

ARTICLE

Faith, Culture, and the River: Socio-Religious Dimensions of Waste Disposal Practices in Indonesia

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Abstract

Environmental degradation caused by poor waste management has become an urgent global issue, particularly in rapidly urbanizing cities like Makassar, Indonesia, where rivers have long been treated as natural dumping sites. This research aims to analyze how socio-cultural practices and Islamic religious values shape community behavior in waste disposal along Makassar's riverbanks. Using a qualitative approach, the research employed in-depth interviews, observation, and documentation to capture the perspectives of residents, community leaders, and religious figures. Data were analyzed through thematic interpretation and triangulated to ensure validity and depth. The findings reveal that waste management behavior is strongly influenced by generational habits and weak social norms, while religious teachings emphasizing cleanliness as part of faith are not consistently translated into environmental action. The study further shows that collaboration between local government and religious institutions can strengthen environmental awareness and transform these values into concrete practices. The implication of this research is that integrating religious ethics with community-based environmental programs can create sustainable behavioral change and enrich sociological discourse on faith-based environmental movements.

Keywords: Socio-Cultural Values; Islamic Teachings; Riverbanks; Waste Management; Environmental Sociology

Degradasi lingkungan akibat pengelolaan sampah yang buruk telah menjadi isu global yang mendesak, terutama di kota-kota yang berkembang pesat seperti Makassar, Indonesia, dimana sungai sejak lama diperlakukan sebagai tempat pembuangan alami. Penelitian ini bertujuan untuk menganalisis bagaimana praktik sosial-budaya dan nilai-nilai keagamaan Islam membentuk perilaku masyarakat dalam isu pembuangan sampah di sepanjang bantaran sungai Makassar. Dengan menggunakan pendekatan kualitatif, penelitian ini dilakukan melalui wawancara mendalam, observasi, dan dokumentasi untuk menggali perspektif warga, tokoh masyarakat, dan pemimpin agama. Data dianalisis secara tematik dan divalidasi melalui triangulasi untuk memastikan kedalaman dan keabsahannya. Temuan penelitian menunjukkan bahwa perilaku pengelolaan sampah sangat dipengaruhi oleh kebiasaan turun-temurun dan lemahnya norma sosial, sementara ajaran agama tentang kebersihan sebagai bagian dari iman belum sepenuhnya diterapkan dalam tindakan lingkungan. Penelitian ini juga menemukan bahwa sinergi antara pemerintah daerah dan institusi keagamaan dapat memperkuat kesadaran lingkungan dan mentransformasikan nilai-nilai tersebut ke dalam praktik nyata. Implikasi penelitian ini adalah bahwa integrasi etika keagamaan dengan program lingkungan berbasis komunitas dapat menciptakan perubahan perilaku yang berkelanjutan serta memperkaya kajian sosiologis tentang gerakan lingkungan berbasis iman.

A. INTRODUCTION

Environmental problems have become one of the most pressing global challenges, with waste management emerging as a critical issue that reflects human behavior towards nature. Across the world, improper waste disposal threatens ecosystems and biodiversity and poses serious risks to public health and social well-being. The accumulation of waste, particularly in waterways, exacerbates flooding, contaminates water supplies, and disrupts the balance of natural systems. Scholars emphasize that these challenges cannot be resolved through technology alone but require understanding human behavior, values, and cultural orientations toward the environment (Koehrsen 2021; Sarkodie and Owusu 2021).

In Indonesia, the problem of waste disposal is especially evident in large urban centers such as Makassar. Dumping waste into rivers, creeks, and drainage channels remains a common practice despite government programs and campaigns promoting cleanliness. This habit has deep socio-cultural roots, where rivers are historically regarded as acceptable places for disposal, reinforced by limited access to proper waste management facilities. In Makassar, a city with rapid urban growth and the largest metropolitan area in Sulawesi, poor waste practices directly affect water quality, aesthetics, public health, and the livelihoods of low-income communities living along riverbanks. This situation reflects structural limitations—such as ineffective waste collection systems and weak enforcement of environmental laws—and persistent socio-cultural practices and a lack of integration of religious values into everyday waste management behavior.

Figure 1.
Garbage Along the River



Source: Personal Documentation

Previous studies in Indonesia have explored different approaches to waste management, ranging from technological solutions to community-based initiatives (Asteria and Heruman 2016a, 2016b; Mukaromah and Kusumastuti 2021; Syahli and Sekarningrum 2017; Takbiran 2020). International research has also highlighted innovative models of waste governance, including circular economy practices and social-capital-based management (Borchard et al. 2022; Fang et al. 2023; Fehr et al. 2020; Gull et al. 2023; Midani 2023; Sarkodie and Owusu 2021; Takbiran 2020). However, only a few studies have strongly emphasized the role of religious ethics and community values in shaping waste-related behavior. For instance, Mangunjaya and Praharawati (2019) examined fatwas on environmental protection in Indonesia, Irawan (2022) studied *pesantren*-based ecological practices, and Mulya & Salvi (2024) analyzed Islamic eco-*pesantren* as models of environmental pedagogy. Similarly, Yandri et al. (2023) explored

'waste *sadaqah*' initiatives as faith-driven waste management, while Koehrsen (2021) addressed how Muslim leaders globally shape climate responses. These studies demonstrate the potential of religious frameworks in environmental conservation but rarely address the lived practices of Muslim-majority urban communities such as Makassar.

Despite these advances, there remains a clear gap in understanding how socio-cultural norms and Islamic teachings influence people's everyday waste management behavior in urban Indonesia. Existing studies treat religion as an abstract ethical background rather than an active force embedded in daily practices and institutions. Few studies systematically explore how religious leaders, mosques, and local Islamic forums can influence environmental awareness and behavior. This gap is particularly urgent given the continued waste crisis in Makassar, where efforts by both government and NGOs have had limited success in changing community practices. Addressing this gap is important empirically and theoretically, as it connects environmental sociology with the sociology of religion in the Global South.

This study examines the interplay between socio-cultural practices and Islamic religious values in shaping waste disposal behavior along Makassar's riverbanks. Specifically, it investigates how religious teachings on cleanliness (*thaharah*), community norms, and institutional influences from mosques and religious leaders intersect with environmental conditions and infrastructure. The central argument is that addressing waste problems in Makassar requires more than infrastructural solutions: it also demands the integration of religious ethics and socio-cultural norms into environmental practices. Academically, this research contributes by filling the gap in literature on religion and environmental sociology, providing a contextualized case from an Indonesian Muslim-majority city. By highlighting the role of religious actors and values in environmental behavior, the study opens new pathways for sociological debates on

environmental crises, cultural practices, and the potential of faith-based initiatives for ecological sustainability.

B. METHODOLOGY

This research uses qualitative methods (Creswell 2013; Upe 2022) to deeply understand the perspectives of socio-cultural, and religious aspects that influence waste disposal behavior on the banks of rivers, creeks and ditches in Makassar City. The qualitative method was chosen because it allows the exploration of people's behaviors, attitudes, and views in their social context in a holistic manner. This study was conducted in Pa'baeng-baeng Village, Tamalate District, Makassar City, where some tributaries and ditches are often used as garbage dumps. This research was conducted in several locations along the Makassar River, creeks and ditches often used as waste disposal sites. Data was collected through in-depth interviews with people living along the riverbanks, community leaders and religious leaders. This was chosen because they were directly involved in activities in the community, especially in terms of experience and in-depth understanding of conditions in the surrounding environment. The interviews were semi-structured, allowing flexibility for informants to provide broader answers regarding waste disposal habits and their views on socio-cultural and religious factors.

Table 1.

The Following is A Table of Research Informants

No	Informant Type	Informant Code Number	Total
1	Riverbank residents	Info-1, info-2, info-4, info-6, info-7, info-8, info-9, info-10	8
2	Community Leaders	info-3, info-14	2
3	Student	Info-12	1
4	Religious Leaders	Infor-5, info-13	2
5	Neighborhood Chief	Info-15	1
6	Teacher	Info-11	1
Total			15

In addition, researchers conducted direct observation (Bhangu et al. 2023) to directly observe people's waste disposal behavior and the environmental conditions around the riverbanks. The findings were then interpreted to understand the factors influencing waste disposal behavior. Data validity was maintained through triangulation (Aspers and Corte 2019) comparing results from interviews, observations, and documentation. With this method, the research identifies suitable solutions based on an in-depth understanding of the socio-cultural and religious conditions that underlie waste disposal behavior in Makassar.

C. RESULT AND DISCUSSION

This research resulted in several important findings found by using the socio-cultural analysis perspective, and the religious perspective that influences waste disposal behavior on riverbanks in Makassar City. The research results can be described in the following main themes:

1. *The Analysis on Socio-Cultural and Religious Values Aspects*

The This study found that the analysis of socio-cultural aspects related to waste disposal behavior on riverbanks and tributaries and parasites shows a close relationship between the community's habits deeply rooted in daily life. In some areas, especially in communities close to rivers, rivers are still considered an important part of the social ecosystem, where all daily activities occur , including disposing of waste. This habit, which has been passed down from generation to generation, is considered normal and socially acceptable (Brennan and Portman 2017).

The local culture that sees rivers as 'natural dumping grounds' complicates behavior change efforts, especially since environmental awareness has not spread evenly. The lack of public knowledge about the negative impacts of dumping waste into rivers, both for the health of the environment and the lives of the people themselves, is a major factor that

perpetuates this behavior. The lack of socialization about the dangers of environmental pollution and its long-term impacts means that people do not feel the need to change this old habit (Betak 2019; Farfán et al. 2018).

In addition, social norms in the communities around the riverbanks tend to be weak regarding providing social sanctions against littering behavior. The absence of strict supervision from local authorities or clear social sanctions means that people do not feel their actions have direct consequences. This is in line with the expression :

Yes, sir. There is no one to tell you when you throw trash in the river. People are used to that, so it's like they've made it a habit, the government forbids nothing. (Informant-08)

This informant confirmed that the community carelessly littered along the riverbanks. In some places, this behavior is even still considered normal so that it does not trigger criticism from the surrounding environment. As a result, although some individuals may be aware of the adverse impacts, there is very little social pressure to change.

The next finding is that the analysis of religious aspects related to waste disposal behavior on riverbanks in Makassar shows a gap between religious teachings and people's daily practices. In the teachings of Islam, which is followed by the majority of the population of Makassar City, cleanliness is part of faith. This teaching covers personal hygiene, and environmental hygiene, including preserving nature and water resources including river water (Begum et al. 2022). However, applying this teaching in the context of environmental conservation has not been optimal.

Findings from observations and information through interviews with several local religious leaders who live around the Makassar city riverbanks, awareness of the importance of protecting the environment does exist in people's understanding. However, it has not been implemented consistently (Raziq et al. 2024). Many people understand that

cleanliness is a religious obligation, but cleanliness is often perceived as limited to personal and household hygiene aspects. Responsibility for the cleanliness of the environment, including rivers, is still not a major concern in daily life.

The separate understanding between personal hygiene and environmental hygiene causes people to ignore the adverse effects of their behavior in terms of society on the surrounding environment (Wijsen and Saptaningtyas 2021). Dumping garbage in rivers, although contrary to religious values, often occurs due to lax social norms and a lack of emphasis from religious leaders on the importance of maintaining environmental cleanliness as an integral part of Islamic teachings. Therefore, the role of religious leaders is crucial in internalizing more holistic religious values related to environmental conservation. A more intensive and targeted faith-based approach can help change community behavior by emphasizing that maintaining environmental cleanliness is part of worship and the moral responsibility of each individual as a Muslim or other religion.

Alternative solutions from a religious perspective emphasize the importance of incorporating religious principles to raise public awareness. Based on Islam's teachings, which emphasize the importance of human kindness and compassion as a means to overcome human weakness, it can be a valuable guide for the community in overcoming poverty (Mohidem and Hashim 2023). In Islam, cleanliness refers to the cleanliness of oneself and the surrounding environment. This understanding can explain the belief that creating a healthy environment, especially in neighborhoods, is in line with religious teachings. For this reason, the Ummah needs to refer to this more often in religious rituals.

Mosques and Islamic study group assemblies as a means of environmental education is also considered an effective step. These places of worship are often centers of social and religious activity, so messages about the importance of maintaining environmental cleanliness can be

spread more widely. Through Friday sermons, recitations or religious discussions, people can be invited to understand better that preserving the river is a social responsibility, and part of a religious obligation. Religious leaders can also lead a movement to clean up the surrounding environment as a tangible example to the community (Koehrsen et al. 2021). By involving the community in real actions, such as cooperation activities to clean the river, the community will more easily accept and internalize moral messages. With this faith-based approach, people's behavior related to littering is expected to change, in line with their spiritual values. The findings on this religious aspect can be explained in the following table:

Table 2.
Findings in Religious Aspects

Aspect	Findings	Recommendations/ Solutions
Religious Teachings	Religion teaches that cleanliness is part of faith, including personal hygiene and environmental cleanliness.	Promote the understanding that environmental cleanliness is part of worship and faith.
Practice/Understanding Gap	People understand the importance of cleanliness, but its implementation is limited to personal and household hygiene.	An educational approach is needed to connect environmental cleanliness with religious responsibility.
Role of Religious Leaders	Religious leaders have not consistently emphasized the importance of protecting the environment in sermons and religious activities	Religious leaders should be actively involved in delivering messages of environmental preservation
Social and Cultural Norms	Waste disposal into rivers still occurs due to permissive social norms and lack of social pressure against environmental violations.	Strengthen social norms through religious teachings emphasized in public spaces and places of worship.
Effective Dissemination Tools	Mosques and religious study groups (<i>majelis taklim</i>) are strategic places for environmental education as they are centers of socio-religious life.	Use sermons and religious activities to convey environmental messages and encourage concrete action.

2. Environmental Factors, Infrastructure and Waste Disposal Timing

Environmental factors, limited infrastructure and the timing of waste disposal around the riverbanks play an important role in the practice of littering. Observations show that the lack of facilities, such as adequate temporary waste disposal sites (TPS), leaves communities with no practical option but to dump waste directly into the river. The distant location of TPS or the absence of such facilities around the river exacerbates the problem, as people find it difficult to manage their household waste properly.

The absence of good waste management infrastructure in densely populated areas around riverbanks is also a major cause. Not all areas are evenly served by the city's waste collection system, so much waste is piled up or disposed of carelessly. This causes the river to become an alternative dumping ground for the community. In some cases, the existing waste management system does not function optimally, so waste that has been collected is also not immediately transported (Narethong 2020). The lack of waste management facilities also creates bad habits in people's behavior, where they feel that throwing waste into the river is the easiest solution and has no immediate consequences. In addition, the dirty and unorganized environment around the riverbanks worsens the condition, as people tend to imitate the same behavior as their neighbors.

Last but not least, there is no fixed time for waste disposal. This causes accumulation of waste at certain hours which results in waste that cannot be managed properly by the waste cleaning team. If the garbage disposal time has been determined, the garbage cleaning team can access and clean up the garbage easily (Wu et al. 2018). Therefore, environmental aspects, infrastructure improvements and waste disposal time are needed to facilitate the community in better waste management. Providing more and more accessible polling stations, as well as increasing the frequency of waste collection, will help reduce the practice of littering in rivers and improve environmental quality.

Table 3.

Findings and recommendations/Solutions

Aspect	Findings	Recommendations /Solutions
Availability of Waste Disposal Sites (TPS)	Waste disposal sites (TPS) are inadequate or unavailable near riverbanks, leading people to dump waste directly into the river.	Increase the number of accessible TPS around riverbank areas.
Waste Transportation Infrastructure	Not all areas are served by the municipal waste collection system; the transportation system is also not optimal.	Ensure equitable waste collection service and optimize the waste management system.
Surrounding Environmental Conditions	Dirty and disorganized surroundings encourage people to imitate littering behavior.	Organize the environment and conduct community-based behavioral change campaigns.
Habits and Social Behavior	Some community members see dumping waste into the river as a practical solution without immediate consequences.	Provide public education and strengthen penalties or social monitoring for cleanliness violations.
Waste Disposal Time	Waste disposal times are irregular, causing accumulation and complicating cleanup efforts.	Set a clear waste disposal schedule and socialize it to the community.
General Solution	Lack of facilities and irregular waste disposal times are major challenges in managing waste near riverbanks.	Improve access to TPS, collection schedules, and involve the community in managing the surrounding environment.

Various obstacles are faced in waste management on the riverbanks, such as the lack of TPS, uneven distribution of transportation infrastructure, littering behavior, and irregular disposal schedules. Effective solutions

include improving facilities, community education, enforcing social norms, and active participation of residents in protecting the environment.

3. Public Awareness of the Environment and Government Policy.

A further finding is that awareness of the environment and the impact of littering among people living along the riverbanks tends to be low. Most residents are not fully aware of the long-term impacts of littering behavior, on the river ecosystem and their health (Nasihah 2023; Wu et al. 2018).. Dumping waste in the river is often considered a practical solution due to the area's lack of adequate waste management facilities. Some research informants claimed to be aware of the negative consequences of dumping waste in the river, such as flooding, water pollution, and increased health risks. A mindset that considers rivers a legitimate place to dispose of waste, has become a hereditary habit in some communities.

In addition, the lack of education about protecting the environment exacerbates the situation. People generally do not have a deep awareness of how waste dumped into rivers can affect the ecosystem as a whole (Debrah et al. 2021). For example, garbage accumulated in rivers can cause blockage of water flow, reduce water quality, and harm aquatic life and communities that use rivers as water sources. Environmental education must be improved to address this issue, especially among people living along the riverbanks. Socialization programs that explain the adverse effects of waste disposal and the importance of keeping rivers clean need to be intensified. In addition, providing adequate waste management facilities is an important factor so that people have better alternatives in disposing of waste, so that they no longer depend on the river as a dumping ground.

Some respondents suggested that awareness-raising efforts should involve residents directly, promoting active participation in environmental cleanliness programs. This approach focuses on empowering communities to feel more responsible for the condition of the river they live in. One

initiative that could be implemented is regular cooperation activities to clean the river and surrounding areas. Cooperation as part of the Indonesian culture, not only serves to keep the environment clean, but also strengthens social relations between residents. By involving all levels of society, cooperation can become a collective activity that unites them to maintain environmental cleanliness sustainably.

In addition to cooperation, community-based waste management programs also have great potential in reducing waste disposal in rivers. For example, forming small groups responsible for waste management in their respective neighborhoods, such as setting up a waste bank or sorting organic and inorganic waste, can be an effective solution. Through this approach, communities are encouraged to maintain cleanliness, and gain economic benefits from proper waste management (Sjoraida and Anwar 2019; Kastolani et al. 2019). The success of these community-based solutions relies heavily on collective awareness and commitment. If all residents are actively involved and feel the benefits of their participation, a sense of responsibility for the condition of the surrounding environment will grow. Thus, community-based solutions can be an important pillar in creating sustainable behavior change.

Government policies related to waste management on the riverbanks have shown real efforts, but the results have not fully changed people's behavior. Based on interviews with local government representatives, several programs have been implemented, such providing temporary disposal sites (TPS) and environmental education programs to increase public awareness. This is also supported by the government's waste management program (Makassar 2024). Even so, behavior change has not been achieved significantly.

One of the main obstacles in this policy is the lack of law enforcement related to littering. The lack of supervision in the field has made people feel free to throw garbage into the river without worrying about legal

consequences. Although regulations related to waste management and the environment management already exist, their implementation at the local level is far from adequate. This sanctions for violators are not strictly enforced, so littering behavior continues (Azhar et al. 2020).

In addition, the government also faces challenges in providing adequate waste management infrastructure, especially in densely populated areas and poor areas around riverbanks. In many of these areas, TPS facilities are often insufficient to accommodate the waste generated by local communities. The lack of access to proper disposal sites encourages people to continue dumping waste in the river (Mangarengi et al. 2020; Rosesar and Kristanto 2020). Therefore, policy strengthening is needed, including stricter law enforcement and increased supervision in the field. In addition, the government must focus more on providing adequate infrastructure, especially in vulnerable areas, and expanding more intensive and sustainable environmental education programs.

4. Strengthening Synergy between Local Government and Religious Institutions Foster Faith-Based Environmental Responsibility

The findings of this research confirm that waste disposal behavior along the riverbanks in Makassar cannot be separated from the deeply rooted socio-cultural habits of the community. From a sociological standpoint, these practices are a product of collective routines that normalize rivers as 'natural dumping grounds'. This illustrates how social norms and environmental behaviors interact, reinforcing a cycle where ecological degradation becomes embedded in everyday life. Environmental sociology highlights that environmental problems are not only technical or infrastructural, but also socially produced and reproduced through shared cultural practices.

The weak role of social sanctions against littering further shows how collective responsibility for the environment has diminished. As

informants admitted, no one ‘tells you off’ when you throw trash into the river, revealing the absence of communal pressure to regulate ecological conduct. In sociological terms, this reflects a breakdown in social control mechanisms, where deviant behavior toward the environment is tolerated and normalized (Al-mosa et al. 2017). Addressing this requires reconstructing social norms through shared values, where religion can provide a strong moral anchor.

Religious teachings in Islam strongly emphasize cleanliness as part of faith, yet the findings show a clear gap between doctrine and practice. Theologically, *thaharah* is meant to encompass personal, social, and environmental dimensions of purity. However, people often limit its meaning to bodily and household hygiene. From the lens of environmental sociology, this indicates a disjunction between religious symbolism and practical behavior, which creates fertile ground for sociological inquiry: why do strong religious values fail to materialize in ecological practices?

This gap reveals the need to reinterpret religious values within environmental contexts. as bearers of symbolic authority, religious leaders can play a transformative role in re-socializing communities to see environmental protection as an act of worship. Environmental sociology underscores that religious institutions are not merely spiritual spaces but also hubs of socialization, where collective consciousness can be reshaped. By integrating eco-theological messages into sermons, study circles, and community rituals, the normative power of religion can help reconstruct pro-environmental norms.

The use of mosques and Islamic study groups (*majelis taklim*) as arenas for environmental education is particularly strategic. These spaces, already central to community life, can serve as platforms where religious discourse is aligned with ecological concerns. From a sociological view, this aligns with the ‘moral community’ concept in which shared values create social cohesion and behavioral change. In practice, when environmental

messages are tied to moral and spiritual obligations, individuals are more likely to internalize them as part of their Muslim identity (Mohamed 2014).

Environmental sociology also emphasizes the role of structural conditions in shaping environmental behavior. The findings indicate that inadequate infrastructure, such as the lack of waste disposal sites and irregular waste collection, reinforces littering practices. In this sense, religious values alone cannot substitute for systemic failures. A faith-based environmental sociology approach would argue that symbolic and material structures must work together: religious ethics should inspire responsibility. At the same time, the state provides the necessary facilities to translate values into action.

Another critical insight is the role of cooperation (*gotong royong*) as a cultural and religiously resonant practice. As a long-standing Indonesian tradition, cooperation embodies solidarity, while in Islam it is reinforced through the concept of *ukhuwah* (brotherhood). Organizing river-cleaning activities under both cultural and religious banners can thus revitalize social capital and transform community norms. From an environmental sociology perspective, this shows how blending indigenous traditions and religious frameworks can create sustainable models of collective ecological action.

The persistent prevalence of littering also demonstrates weak environmental governance. Policies exist, but the lack of firm enforcement renders regulations merely symbolic, rather than effective. Environmental sociology teaches us that informal mechanisms—such as religious authority—become crucial in shaping behavior when formal sanctions fail. Religious leaders can bridge this policy gap by mobilizing their moral legitimacy to encourage accountability, complementing government regulations with religiously based moral sanctions. Theoretically, this study contributes to the sociology of religion and the environment by demonstrating how Islamic ethics can be mobilized as a form of ‘ecological

capital'. when linked to ecological responsibility, provides symbolic resources that communities can draw on to justify behavioral change. This echoes broader debates in environmental sociology about how values, beliefs, and identities influence environmental practices. In the context of predominantly Muslim societies, religion is not simply a background factor but a central force shaping ecological worldviews.

The findings illustrate that solving waste problems in Makassar requires an integrated approach that combines socio-cultural change, religious reorientation, and infrastructural improvement. Environmental sociology with a religious lens highlights that religion can act as both a normative framework and a mobilizing force for environmental sustainability. Community behavior can shift toward more sustainable practices by positioning cleanliness and ecological care as religious obligations, supported by effective policies and facilities. This synthesis between social structures, cultural traditions, and religious ethics addresses local problems and enriches academic debates on eco-theology and faith-based environmental movements in the Global South.

A key recommendation from this study is the need for stronger synergy between local government and religious institutions in Makassar. The government, which has the authority and resources to provide infrastructure, should actively involve religious leaders in its environmental programs. For example, policies on waste management and river conservation can be more effective if they are socialized through Friday sermons, Qur'an study circles, and mosque-based community events. By embedding environmental education within existing religious activities, the government can leverage the moral authority of religious leaders to reinforce compliance, not only through regulations but also through values that resonate deeply with the community.

Furthermore, religious institutions can serve as strategic partners in mobilizing communities for practical action. Joint initiatives, such as

mosque-led clean-up campaigns supported by municipal facilities, can strengthen public participation and create a sense of shared responsibility. When religious leaders frame river cleanliness as a civic duty and an act of worship, while the government provides adequate facilities and law enforcement, the combination can generate a sustainable behavioral shift. This partnership ensures that environmental protection is not seen as an external imposition but as an integrated aspect of faith and daily life in Makassar.

D. CONCLUSION

This study highlights that waste disposal behavior along the riverbanks in Makassar is not merely a technical issue of inadequate infrastructure, but is deeply intertwined with socio-cultural practices and religious values. While local communities often normalize rivers as dumping grounds due to generational habits and weak social norms, Islamic teachings emphasize cleanliness and environmental stewardship as part of faith. The findings reveal a persistent gap between religious doctrine and daily practices, compounded by insufficient facilities and weak law enforcement, making waste management a complex socio-religious and structural problem.

These findings reflect that effective waste management in Makassar requires a holistic approach that integrates religious, social, and structural dimensions. Religion—particularly Islam as the majority faith—holds significant potential as both an ethical foundation and a form of social capital to drive behavioral change. By activating the role of mosques, study circles (*majelis taklim*), and religious leaders as centers for internalizing values of cleanliness and environmental care, communities can be guided toward the awareness that protecting rivers is not only a social obligation but also an act of worship.

This research is limited by its qualitative scope and focus on specific communities in Makassar, which may not capture the diversity of practices in other Indonesian cities. Future research could expand through comparative studies across regions, integrate quantitative approaches to measure behavioral change, or explore interfaith perspectives on environmental responsibility. Nevertheless, the significance of this study lies in its contribution to environmental sociology by demonstrating how religion can function as ecological capital, bridging the gap between values and practice, and offering insights for faith-based collaborations with government in addressing urgent urban environmental challenges.

REFERENCES

- Al-mosa, Y., Parkinson, J., & Rundle-Thiele, S. (2017). A Socioecological Examination of Observing Littering Behavior. *Journal of Nonprofit and Public Sector Marketing*, 29(3). <https://doi.org/10.1080/10495142.2017.1326354>
- Aspers, P., & Corte, U. (2019). What is Qualitative in Qualitative Research. *Qualitative Sociology*, 42(2). <https://doi.org/10.1007/s11133-019-9413-7>
- Asteria, D., & Heruman, H. (2016a). Bank Sampah Sebagai Alternatif Strategi Pengelolaan Sampah Berbasis Masyarakat di Tasikmalaya. *Jurnal Manusia Dan Lingkungan*, 23(1). [doi: 10.22146/jml.18783](https://doi.org/10.22146/jml.18783)
- Asteria, D., & Heruman, H. (2016b). Bank Sampah Sebagai Alternatif Strategi Pengelolaan Sampah Berbasis Masyarakat di Tasikmalaya (Bank Sampah (Waste Banks) as an Alternative of Community-Based Waste Management Strategy in Tasikmalaya). *Jurnal Manusia Dan Lingkungan*, 23(1). <https://doi.org/10.22146/jml.18783>
- Azhar, Sobri, K. M., & Halim, A. (2020). Law Enforcement of Waste Management in An Effort to Reduce Flood Risk in Indonesia. *Jambe Law Journal*, 3(1). <https://doi.org/10.22437/jlj.3.1.37-64>
- Begum, M., Alam, F. S., Hossain, M. T., & Hasan, A. (2022). Knowledge and

- Practice of Personal Hygiene Among the High School Students in A Rural Area of Mymensingh, Bangladesh. *Community Based Medical Journal*, 11(2). <https://doi.org/10.3329/cbmj.v11i2.61283>
- Betak, C. (2019). Spiritual consciousness: A potent means of environmental protection. *Environment Conservation Journal*, 20(Special Edition). <https://doi.org/10.36953/ecj.2019.se02020>
- Bhangu, S., Provost, F., & Caduff, C. (2023). Introduction to Qualitative Research Methods - Part i. *Perspectives in Clinical Research*, 14(1). https://doi.org/10.4103/picr.picr_253_22
- Borchard, R., Zeiss, R., & Recker, J. (2022). Digitalization of waste management: Insights from German private and public waste management firms. *Waste Management and Research*, 40(6). <https://doi.org/10.1177/0734242X211029173>
- Brennan, R. E., & Portman, M. E. (2017). Situating Arab-Israeli artisanal fishermen's perceptions of marine litter in a socio-institutional and socio-cultural context. *Marine Pollution Bulletin*, 115(1-2). <https://doi.org/10.1016/j.marpolbul.2016.12.001>
- Creswell, J. (2013). Qualitative, Quantitative, and Mixed Methods Approaches. In *Research design*.
- Debrah, J. K., Vidal, D. G., & Dinis, M. A. P. (2021). Raising awareness on solid waste management through formal education for sustainability: A developing countries evidence review. *Recycling*, 6(1). <https://doi.org/10.3390/recycling6010006>
- Fang, B., Yu, J., Chen, Z., Osman, A. I., Farghali, M., Ihara, I., Hamza, E. H., Rooney, D. W., & Yap, P. S. (2023). Artificial intelligence for waste management in smart cities: a review. In *Environmental Chemistry Letters* (Vol. 21, Issue 4). <https://doi.org/10.1007/s10311-023-01604-3>
- Farfán, J. C., Marulanda, S. C., Zapata, I. C., & Cainas, N. E. (2018). Community Perspectives About Sociocultural Conditions Associated With Children's Health Among the Nasa People in Colombia. *Progress*

- in Community Health Partnerships : Research, Education, and Action*, 12(3).
<https://doi.org/10.1353/cpr.2018.0052>
- Fatma Sjoraida, D., & Khairul Anwar, R. (2019). *Waste Management At Neighbourhood Level For The Purpose Of Society Welfare*.
<https://doi.org/10.2991/iclick-18.2019.20>
- Fehr, A., Urushadze, T., Zöller, N., Knerr, B., Ploeger, A., & Vogtmann, H. (2020). Establishing a sustainable waste management system in a transitional economic context: Analysis of the socio-economic dynamics. *Sustainability (Switzerland)*, 12(9).
<https://doi.org/10.3390/su12093887>
- Gull, A. A., Atif, M., & Hussain, N. (2023). Board gender composition and waste management: Cross-country evidence: Board gender diversity and waste management. *British Accounting Review*, 55(1).
<https://doi.org/10.1016/j.bar.2022.101097>
- Kastolani, W., Darsiharjo, Setiawan, I., & Paramida, I. (2019). Development of microbial organic waste processing model in community of Sukasari Sub-District Bandung. *IOP Conference Series: Earth and Environmental Science*, 243(1). <https://doi.org/10.1088/1755-1315/243/1/012038>
- Koehrsen, J., Blanc, J., & Huber, F. (2021). How “green” can religions be? Tensions about religious environmentalism. *Zeitschrift Für Religion, Gesellschaft Und Politik*, 6(1). <https://doi.org/10.1007/s41682-021-00070-4>
- Makassar, H. K. (2024). *Wujudkan Makassar Ramah Lingkungan, DLH Makassar Perkuat Program Strategis Penataan Sistem Persampahan*. Pemerintah Kota Makassar.
- Mangarengi, N. A. P., Zubair, A., & Abdurrahman, M. A. (2020). Analysis of infrastructure needs and operational systems for traditional market solid waste management (A case study on Makassar - Niaga Daya traditional market). *IOP Conference Series: Earth and Environmental Science*, 419(1). <https://doi.org/10.1088/1755-1315/419/1/012156>

- Mohamed, N. (2014). Islamic Education, Eco-ethics and Community. *Studies in Philosophy and Education*, 33(3). <https://doi.org/10.1007/s11217-013-9387-y>
- Mohidem, N. A., & Hashim, Z. (2023). Integrating Environment with Health: An Islamic Perspective. In *Social Sciences* (Vol. 12, Issue 6). <https://doi.org/10.3390/socsci12060321>
- Mukaromah, H., & Kusumastuti, K. (2021). Modal sosial dalam upaya pengelolaan sampah berkelanjutan di Kampung Iklim Joyotakan Surakarta. *Region : Jurnal Pembangunan Wilayah Dan Perencanaan Partisipatif*, 16(1). <https://doi.org/10.20961/region.v16i1.34512>
- Narethong, H. (2020). Environmental Governance: Urban Waste Management Model. *Journal La Lifesci*, 1(2). <https://doi.org/10.37899/journallalifesci.v1i2.102>
- Rahimi-Midani, A. (2023). Deep Technology for Sustainable Fisheries and Aquaculture. In *Deep Technology for Sustainable Fisheries and Aquaculture*. <https://doi.org/10.1007/978-981-99-4917-5>
- Raziq, A., Khan, N., & Maroof, M. M. (2024). Teachings and Instructions of Islam about Cleanliness and Hygiene in the Light of Quran and Hadiths. *Annaly of Human and Social Sciences*, 5(3). [https://doi.org/10.35484/ahss.2024\(5-III\)45](https://doi.org/10.35484/ahss.2024(5-III)45)
- Sarkodie, S. A., & Owusu, P. A. (2021). Impact of COVID-19 pandemic on waste management. *Environment, Development and Sustainability*, 23(5). <https://doi.org/10.1007/s10668-020-00956-y>
- Semilu Rosesar, J., & Andari Kristanto, G. (2020). Household solid waste composition and characterization in Indonesia Urban Kampong. *IOP Conference Series: Materials Science and Engineering*, 909(1). <https://doi.org/10.1088/1757-899X/909/1/012077>
- Syahli, R., & Sekarningrum, B. (2017). Pengelolaan Sampah Berbasis Modal Sosial Masyarakat. *Sosioglobal : Jurnal Pemikiran Dan Penelitian Sosiologi*, 1(2). <https://doi.org/10.24198/jsg.v1i2.13309>

- Takbiran, H. H. T. (2020). Bank Sampah Sebagai Alternatif Strategi Pengelolaan Sampah Menuju Sentul City Zero Emission Waste Kabupaten Bogor. *IJEEM - Indonesian Journal of Environmental Education and Management*, 5(2). <https://doi.org/10.21009/ijeem.052.05>
- Upe, A. (2022). *Metode Riset Kuantitatif dan Kualitatif (Mengurai Perbedaan Ke Arah Mixed Methods*. Cv. Linterasi Indonesia.
- Wu, D. W. L., Lenkic, P. J., DiGiacomo, A., Cech, P., Zhao, J., & Kingstone, A. (2018). How does the design of waste disposal signage influence waste disposal behavior? *Journal of Environmental Psychology*, 58(March), 77–85. <https://doi.org/10.1016/j.jenvp.2018.07.009>

