or foster indifference. As Moser, et al (2010) stated that emotive language and metaphors employed in discussions on climate change can generate a feeling of urgency, so stimulating community engagement and prompting legislative modifications.

Language establishes a link between environmental challenges and particular cultural contexts, so enhancing their relevance and comprehensibility for diverse groups. Environmental communicators can increase interest and participation in environmental

conservation activities by adopting language that is culturally acceptable. This approach recognizes the variety of environmental viewpoints and the significance of integrating indigenous and local knowledge systems into mainstream environmental discussions (Caniglia et al., 2017).

Efficient environmental communication should be easily understandable and encompassing, addressing a wide range of audiences. Language plays a crucial part in this process by ensuring that information is not only accessible but also comprehensible to individuals with diverse educational levels and linguistic origins. Utilizing simplified scientific terminology and employing several languages can effectively bridge the communication divide between specialists and the general public (Schäfer and Schlichting, 2014).

Language significantly influences environmental legislation and advocacy, shaping public sentiment and policy outcomes through persuasive language supported by scientific evidence (Cox, 2018). Despite challenges such as linguistic barriers and misinformation, these obstacles present opportunities for innovative communication strategies like digital media and interactive content to enhance engagement and understanding (Houston, et al., 2018). Effective language use in environmental communication can deepen public comprehension and involvement in addressing environmental issues.

3. Urban Green Spaces and Environmental Stewardship

Urban green spaces, such as parks, community gardens, and river walks, play a critical role in enhancing the quality of urban life, providing ecological benefits, and fostering environmental stewardship among city residents. Environmental stewardship refers to responsible use and protection of the natural environment through conservation and sustainable practices.

Urban green spaces are vital habitats for various species, providing refuge and breeding grounds for wildlife, preserving biodiversity in urban areas (Dearborn & Kark, 2010). They also contribute to climate regulation by providing shade, reducing the urban heat island effect, and absorbing atmospheric CO₂. Green spaces also play a significant role in sustainable water management, as vegetation and soil help absorb rainwater, reducing runoff and decreasing the risk of flooding. Urban green spaces also promote environmental stewardship by providing educational opportunities, fostering community engagement, and promoting health and well-being. Access to natural areas contributes to physical and mental health benefits, encouraging a greater appreciation and motivation to protect these valuable resources. Healthy communities are more likely to engage in stewardship activities due to their direct, personal connection to their environment.

Maintaining robust urban green spaces can lead to economic benefits, such as increased property values and attractiveness for tourism. These incentives can motivate both public and private sectors to invest in the conservation and expansion of green spaces, aligning economic development with environmental stewardship (Kabisch & Bosch, 2017). Briefly, urban green spaces are more than just aesthetic enhancements; they are essential components of urban ecosystems and key to promoting environmental stewardship. By providing ecological, educational, and community benefits, these spaces play a pivotal role in fostering an engaged, informed, and conscientious urban population.

4. An Overview of Urban Green Spaces in Makassar City

Makassar, the provincial capital of South Sulawesi, Indonesia, is not only a bustling urban hub but also a city that recognizes the importance of integrating green spaces into its

urban landscape. These green spaces range from public parks and waterfronts to urban forests, playing a vital role in the city's ecological and social dynamics.

Residents of Makassar have access to a number of public parks that provide opportunities for recreation and socialization. One such establishment is the renowned Losari Beach Park, which serves as a venue for daily physical activities, social gatherings, and cultural events despite its location on the waterfront. By its scenic waterfront setting, making it a favored destination for both locals and tourists. The integration of cultural events also helps in maintaining and promoting local traditions and community cohesion.



Figure 1. Losari Beach Park

Another example is the recently constructed Lapangan Karebosi, is a significant urban green space in the heart of Makassar. It holds considerable value for the city not just as a recreational area but also as a cultural and social hub. Its importance extends beyond mere greenery, serving multiple roles in urban life and community dynamics. (Sulaiman et al., 2019).



Figure 2. Lapangan Karebosi



Figure 3. Taman Macan

Public spaces have been established along the extensive littoral of Makassar, serving to augment urban aesthetics while also offering opportunities for leisure. As a historical landmark, Fort Rotterdam represents the rich heritage of Makassar. Cultural exploration and the conservation of historical architecture are aided by its adaptive reuse and preservation. Environmental functions are served while the area's aesthetic allure is enhanced by the green landscaping surrounding Fort Rotterdam.

The aesthetic appeal of urban environments is enhanced by green spaces, including parks, gardens, and waterfront promenades; they also aid in the improvement of air quality, biodiversity preservation, and climate resilience. These areas offer urban residents a sanctuary from the stresses and pressures of the city, fostering a sense of tranquility and overall welfare. The incorporation of natural elements and vegetation into the urban environment fosters a lifestyle that is both environmentally sustainable and pleasurable.

METHODOLOGY

In order to effectively investigate the linguistic ecology of Makassar's green spaces and its impact on environmental awareness, a comprehensive research methodology integrating linguistic analysis and qualitative research methods is proposed. This methodology aims to uncover language patterns, perceptions, attitudes, and behaviors towards urban sustainability and environmental stewardship in Makassar. The study focuses on prominent landmarks in Makassar City, including Losari Beach, Fort Rotterdam, Taman Macan, and Lapangan Karebosi, chosen for their significance and accessibility to the public. Samples of participants were employed, comprising 60 contributors in the survey including visitors, residents living near green spaces, stakeholders, and community groups. This ensures representation from various perspectives and demographics. Data were taken through documentation of language use in signage; survey to explore their perceptions, attitudes, and behaviors towards urban sustainability and environmental stewardship. The survey employed Likert-scale questions and open-ended items to capture a comprehensive understanding of participants' perspectives. Findings from linguistic analysis and qualitative research methods were triangulated to provide a comprehensive understanding of the linguistic ecology of Makassar's green spaces.

FINDINGS AND DISCUSSION

The analysis of linguistic patterns in environmental messaging across Makassar's landmarks reveals a range of strategies employed to promote environmental awareness and green space management. These include narratives and framing techniques that highlight the cultural significance of green spaces, efforts to enhance accessibility and inclusivity in environmental communication, targeted messaging tailored to specific audiences, and initiatives aimed at promoting environmental education and awareness. However, the research also identifies challenges, including disparities in environmental literacy and awareness among different language groups, and barriers to effective communication and community engagement.

1. The Way Language Utilized in Signage Within Makassar's Green Spaces to Convey Messages Related to Environmental Conservation and Green Space Management

Based on the observation, it is found that there are 4 kinds of signage in the sites' studied, namely directional and informative signage, ecological information and conservation messages, safety and visitor guidelines, promotion of sustainable practices signage. These signage within Makassar's green spaces serves as a critical tool for conveying messages related to environmental conservation and green space management. Through carefully crafted language, these signs play a pivotal role in informing, educating, and guiding visitors on various aspects of environmental stewardship. The research took place within four

destination places in Makassar City, namely Fort Rotterdam, Lapangan Karebosi, Taman Macan and Pantai Losari.

a. Directional and informative signage

The main purpose of directional signage is to provide directions to visitors or space users about how to reach a certain location or destination in an area. This signage includes signs that show directions to toilets, exits, parking, reception, or other facilities. Meanwhile, informative signage aims to provide basic or specific information about a place, service or rules. This information relates to safety, instructions for use, or facts and data about a place or object. Informative signage include signs stating the opening and closing hours of a place, rules that must be followed in a particular area (such as no smoking or safety instructions), or information about the history or importance of a landmark.

Regarding to the directional and informative signage, here below researchers show the signage used in the green open space started from the entrance of each sites. Based on the observation, all the entrances to the green open spaces studied show the name of the place, the signage is in large writing of the name of the place, as can be seen below:



Figure 5. Entrance of Fort Rotterdam



Figure 6. Entrance of Lapangan Karebosi



Figure 7. Entrance of Pantai Losari



Figure 8. Entrance of Taman Macan

As seen in the preceding section, each entrance is marked with a conspicuous place name. This demonstrates an effort to furnish visitors with pertinent information regarding the area they are approaching. The marker takes the form of signage or large writing that prominently displays the location's name, thereby facilitating visitors' recognition of their intended destination.





Figure 9. Welcome signage at Lapangan Karebosi

Figure 10. Welcome Banner at Fort Rotterdam

However, there are differences in the placement of welcome boards. Only in two locations, namely Fort Rotterdam and Lapangan Karebosi, welcome boards were installed as well. A sign near the entrance of Fort Rotterdam reads: "Welcome to Fort Rotterdam - A Symbol of Makassar's Rich History". This statement encapsulates the site's historical significance and sets the tone for visitors to explore its cultural heritage. However, signage at Lapangan Karebosi, only written "Selamat Datang" which means "Welcome". This shows that these two locations have special importance or have historical or tourist value which is deemed necessary to be greeted with a welcome board. Thus, the placement of welcome boards is only focused on certain places that are considered to have significant value for visitors.

It has been well known that Fort Rotterdam and Lapangan Karebosi are historical sites that have high historical and cultural value for the people of Makassar. The placement of welcome signage at these two locations is not only to welcome visitors, but also as an effort to maintain and promote cultural heritage. By welcoming visitors in a friendly manner and providing clear information, the management of historical sites such as Fort Rotterdam and Lapangan Karebosi can strengthen awareness of the importance of maintaining and preserving cultural heritage for future generations.

It also shown on the way these both location provide directional signage, including the direction of entrance, parking area, prayer room for moslem, toilet, exit way, direction of place or building, special area, path for pedestrian, and so forth.



Figures 11. Directional signage at Fort Rotterdam



Figures 12. Directional signage at Lapangan Karebosi

Directional signages are also found on the other two sites, Taman Macan and Pantai Losari. The signages are typically the same with signage found on both previous sites. Mostly to provide direction for the visitors, but not as much as found in Lapangan Karebosi and Fort Rotterdam.



Figures 13. Directional signage at Pantai Losari



Figures 14. Directional signage at Taman Macan

Apart from that, there is also informational signage in these four places. The signages help the visitors to get the information they need, and comply with existing rules or guidelines.



Figure 15. No Smoking Area signage (Lapangan Karebosi)



Figure 16. Information about the site (Fort Rotterdam)



Figure 17. Information about the site (Taman Macan)



Figure 18. Information about the site (Taman Macan)

Seen from the example of informational signage from the sites, we can assume that the government has an effort to protect these open public spaces. Therefore it can be comfortable and safe places for the society as a place to gather and carry out other outdoor activities.

In Figure 15, we can get the presence of "No smoking area" signage shows awareness of the importance of a clean and healthy environment in green open spaces. This reflects efforts to protect visitors from exposure to cigarette smoke and improve air quality in the area.

Signage that provides information about places, information about the city, and the jargon "Sombere City" (figure 16 & 17) indicates an effort to provide useful information for visitors about the surrounding environment and the identity of the city of Makassar. This information can help visitors to better understand and appreciate the uniqueness and beauty of green open spaces in Makassar City.

In some place, there are also appeal not to use the park location without the management's permission shows respect for green open space as an asset that needs to be maintained and managed well. This shows awareness of the importance of environmental preservation and responsible management of green open spaces in Makassar City.

b. Ecological Information and Conservation Messages

Signage within Makassar's open green spaces educates visitors about the ecological features of the site and promotes conservation messages. Information is provided about the native flora found within the grounds, as well as efforts to preserve and protect these natural resources.



Figure 19. Running text signage in Fort Rotterdam



Figure 20. Signage in Fort Rotterdam

At Fort Rotterdam, there many signage reads: "Kunjungi, Lindungi, Lestarikan", it can be seen in every corner in the location. There is even running text about it after we enter the fort. This message encourages visitors to respect the natural environment and contribute to its conservation.



Figure 21



Figure 22.



Figure 23.



Figure 24

Figures. Ecological Information and Conservation Messages

The presence of signage such as "throw rubbish in its place" (Figure 21) and "thank you for throwing rubbish in its place" (Figure 23) shows awareness of the importance of maintaining environmental cleanliness in green open spaces. This reflects an effort to encourage visitors to act responsibly by throwing away rubbish in the right place, so as to maintain the cleanliness and beauty of green open spaces. Beside that, words and phrase used in figure 23 also shows appreciation for the positive behavior of visitors who have obeyed the rules and acted in accordance with the values of cleanliness and environmental conservation. This can provide positive encouragement to other visitors to follow this good example.

Meanwhile, signage such as "clean is beautiful" (figure 22) and "create comfortable and safe facilities" (figure 24) indicate efforts to promote sustainable practices in managing green open spaces. These messages invite visitors also to maintain the cleanliness, safety and comfort of the environment, as well as pay attention to aspects of natural beauty as part of conservation efforts.

Base on the findings above, we can assume that signage in open public spaces in Makassar City reflects efforts to increase awareness of the importance of sustainable practices and environmental preservation in green open spaces. The messages conveyed through this signage aim to change visitor behavior towards a more responsible attitude towards the environment and sustainability.

c. Safety and visitor guidelines

Language in signage includes safety information and visitor guidelines to ensure the well-being of visitors and the preservation of the site. Signs may provide instructions for safe exploration of the fort's grounds, highlight potential hazards, and outline rules for responsible behavior.



Figure 25. Signage in Lapangan Karebosi



Figure 26. Figure in Taman Macan

Signage advising not to leave valuables in vehicles provides concern for visitor safety. This shows awareness of the risk of crime such as theft that can occur in green open space parking areas. Thus, the management is trying to provide warnings to visitors to be more alert and take precautions. The existence of warnings related to construction project work indicates that green open spaces are undergoing development or improvement. This indicates efforts to repair or improve existing facilities in the green open space. Proper management of construction projects can help improve facilities, increase accessibility, and enhance visitor experiences in green open spaces.

Both signage also reflect attention to the visitor experience in green open spaces. By providing safety warnings and information regarding construction projects, visitors are expected to feel safer and more informed while in the area. This can also increase visitor trust and satisfaction with the management of green open spaces.

d. Promotion of Sustainable Practices

Signage within Fort Rotterdam's green spaces promotes sustainable practices and encourages visitors to minimize their environmental impact. Messages may include tips for reducing waste, conserving water, and respecting wildlife habitats.



Figure 27. Signage of promotion and sustainable practice

The existence of signage on waste bins that provides instructions on the disposal of organic and non-organic waste, as well as classifying waste into recyclable and non-recyclable, shows awareness of the importance of waste management in green open spaces. This reflects a commitment to maintaining a clean and healthy environment by minimizing pollution and reducing the amount of waste that ends up on open land. The signage also reflects efforts to promote sustainable practices among visitors to green open spaces. By providing guidance on proper waste disposal and waste grouping, green open space managers invite visitors to participate in waste reduction and recycling efforts. This is in line with the concept of sustainable development which emphasizes the importance of maintaining a balance between human needs and environmental sustainability.

Moreover, the signage can also function as an effective educational tool to increase public awareness about the importance of waste management and sustainable practices. By providing clear and easy to understand information about waste disposal, visitors can better understand the consequences of their behavior on the environment and hopefully change their behavior to be more environmentally friendly.



Figure 28. Signage to use water wisely

Signage that provides notification regarding the wise use of water at ready-to-drink water taps shows awareness of the importance of maintaining water availability, especially in green open space environments. This reflects efforts to reduce water waste and ensure that this natural resource can be enjoyed by future generations. The signage also reflects efforts to promote wise water use among visitors to green open spaces. By providing warnings or

suggestions on how to use water efficiently, green open space managers invite visitors to act responsibly in their use of this natural resource.

Apart from that, this signage can also function as an effective educational tool to increase public awareness about the importance of wise water use. By providing clear and easy to understand information about practices that can be done to reduce water waste, visitors can better understand the consequences of their behavior on the environment and hopefully change their behavior to be more environmentally friendly.

Signage in open public spaces in that site shows a commitment to promoting sustainable practices regarding the use of natural resources, especially water. This is a positive step in efforts to preserve and manage green open spaces, and can contribute to creating a cleaner, healthier and more sustainable environment.

The findings from the observation of signage in green open spaces in Makassar provide valuable insights into the efforts made to promote environmental awareness, safety, and sustainable practices within these areas. The presence of markers displaying place names at each entrance facilitates visitor orientation and enhances their overall experience. According to Environmental Design Theory, clear signage helps users navigate and understand their environment, contributing to a positive user experience (Nasar, 2008). Additionally, the use of welcome boards at certain locations like Fort Rotterdam signifies the cultural and historical significance of these sites. This aligns with the concept of Place Attachment, which suggests that individuals develop emotional bonds with places based on their personal experiences and perceptions (Lewicka, 2011).

Clear and concise instructions, such as "throw rubbish in its place" and "No smoking area," serve as behavioral cues that guide visitors' actions. The Cognitive-Behavioral Theory posits that individuals learn and adopt new behaviors through repeated exposure and reinforcement (Bandura, 1977). By providing straightforward instructions, these signs facilitate compliance with environmental regulations and promote a culture of responsibility and respect for the environment.

Signage advocating for environmental cleanliness, proper waste disposal, and water conservation reflects a commitment to sustainability and eco-consciousness. The Theory of Planned Behavior posits that attitudes, subjective norms, and perceived behavioral control influence individuals' intentions to engage in pro-environmental behavior (Ajzen, 1991). By providing clear instructions and reinforcement messages ("thank you for throwing rubbish in its place"), these signs aim to shape visitors' attitudes and norms toward responsible environmental stewardship. The use of words or phrases like that in signage employs positive reinforcement techniques. This approach acknowledges and reinforces desirable actions, fostering a sense of accomplishment and pride among visitors who adhere to environmental guidelines. According to Psychological Reactance Theory, individuals are more likely to comply with requests when they feel appreciated rather than compelled (Brehm, 1966). By expressing gratitude, these signs encourage continued compliance with environmental norms.

Signage advising visitors not to leave valuables in vehicles and warnings about construction project work demonstrate a concern for visitor safety and security. This aligns with the Risk Perception Theory, which suggests that individuals' perceptions of risk influence their behavior and decision-making (Slovic, 2000). By raising awareness of potential risks, such signage aims to encourage precautionary actions and reduce the likelihood of adverse incidents.

The use of phrases like "clean is beautiful" and "create comfortable and safe facilities" employs persuasive language to evoke positive emotions and associations with

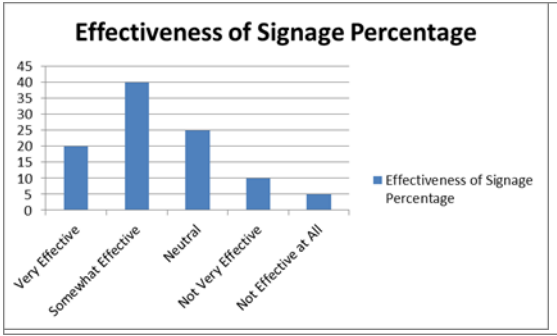
environmental stewardship. This resonates with Narrative Persuasion Theory, which emphasizes the power of storytelling and positive messaging in influencing attitudes and behaviors (Green & Brock, 2000). By framing environmental care as aesthetically pleasing and conducive to comfort and safety, these words in the signs seek to motivate visitors to adopt sustainable practices and encourage them to uphold these standards through their actions.

Signage that uses evocative language to convey messages, such as "Kunjungi, Lindungi, Lestarikan" ("Visit, Protect, Preserve"), taps into the power of narrative persuasion and emotional appeal. According to the Elaboration Likelihood Model (Petty & Cacioppo, 1986), messages that elicit emotional responses are more likely to be processed deeply and remembered. By invoking emotions like empathy and responsibility, these signs foster a sense of connection to nature and motivate visitors to engage in conservation efforts.

The use of words and phrases in signage plays a crucial role in shaping visitors' attitudes, behaviors, and perceptions toward environmental conservation in green open spaces. By leveraging principles from psychology, communication theory, and environmental education, these signs effectively communicate key messages, elicit emotional responses, and encourage sustainable practices among visitors.

2. Community Perception on Makassar City Public Open Space Signage in Relation with Environmental Conservation and Management

Based on the survey distributed to 60 participants, it can be concluded that the community's impression of signs in public open spaces in Makassar City is generally positive. The survey reveals a positive trend, a significant portion (70%) notices signage related to environmental conservation. The perceived effectiveness is also encouraging, with 60% finding it impactful in raising awareness. This suggests signage plays a valuable role in environmental efforts. Can be seen on the graphic below,



Graphic 1.

Graphic 2

Moreover, the high preference for waste management instructions (78%) and environmental tips (65%) provides valuable insight. This high preference for clear instructions regarding waste management in public spaces shows that people need specific and easy-to-understand guidance to manage their waste properly when in green spaces. These instructions are very important because public spaces often produce large amounts of waste. With clear instructions, it is hoped that it can reduce the amount of rubbish scattered around and increase public awareness and participation in maintaining a clean environment. Respondents also expressed their interest in environmental tips that can be found in public spaces. These

tips can include practical suggestions such as how to reduce plastic use, save water, or how to keep green spaces clean. These tips not only provide knowledge, but can also inspire environmentally responsible behavior.

Although signage has an important role in providing instructions and tips to the public, this research shows that signage is not the only source of information that the public relies on. In addition to signage, social media and word of mouth were also identified as important sources of information. As many as 52% of respondents got information through social media, while the other 48% through direct communication with other people. This shows that an effective communication strategy must include multiple channels, not just relying on signage but also harnessing the power of social media and interpersonal communication networks.

The findings indicate that signage plays a significant role in raising awareness about environmental conservation among visitors to public open spaces in Makassar City. This suggests that signage serves as an effective communication tool for conveying important messages related to environmental protection and sustainable behaviors. Despite the overall positive perception of signage effectiveness, there are opportunities for improvement. Respondents' suggestions highlight the importance of continuously refining signage design and content to ensure maximum impact and engagement. While signage is a prominent information source, the survey results underscore the importance of complementing signage with other communication channels, such as social media and community. The survey findings emphasize the need for inclusive communication strategies, including multilingual signage, to effectively engage diverse community members and promote environmental stewardship among all residents of Makassar City.

Landry and Bourhis (1997) and Gorter (2006) highlight the significance of visible language in public spaces as a reflection of sociolinguistic dynamics and cultural identity. In the context of environmental signage, the visible language on signs plays a crucial role in conveying messages related to environmental conservation and sustainable behaviors. The survey findings confirm the importance of signage as a prominent communication tool in shaping public perceptions and behaviors towards environmental stewardship in Makassar City's public open spaces.

According to environmental awareness theory, raising public awareness about environmental issues is essential for promoting individual and collective action towards sustainability (Steg et al., 2015). The survey findings support this theory by demonstrating that signage plays a significant role in increasing awareness about environmental conservation among visitors to public open spaces in Makassar City. By conveying important messages related to environmental protection and sustainable behaviors, signage contributes to the cultivation of environmental consciousness and encourages proactive engagement in conservation efforts.

The results highlight the importance of complementing signage with other communication channels, such as social media and community engagement initiatives. This aligns with the concept of multimodal communication, which emphasizes the use of multiple channels and formats to effectively convey messages (Forceville, 2020). By integrating signage with digital platforms and community outreach activities, stakeholders can reach a wider audience and reinforce messaging, thereby enhancing the overall impact of environmental communication efforts.

The preferences of particular categories of information displayed on signs, such as directions for waste management and suggestions for environmental protection, highlight the significance of customizing the content to address local environmental issues and fulfill

the requirements of the community. This is consistent with studies on audience segmentation and message targeting, which highlights the need of tailoring communication materials to connect with certain audience categories (Moser and Dilling, 2011). By ensuring that signage content is in line with local priorities and interests, stakeholders can improve the relevance and efficacy of transmitting environmental messages to inhabitants of Makassar City. The results emphasize the significance of employing comprehensive communication tactics, such as using signage in many languages, to successfully involve a wide range of community people in environmental conservation efforts. This is in accordance with the principles of fairness and inclusivity.

CONCLUSION

Seeing the signs in Makassar's green spaces gives us useful information about the work that's being done to promote safety, environmental understanding, and eco-friendly habits in these places. Clear and concise signs make it easier for people to find their way around and understand their surroundings, which lead to a good user experience. Putting up welcome boards in some places also shows that these places are important culturally and historically, which helps people feel connected to their surroundings. Environmental laws are easier to follow when there are behavioral cues and directions on signs. This also encourages a culture of responsibility and respect for the environment. Supporting clean environments, proper trash disposal, and water saving through signs shows a dedication to sustainability and eco-friendliness. Using techniques for positive reinforcement, like showing gratitude, helps people keep following the rules in their surroundings. Putting up signs about safety and security issues makes people more aware of the risks and pushes them to take precautions. Using persuasion and stories in signs makes people feel good and makes them think of being good to the environment, which encourages them to start doing things that are better for the environment. Signage that uses emotive language and emotional appeal helps people feel connected to nature and encourages them to help protect it. Overall, the words and phrases used in signs have a big impact on how people feel, what they do, and how they think about protecting the environment in Makassar City's green areas.

Signs in public places are very important for spreading messages about caring for the earth and acting in ways that are good for the world. In line with the idea of environmental awareness, it makes visitors more aware. Environmental communication efforts should use more than just signs. For example, social media and community involvement projects can help make the signs more effective. Content should be tailored to local needs, like how to deal with trash and protect the environment. To get people from all walks of life involved in environmental stewardship, it's important to use inclusive communication tactics, like multilingual signs. Overall, signs in Makassar City's public places affect how people think about and act toward environmental responsibility in many ways.

REFERENCES

- Aronin, L., & Laoire, M. Ó. (2004). Exploring multilingualism in cultural contexts: Towards a notion of multilinguality. [Trilingualism in family, school and community, 11-29.](#)
- Bilandzic, H., & Sukalla, F. (2019). The Role of Fictional Film Exposure and Narrative Engagement for Personal Norms, Guilt and Intentions to Protect The Climate. *Environmental Communication*, 13(8), 1069-1086. <https://doi.org/10.1080/17524032.2019.1575259>

- Cox, R. (2018). "Environmental Communication and the Public Sphere." [Sage Publications](#).
- Dearborn, D. C., & Kark, S. (2010). Motivations for conserving urban biodiversity. *Conservation biology*, 24(2), 432-440. <https://doi.org/10.1111/j.1523-1739.2009.01328.x>
- Döring, M., Penz, H., & Trampe, W. (Eds.). (2008). *Language, Signs and Nature: Ecolinguistic Dimensions of Environmental Discourse*: L. [Stauffenburg Verlag](#).
- Epstein, M. J. (2018). *Making sustainability work: Best practices in managing and measuring corporate social, environmental and economic impacts*. [Routledge](#).
- Fill, A., & Penz, H. (Eds.). (2018). *The Routledge handbook of ecolinguistics*. [New York: Routledge](#).
- Forceville, C. (2020). *Visual and multimodal communication: Applying the relevance principle*. [Oxford University Press, USA](#).
- Gazzola, M. (2023). Language policy as public policy. In *Epistemological and theoretical foundations in language policy and planning* (pp. 41-71). [Cham: Springer International Publishing](#).
- Gazzola, M., Templin, T., & McEntee-Atalianis, L. J. (2020). Measuring diversity in multilingual communication. *Social Indicators Research*, 147(2), 545-566. <https://doi.org/10.1007/s11205-019-02161-5>
- Gorter, D. (2006). *Linguistic landscape: A new approach to multilingualism*. [Clevedon: Multilingual Matters](#).
- Grenoble, L. A., & Whaley, L. J. (2021). Toward a new conceptualisation of language revitalisation. [Journal of Multilingual and Multicultural Development](#), 42(10), 911-926.
- Haugen, E. (2001). The ecology of language. *The ecolinguistics reader: Language, ecology and environment*, 57-66.
- Holmes, B. (2011). *Citizens' engagement in policymaking and the design of public services*. Canberra: [Parliamentary Library](#).
- Houston, Donna, Jean Hillier, Diana MacCallum, Wendy Steele, and Jason Byrne. "Make kin, not cities! Multispecies entanglements and 'becoming-world'in planning theory." *Planning theory* 17, no. 2 (2018): 190-212.
- Indriyani, V., Atmazaki, A., & Ramadhan, S. (2024, February). Promoting Environmental Awareness through language learning: A study on the Integration of Environmental Education in The Classroom. [In AIP Conference Proceedings \(Vol. 3001, No. 1\). AIP Publishing](#).
- Kabisch, N., & Van Den Bosch, M. A. (2017). Urban green spaces and the potential for health improvement and environmental justice in a changing climate. *Nature-Based Solutions to Climate Change Adaptation in Urban Areas: Linkages between Science, Policy and Practice*, 207-220. [DOI 10.1007/978-3-319-56091-5_12](https://doi.org/10.1007/978-3-319-56091-5_12)
- Landry, R., & Bourhis, R. Y. (1997). Linguistic landscape and ethnolinguistic vitality: An empirical study. [Journal of Language and Social Psychology](#), 16(1), 23-49.
- Moser, S. C. (2010). Communicating climate change: history, challenges, process and future directions. *Wiley Interdisciplinary Reviews: Climate Change*, 1(1), 31-53.
- Moser, S. C., & Dilling, L. (2011). Communicating climate change: Closing the science-action gap. [The Oxford handbook of climate change and society](#), 161-174.
- Myerson, G., & Rydin, Y. (2014). *The language of environment: A new rhetoric*. [Routledge](#).

- Mühlhäusler, P. (2002). Linguistic ecology: Language change and linguistic imperialism in the Pacific region. [Routledge](#).
- Pakarinen, S., & Björklund, S. (2018). Multiple language signage in linguistic landscapes and students' language practices: A case study from a language immersion setting. [Linguistics and Education, 44](#), 4-11.
- Pezzullo, P. C., & Liu, J. (2021). Rethinking publics and environmental communication in Western and Eastern cultures. [The Handbook of International Trends in Environmental Communication](#), 206-219.
- Saud, J., Susanty, L., & Pattiasina, P. J. (2023). Exploring the Influence of the Environment on Students' Second Language Acquisition: A Comprehensive Psycholinguistic Study. [RETORIKA: Jurnal Ilmu Bahasa, 9\(2\), 174-184](#).
<https://doi.org/10.55637/jr.9.2.7724.174-184>
- Schäfer, M. S., & Schlichting, I. (2014). Media Representations of Climate Change: A Meta-Analysis of the Research Field. *Environmental Communication*, 8(2), 142–160.
<https://doi.org/10.1080/17524032.2014.914050>
- Steg, L., Bolderdijk, J. W., Keizer, K., & Perlaviciute, G. (2015). An integrated framework for encouraging pro-environmental behaviour: The role of values, situational factors and goals. [Journal of Environmental Psychology, 43](#), 21–34.
- Vargas-Hernández, J.G., Pallagst, K., Zdunek-Wielgolaska, J. (2018). Urban Green Spaces as a Component of an Ecosystem. In: Marques, J. (eds) *Handbook of Engaged Sustainability*. Springer, Cham. https://doi.org/10.1007/978-3-319-71312-0_49

