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A Partnership-Based Environmental Communication Model for Reducing Pollution in the Coastal Areas

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Abstract**:** *This study aims to analyze the partnership-based environmental communication model implemented by the Green Agent Student Activity Unit (UKM GA) at UTU to reduce pollution in coastal areas. Using a qualitative approach and data collected through interviews, the research identifies two dimensions of partnership-based environmental communication: internal and external partnerships. Internal partnerships are built through bonding and bridging social capital. Bonding social capital is reflected in members' sense of solidarity and personal commitment to environmental cleanliness, while bridging social capital is realized through collaborations with other units within UTU. External partnerships are developed through linking social capital, evident in cooperation with communities outside UTU. The findings indicate that such partnerships not only expand social networks and enhance the legitimacy of environmental movements but also strengthen the community's capacity to undertake collective actions to reduce pollution in coastal areas.*

Keywords**:** *Environment communication; partnership; coastal area*

Abstrak: Penelitian ini bertujuan untuk menganalisis model komunikasi lingkungan berbasis kemitraan yang diterapkan oleh Unit Kegiatan Mahasiswa Green Agent (UKM GA) UTU untuk mengurangi pencemaran di kawasan pesisir. Dengan menggunakan pendekatan kualitatif dan pengumpulan data melalui wawancara, penelitian ini mengidentifikasi dua dimensi komunikasi lingkungan berbasis kemitraan, yaitu kemitraan internal dan eksternal. Kemitraan internal dibangun melalui modal sosial mengikat dan menjembatani. Modal sosial mengikat tercermin dari rasa kebersamaan anggota dan komitmen pribadi terhadap kebersihan lingkungan, sedangkan modal sosial menjembatani diwujudkan melalui kolaborasi dengan unit lain di lingkungan UTU. Kemitraan eksternal dibangun melalui modal sosial menghubungkan, yang terlihat dari kerja sama dengan komunitas di luar UTU. Temuan penelitian menunjukkan bahwa kemitraan tersebut tidak hanya memperluas jaringan sosial dan meningkatkan legitimasi gerakan lingkungan, tetapi juga memperkuat kapasitas komunitas dalam melakukan aksi kolektif untuk mengurangi pencemaran di kawasan pesisir.

Kata kunci: Komunikasi lingkungan; kemitraan; kawasan pesisir

Introduction

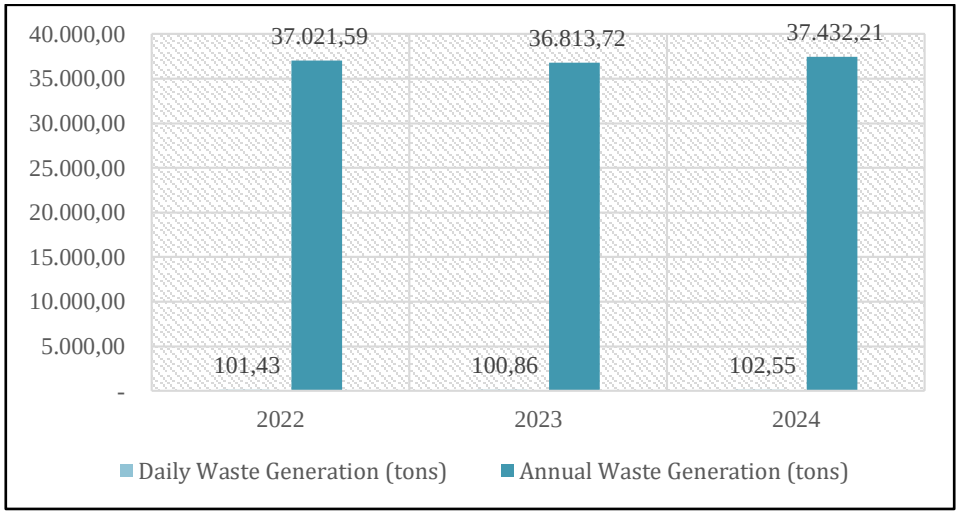
Coastal communities are among the most vulnerable social groups to environmental pollution, particularly due to the growing volume of waste in coastal zones. This issue has evolved from a local concern into a global challenge that requires serious attention from multiple stakeholders. Environmental pollution is widely recognized as a multidimensional problem that calls for shared responsibility and collaborative, cross-sectoral approaches. Previous research has highlighted that low ecological awareness, weak institutional synergy, and ineffective waste governance across different administrative levels are key factors that

exacerbate the problem (Herdiansyah, Saiya, Afkarina, & Indra, 2021; Kawabe, Kohno, Ishimaru, & Baba, 2013; Vince & Hardesty, 2017).

Environmental pollution has profound implications for human health as well as social and economic sustainability. Imran reports that marine plastic waste in Kendari City has significantly constrained local socio-economic development, particularly by undermining the tourism sector (Imran, 2024). In addition to reducing fishery yields, plastic pollution accelerates the degradation of critical marine ecosystems, including coral reefs, mangroves, seagrass beds, and fish populations. Declining fish catches resulting from marine debris pollution may further intensify competition over marine resources, potentially leading to conflicts among fishers, including class-based, orientation-based, agrarian, and primordial conflicts (Zulfahmi, 2023). Accordingly, the establishment of effective and integrated waste management governance is imperative.

West Aceh, as a coastal region, is currently facing significant environmental pollution challenges. Its geographical location along the Indian Ocean coastline makes it highly susceptible to marine debris accumulation, originating from both local activities and transboundary ocean waste. According to data from the National Waste Management Information System (SIPSN) of the Ministry of Environment, waste generation in West Aceh reached 102.55 tons per day in 2024. This situation underscores the urgent need for coordinated responses involving governmental institutions, local communities, and environmental organizations.

Figure 1. Daily Waste Generation in West Aceh



Source: National Waste Management Information System (https://sipsn.menlhk.go.id/sipsn/public/data/timbulan)

Several studies have emphasized the necessity of strengthening infrastructure and enhancing public awareness in waste management (Herdiansyah et al., 2021; Kawabe et al., 2013; Mary Thomas et al., 2022; Mussehl, Webb, Horne, Rumpff, & Poff, 2023; Van Le & Leenders, 2024; Yudha et al., 2024). Furthermore, a holistic and integrated approach that prioritizes community participation is considered crucial for mitigating pollution in coastal regions (Kelly et al., 2022; Vince & Hardesty, 2017; Sasoko, 2024). From an infrastructural

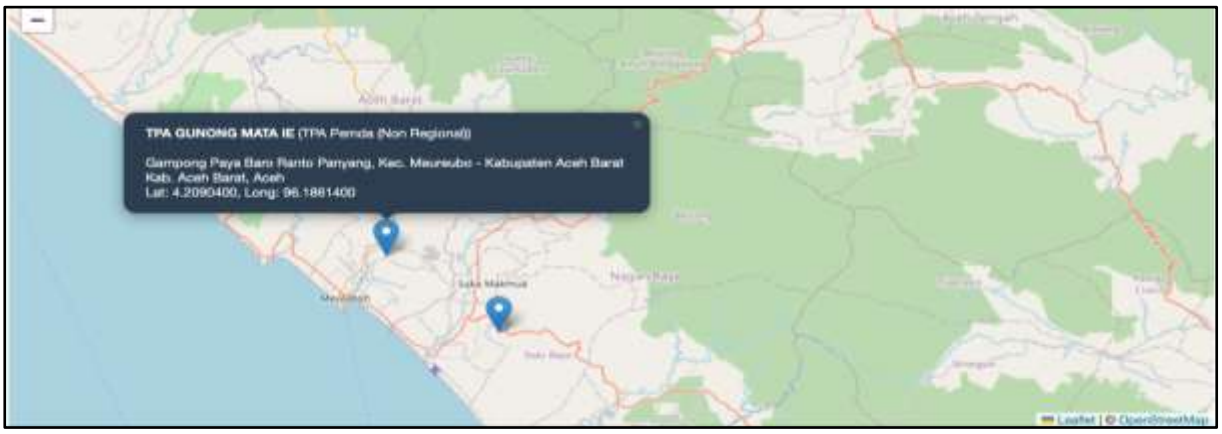
perspective, Indonesia has developed an extensive network of Final Disposal Sites (TPA) across nearly all regions, as illustrated in Figure 2.

Figure 2. Distribution of Final Disposal Sites (TPA) in Indonesia

Source: National Waste Management Information System (https://sipsn.kemenlhk.go.id/sipsn/)

Based on the visualization in the previous figure, it is evident that almost all regions in Indonesia have established landfill sites *(Tempat Pemrosesan Akhir/*TPA) as the primary facilities for waste management. In North Sumatra and Aceh Provinces, approximately 80 landfill sites are distributed across various regencies and municipalities, indicating a governmental commitment to addressing solid waste issues. In Aceh Province, in particular, landfill facilities are in several areas, including Banda Aceh, Aceh Jaya, West Aceh, South Aceh, and Central Aceh, each with varying management characteristics. West Aceh Regency has only one active landfill, namely Gunong Mata Ie Landfill, located in Gampong of Paya Ranto Baro Panyang, Meureubo District. This site serves as the main disposal facility for daily household waste generated by the local population. Despite the limited number of landfill facilities in the region, waste management efforts are further strengthened through community-managed waste banks. These community initiatives demonstrate the crucial role of local participation in supporting participatory waste management systems and serve as an alternative strategy to reduce the waste burden on landfill sites.

Figure 3. Distribution of Final Disposal Sites (TPA) in West Aceh



Source: National Waste Management Information System (https://sipsn.kemenlhk.go.id/sipsn/)

These structural initiatives demonstrate the government's commitment to addressing waste-related issues. Nevertheless, non-structural aspects, such as public education, awareness building, and community empowerment—remain underdeveloped. The lack of synergy among key actors in these areas underscores the importance of partnership-based environmental communication as an integrative strategy to tackle environmental pollution in coastal regions. Environmental communication plays a strategic role in addressing the various ecological challenges faced by coastal communities. Cox defines environmental communication as a planned and strategic process of delivering messages, ideas, and information to support effective public policy and to encourage public participation in environmental conservation (Cox, 2013). In practice, environmental communication is not limited to verbal message delivery; it is also manifested through non-verbal actions such as participation and concrete environmental initiatives. Therefore, the effectiveness of environmental communication can be significantly enhanced when implemented collaboratively through partnership-based approaches involving multiple stakeholders.

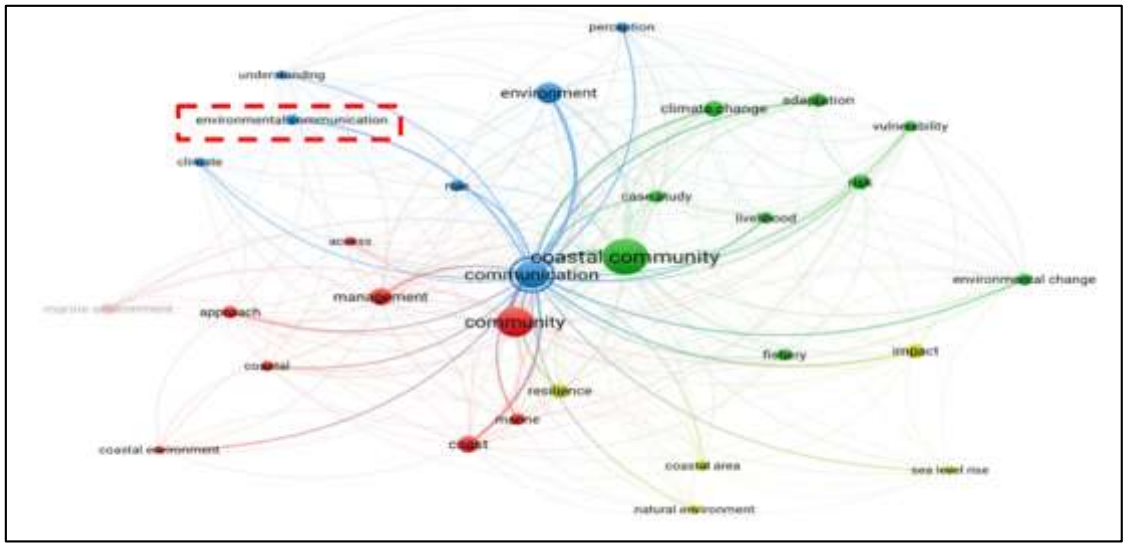
In the context of this study, partnership-based environmental communication is understood as a manifestation of social capital, which functions as a collective resource for addressing pollution issues in coastal areas. Drawing on the theories of Pierre Bourdieu and James S. Coleman, social capital is defined as the actual or potential resources available to individuals or groups that facilitate collective action to achieve the public good (Häuberer, 2011). Social capital is embodied in three primary forms of social networks (Claridge, 2018; Leonard, 2004): First, bonding social capital, referring to social ties formed through shared identity and emotional closeness among group members. Second, bridging social capital, referring to horizontal social connections that enable individuals or groups to expand their networks and collaborate with others. Third, linking social capital, referring to vertical relationships that connect communities with external actors possessing greater authority, power, or resources. This study adopts these three dimensions of social capital networks to explain the dynamics of partnership-based environmental communication as practiced by the Green Agent Student Activity Unit (UKM Green Agent) at Teuku Umar University (UTU).

Previous studies have consistently emphasized that collaboration and partnership are fundamental elements for ensuring environmental sustainability (Jamasy, Gunawan, Spm Budisusanti, Askary, & Agus Suwendar, 2023; Jorgensen, Krasny, & Baztan, 2021; Lim, Wong, Elfithri, & Teo, 2022; Tevapitak & Helmsing, 2019). However, prior research on environmental communication has not comprehensively articulated a partnership-based communication model applicable to coastal communities. To fill this gap, the present study proposes a partnership-based environmental communication model comprising two main dimensions: First, Internal partnership, which is built through bonding and bridging social capital; and second, external partnership, which is developed through linking social capital.

Academic attention to the contribution of higher education institutions, particularly student organizations, in facilitating environmental communication within coastal communities remains limited. A literature search of Google Scholar covering the period 2014–2024 using the keyword "Environmental Communication in Coastal Communities", and analyzed using Publish or Perish and VOSviewer, reveals that studies explicitly addressing

the strategic role of student organizations in promoting participatory communication and environmental awareness among coastal communities are scarce. This indicates a significant research gap, especially regarding the involvement of youth actors and higher education institutions. Despite this, student organizations have strong potential as agents of social change in bridging scientific knowledge and local coastal practices. Therefore, the bibliometric mapping shown in Figure 3 highlights the need to broaden research focus on the role of higher education institutions in strengthening community-based environmental communication in coastal areas.

Figure 4. Mapping of Environmental Communication and Coastal Community Studies Based on Publish or Perish Analysis



Source: Research Findings, 2025

The visualization results indicate that research on environmental communication in coastal communities remains relatively limited, as reflected by the small size of the circular symbols on the research map. Addressing this gap, the present study seeks to analyze a partnership-based environmental communication model implemented by the Green Agent (GA) Student Activity Unit at Universitas Teuku Umar (UTU) in reducing environmental pollution in coastal areas. GA is one of the student organizations that specifically focuses on environmental sustainability initiatives. The organization actively conducts programs and activities in collaboration with both internal and external stakeholders of the university. By examining GA's partnership-based communication model, this study contributes both conceptually and practically to the development of environmental communication models aimed at addressing environmental pollution in coastal regions.

Method

This research was conducted at the Green Agent (GA) Student Activity Unit of Universitas Teuku Umar (UTU). The selection of GA as a case study was based on two main considerations. First, GA is the only student organization in West Aceh Regency that has consistently focused on environmental sustainability issues. This consistency is reflected in the various educational programs, campaigns, and environmental actions that they have

carried out over the past several years. Second, GA has actively organized a wide range of environmental initiatives in collaboration with both internal and external partners in the coastal areas of West Aceh. Therefore, GA is considered a representative case for examining a partnership-based environmental communication model among university student organizations.

The research subjects consisted of UKM GA administrators and members, as well as the management of the Gerakan Peduli Lingkungan (GPL) Meulaboh, which serves as an organizational partner in environmental activities. Informants were selected using a snowball sampling technique, aiming to include participants with direct experience and knowledge of partnership-based environmental communication practices. The initial informant was the Head of UKM GA, who then recommended other relevant members. Based on these recommendations, the researcher also interviewed the Head of GPL Meulaboh as a representative of external partnership. All informants participated voluntarily.

A qualitative research approach was employed to obtain an in-depth understanding of social phenomena within their real-life context (Clarke & Tittensor, 2014). The research process consisted of three main stages: First, Literature review and academic analysis on partnership-based environmental communication in coastal regions. Second, Field data collection, and Third, Data analysis and interpretation. Data were collected through semi-structured interviews designed to explore participants' experiences, perceptions, and practices related to partnership-based environmental communication. Data analysis was conducted using thematic analysis guided by social capital network theory, which encompasses the dimensions of bonding, bridging, and linking social capital. The analysis aimed to identify, organize, and interpret emerging thematic patterns related to the partnership-based environmental communication model. To ensure data validity, source triangulation was applied by comparing and cross-verifying information obtained from multiple informants, including GA administrators, members, and the GPL Meulaboh community. This technique was used to maintain the consistency, credibility, and reliability of the research findings.

Results and Discussion

This study identifies two forms of partnership-based environmental communication models implemented by the Green Agent (GA) Student Activity Unit in its efforts to reduce pollution in coastal areas. The first is an internal partnership-based environmental communication model, which emphasizes collaboration within the university environment. The second is an external partnership-based environmental communication model, which involves cooperation with communities and institutions outside the campus. Both models are implemented through various collaborative activities oriented toward the sustainability of coastal environments. Thus, these two communication models establish a synergistic pattern between university actors and local communities in sustaining coastal environmental sustainability.

Internal Partnership-Based Environmental Communication

Internal partnership-based environmental communication refers to the process of exchanging information, ideas, and ecological values among organizational members to foster

collective awareness in addressing environmental issues. This form of communication functions as an internal mechanism that strengthens coordination and shared commitment toward sustainability practices. These findings are consistent with those of Piwowar-Sulej et al. (Piwowar-Sulej, Popowicz, & Sulich, 2024), who demonstrated that internal communication plays a crucial role in building organizational commitment to environmental sustainability.

In the context of UKM GA, internal partnership-based environmental communication is implemented through two social capital networks: bonding social capital and bridging social capital. Bonding social capital emphasizes solidarity, a sense of belonging, and shared values among members that strengthen community identity. Meanwhile, bridging social capital is realized through cross-unit collaboration within the campus, such as partnerships with the Green Campus Team (UTU Green Metric), to expand networks and collaborative initiatives. These two forms of social capital serve as strategic foundations for building internal awareness and reinforcing collective commitment in efforts to address coastal pollution.

UKM GA develops its partnership-based environmental communication practices primarily through the reinforcement of bonding social capital networks. The concept of bonding social capital refers to social relationships formed based on shared identity, values, and orientations among individuals within a group (Claridge, 2018; Leonard, 2004). In this context, such bonding social networks function to strengthen the sense of togetherness among community members, enhancing solidarity and shared purpose in achieving environmental goals. One of the members of UKM GA, Sukma Aria, emphasized that his involvement in the community was driven by the alignment between the organization's mission and his personal inclination toward cleanliness. In this context, bonding social networks play a strategic role in fostering internal solidarity and building mutual trust among community members.

> *"I personally joined Green Agent because I like cleanliness. When I started university and learned about GA, I immediately decided to join. I am also active in other external communities that focus on environmental issues"* (interview with Sukma Aria, 2025).

Similarly, Wahyu, another member of UKM GA, expressed comparable motivations regarding his participation in the organization. According to him, GA's mission resonates with his personal character and passion for environmental stewardship.

> *"My motivation for joining GA was, first, because I love the environment. I care about nature and enjoy cleaning up the surroundings. The second reason was encouragement from friends. After joining several activities, I found it enjoyable"* (interview with Wahyu, 2025).

In contrast to the two previous statements, Ulfa Destari, a demisioner of GA, explained that her involvement in the community was primarily motivated by the strong sense of togetherness within the organization.

> *"I joined GA because of its strong sense of togetherness. It feels comfortable to share the same vision with friends who are passionate about environmental action"* (interview with Ulfa Destari, 2025).

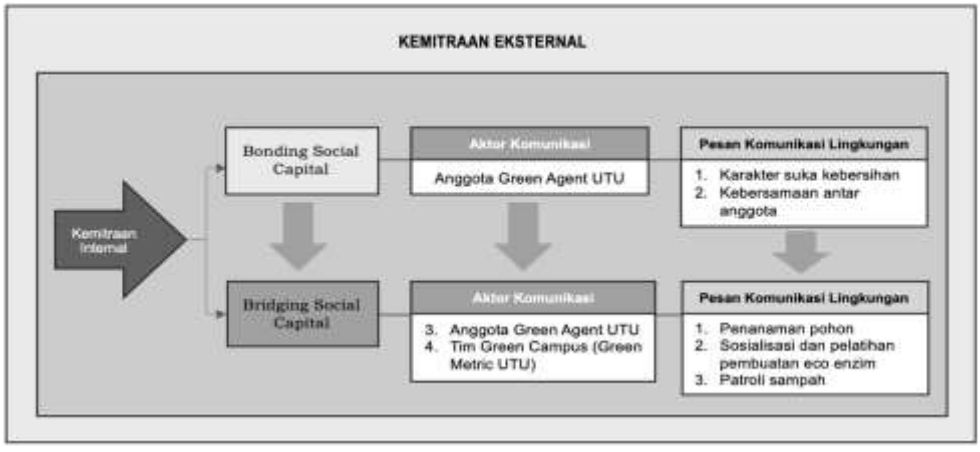
A similar sentiment was also shared by Susi, who highlighted that her engagement with GA stemmed from the strong family-like bond among its members.

> *"I first joined GA after attending a camp (capacity building). It was fun. This organization is different from others. The sense of kinship here is very strong"* (interview with Susi, 2025).

The internal partnership-based environmental communication implemented by UKM GA is also manifested through the strengthening of bridging social capital. Bridging social capital refers to social networks that enable individuals or groups to expand cooperation and share resources with other groups within a broader organizational context (Claridge, 2018; Leonard, 2004). In this regard, UKM GA has established collaborations with various units within the university. One form of such collaboration is with the Green Campus Team (UTU Green Metric), a task force established by the Rector of Teuku Umar University that focuses on promoting campus environmental sustainability and achieving the UI Green Metric standards. The UI Green Metric is a global university sustainability ranking program initiated by Universitas Indonesia (UI). This partnership has resulted in several joint initiatives, including tree-planting activities, environmental awareness campaigns, eco-enzyme production training, and waste patrol programs that contribute to pollution reduction in coastal areas.

The strong partnership between the UKM GA and the Green Campus Team is primarily driven by their shared mission toward environmental sustainability. Several forms of environmental communication have been carried out through this collaboration. First, the tree-planting program on the UTU campus aims to promote environmental sustainability while commemorating World Environment Day. Tree planting was also conducted on the rooftop area of the Integrated Lecture Building (GKT) as part of a vertical greening initiative. Second, in addition to tree planting, UKM GA and the Green Campus Team jointly implemented organic waste recycling activities by producing eco-enzymes, an environmentally friendly organic fertilizer. Third, UKM GA also carried out waste patrols during UTU's graduation ceremonies. This activity has been conducted regularly as an educational effort to encourage visitors to properly dispose of waste and to reduce plastic usage during the event.

Figure 5. Forms of Internal Partnership-Based Environmental Communication Conducted by UKM GA



Source: Research Findings, 2025

Based on the above explanation, it can be concluded that internal partnership-based environmental communication is closely related to the utilization of social capital possessed by communication actors within the organization, as well as other parties operating within the same institutional framework. The ability to identify and optimize internal communication networks serves as a crucial foundation for expanding collaboration with social groups beyond the organization. Through these networks, Green Agent not only expands the reach of its communication messages but also strengthens the positioning of the environmental movement as a collective agenda within the academic community. The strengthening of this bridging social capital is crucial, as it enhances the capacity of student organizations to promote collaborative social change and environmental sustainability (Pretty & Ward, 2001; Aldrich, 2012). Therefore, UKM GA's internal environmental communication is not merely informative in nature, but also contributes to the construction of a supportive social ecosystem for the sustainability of environmental movements within the higher education environment.

External Partnership-Based Environmental Communication

Environmental pollution is a multidimensional issue that cannot be resolved solely through internal community efforts; it also requires external support and engagement. Through external partnerships, environmental messages and programs can be disseminated more widely, thereby fostering greater public participation in sustainability issues. In line with the perspectives of Higham et al. and Mganga, multi-stakeholder partnerships play a crucial role in building social legitimacy and mobilizing collective action to promote environmental sustainability practices (Higham, Bäckstrand, Fritzsche, & Koliev, 2024; Mganga et al., 2023). Furthermore, cross-actor partnerships create opportunities for the mobilization and exchange of resources, knowledge, and technological capacities, thereby supporting innovation in environmental governance. In environmental communication practices, these collaborative arrangements contribute to more effective message circulation and greater program sustainability over time (Reed et al., 2009; Ansell & Gash, 2008). Consequently, partnership-based environmental communication extends beyond network expansion and plays a critical role in deepening the transformative impact of sustainability-oriented social actions.

In this context, UKM GA implements external partnership-based environmental communication through the strengthening of linking social capital. The concept of linking social capital refers to vertical relationships that connect grassroots communities with actors who possess power, authority, and access to resources, such as local governments, non-governmental organizations, and the private sector (Woolcock, 2001; Claridge, 2018; Leonard, 2004). Through these networks, GA UTU can gain access to policy support, funding opportunities, and technical resources for the implementation of coastal environmental programs. Moreover, linking social capital facilitates dialogue between students, coastal communities, and key stakeholders in jointly formulating solutions to environmental pollution issues (Szreter & Woolcock, 2004). From an environmental communication perspective, these vertical relations strengthen the social legitimacy of student-led movements while simultaneously expanding the reach of sustainability messages into broader policy and public arenas (Dempsey et al., 2011). Thus, the strengthening of linking social capital functions as a

strategic form of capital to enhance organizational capacity and promote active community engagement in addressing environmental pollution in the West–South coastal region of Aceh.

To tackle environmental pollution, Green Agent UTU has established an external communication partnership with the Environmental Care Movement (Gerakan Peduli Lingkungan) (GPL) in Meulaboh. Both communities share a common mission centered on environmental sustainability. GPL is an environmental organization that emerged in West Aceh Regency, initiated by a group of young people who independently organized cleanup actions around the Meulaboh Port area. These activities later evolved into a more structured organization with a strong environmental focus. To this day, GPL continues to grow and actively conducts various initiatives dedicated to the conservation and management of the coastal environment in Meulaboh.

UKM GA and GPL engage in multiple forms of environmental communication through joint coastal cleanup campaigns across the West Aceh shoreline. Initially, both communities emphasized action-based communication as a means of raising public awareness about pollution issues. Over time, their communication approach expanded to include educational initiatives aimed at promoting behavioral change and enhancing environmental literacy among local communities. One of their flagship programs is the coastal cleanup activity held to commemorate National Waste Awareness Day *(Hari Peduli Sampah Nasional)* (HPSN) and World Cleanup Day (WCD). Through these initiatives, both organizations consistently work to foster collective public awareness of the importance of maintaining coastal cleanliness and ensuring the sustainability of marine ecosystems.

National Waste Awareness Day (HPSN) has inspired numerous environmental initiatives across Indonesia. The establishment of this day holds significant historical meaning in the country's environmental management journey. As noted by Lavigne et al. HPSN was designated following the tragic landslide at the Leuwigajah Landfill in Cimahi, West Java, on February 21, 2005. The disaster, caused by a methane gas explosion from a 60-meter-high, 200-meter-long pile of waste, resulted in 143 fatalities and buried 71 houses under waste material. This tragedy exposed the severe weaknesses of Indonesia's waste management system and underscored the urgent need for collective action from both government and society. In response, the Ministry of Environment designated February 21 as National Waste Awareness Day to raise public consciousness about the importance of sustainable and environmentally friendly waste management (Kompas.com, n.d.).

As part of their participation in the National Waste Awareness Day (HPSN), the UKM GA and GPL actively organized a series of environmental activities along the coastal areas of West Aceh. Both communities used the HPSN commemoration as a platform to strengthen environmental communication and enhance public participation in waste management. One of their main initiatives was the coastal cleanup campaign, which focused not only on collecting waste but also on educating the public about the importance of maintaining coastal environmental cleanliness. Several beaches served as the central sites for these cleanup activities, including Gampong Pasir Beach (in 2023 and 2025) and Samatiga Beach (in 2024). These beaches are among the most active coastal areas with high community activity. During these cleanups, participants collected scattered waste along the shoreline. Data from the 2023 cleanup at Gampong Pasir Beach show that approximately 364 kilograms of waste, the

majority of which consisted of plastic debris. Through this collaboration UKM GA and GPL sought to foster local ecological awareness using a participatory approach. The initiative served as a platform for students and community members to work together directly in creating a cleaner and healthier environment. The environmental actions commemorating HPSN also became a stepping stone for UKM GA and GPL to engage in the global environmental movement World Cleanup Day (WCD).

World Cleanup Day (WCD) is a global environmental movement that mobilizes millions of volunteers across countries to engage simultaneously in waste cleanup actions. This movement is not merely oriented toward symbolic action, but also functions as a medium of public education to raise awareness of the ecological impacts of the global waste crisis (Let's Do It Foundation, 2022; Voukkali et al., 2025). The waste problem, particularly single-use plastics, has evolved into a global environmental issue due to unsustainable consumption patterns and weak waste management systems in many developing countries (Jambeck et al., 2015). A report by the United Nations Environment Programme (UNEP) indicates that global plastic production has exceeded 400 million tonnes per year and is projected to continue increasing over the next 10–15 years in the absence of substantial policy interventions (UNEP, 2021; Unep.org, n.d.). Nearly half of global waste originates from single-use plastic packaging that ultimately ends up in landfills or pollutes marine ecosystems. This condition contributes significantly to coastal environmental degradation and threatens the sustainability of marine ecosystems (UNEP, 2021; OECD, 2022). In this context, WCD plays a crucial role as a collaborative platform among communities, governments, and civil society to promote behavioral change while strengthening participatory waste management practices. Therefore, WCD should be understood not only as a physical cleanup initiative but also as an environmental communication strategy to build collective awareness regarding the systemic reduction of plastic waste.

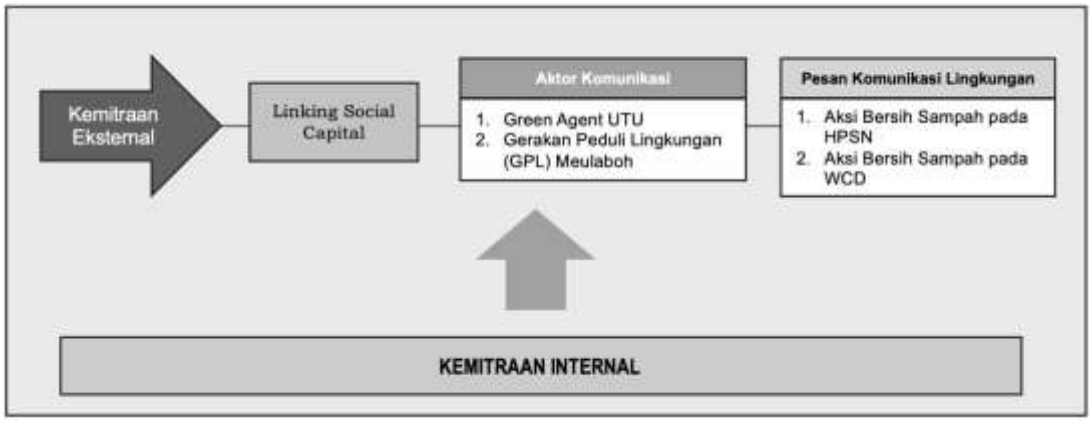
The global condition of waste pollution necessitates cross-sector collaboration and collective action from communities across the world to build sustainable waste management systems. The World Cleanup Day (WCD) movement illustrates how large-scale global participation can be mobilized. In 2023, more than 19.1 million volunteers from 198 countries and territories joined the mass cleanup activities (Let's Do It, 2023). In Aceh Barat, for instance, the Green Agent Student Activity Unit of Teuku Umar University (UTU) and the Gerakan Peduli Lingkungan (GPL) Meulaboh participated as part of the WCD volunteer network. The involvement of local communities such as GA UTU and GPL Meulaboh demonstrates how local actions can contribute to global environmental agendas. This participatory model reflects how cleanup movements can serve as platforms for environmental education as well as cross-stakeholder advocacy. According to Khaliq et al., WCD can be considered a form of new social movement that integrates the engagement of civil society, community groups, government institutions, and educational organizations to reduce plastic waste (Khaliq et.al, 2025). Furthermore, such collaboration strengthens inter-community social capital, which is essential for driving behavioral change in waste management practices. Thus, WCD functions not only as a physical cleanup initiative but also as an environmental communication strategy aimed at strengthening collective awareness and mobilizing global commitment to reducing plastic waste.

In line with the activities commemorating National Waste Awareness Day (HPSN), the UKM GA and the GPL also actively participated in the World Cleanup Day (WCD) through coastal cleanup initiatives in West Aceh. In 2024, both communities organized a cleanup campaign at Peunaga Pasi Beach, while in 2023, a similar event was held at Batu Putih Beach. During these activities, GA and GPL invited residents to take part directly in collecting and sorting waste along the coastal areas. Although these efforts have not yet fully resolved the issue of marine and coastal waste, both communities believe that such initiatives contribute to reducing the overall waste volume each year and enhance public awareness of the importance of maintaining coastal environmental sustainability.

> *"At the moment, it's not yet optimal. For example, during the recent cleanup at Lhok Bubon, the local women there began reminding visitors not to litter, saying things like, 'Don't throw your trash here; there's a bin available.' This shows that stricter informal rules are emerging. So far, it's more about raising public awareness*" (interview with Reka Nopi Juwita, 2025).

Their participation in World Cleanup Day not only strengthened public awareness among coastal communities regarding waste issues but also positioned their actions as part of a broader framework of global public participation in environmental sustainability efforts.

Figure 6. Forms of External Partnership-Based Environmental Communication Conducted by UKM GA



Source: Research Findings, 2025

The UKM GA and GPL have established a mutually beneficial partnership to address pollution issues in coastal areas. Both communities recognize that effective and sustainable solutions to environmental pollution require cross-community collaboration. A study conducted by Ade and Andriansyah demonstrated that collaboration among government bodies, non-governmental organizations (NGOs), and the public significantly enhances awareness and participation in reducing plastic waste in Makassar City (Ade, 2024). Similarly, Hung & Yeh found that partnerships between government institutions and environmental NGOs can strengthen public awareness and trust in addressing marine waste issues (Hung, Wang, & Yeh, 2022). In line with these findings, the external partnership developed by UKM GA and GPL illustrates how collaboration-based environmental

communication can expand social networks, strengthen community participation, and create mutual benefits for all parties involved in coastal environmental management.

Members of UKM GA acknowledge that their partnership with GPL has had a positive impact on the sustainability of their movement. This awareness stems from at least two main factors. First, in terms of sustainability and resource mobilization, the collaboration connects two communities with a shared focus on environmental pollution issues. Through this partnership, UKM GA's position as an environmental organization has been strengthened, enabling the implementation of various work programs. Second, the partnership enhances the human resource capacity of individuals involved in environmental activities. Fajar Oza Pratama, a member of GPL, emphasized that cooperation with UKM GA strengthens the implementation of environmental programs through the growing and more cohesive support of volunteers:

> *"There is financial support for each activity. For example, when we collaborate with radio stations, the support comes in the form of news coverage. When partnering with campus-based communities, the support is in the form of volunteers. Our system is that whenever we organize an event, we invite student communities to participate, because our members are limited in number. Their presence makes our activities livelier and more impactful"* (interview with Fajar, 2025).

From a social network perspective, the partnership established between the UKM GA and GPL indirectly connects them to a broader network of social actors. Wahyu, a member of the UKM GA management team, explained:

> *"In environmental activities, collaboration is essential for our programs to run effectively. Through collaboration, our activities are not only confined to the campus but also extend beyond it. Green Agent often collaborates with other communities, such as GPL"* (interview with Wahyu, 2025).

Similarly, Fajar emphasized that the purpose of forming partnerships is to make their movement's mission more widely known:

> *"The goal of partnership is partly for promotion. We collaborate to introduce our movement, which is why we are open to partnering with anyone, as long as we share the same vision"* (interview with Fajar, 2025).

The statements from these two informants illustrate that external partnerships encourage mass mobilization around environmental issues and broaden the scope of the movement. The external collaboration between UKM GA and GPL not only expands their outreach beyond the campus but also establishes new and more dynamic social networks. Through this collaboration, UKM GA gains wider access to GPL's pre-existing partnership networks. As a more established environmental community, GPL has developed strategic collaborations with various stakeholders, including PT Mifa Bersaudara, one of the largest mining companies in West Aceh, and Generasi Baru Indonesia (GenBI) Aceh. These partnerships create opportunities for UKM GA to engage in GPL's environmental initiatives, such as the Coastal Cleanup Campaign ahead of the 2024 PON XXI Aceh–North Sumatra Games, the Waste

Cleanup Action at Lhok Bubon Beach in West Aceh, and other sustainability-oriented programs.

This pattern of external partnership demonstrates that inter-organizational relations among environmental communities are circular, mutually reinforcing, and oriented toward long-term sustainability. Each community not only gains direct benefits from collaboration but also expands its access to broader social networks, resources, and participation opportunities. From a collaborative network perspective, such partnerships function as mechanisms for enhancing collective capacity through processes of knowledge sharing, action coordination, and resource integration (Ansell & Gash, 2008). Moreover, cross-organizational collaboration strengthens the social legitimacy of environmental movements by involving diverse stakeholders with varying forms of authority and expertise (Bryson et.al, 2006; Kallis et.al, 2009). This mechanism also facilitates the transfer of experience and innovation in environmental management practices, which has become increasingly crucial in addressing ecological challenges that are complex and multidimensional (Bodin, 2017). Thus, external partnerships are not merely technical forms of cooperation but constitute strategic foundations that reinforce social networks, enhance the effectiveness of interventions, and support the sustainability of community-based environmental movements.

Conclusion

The findings of this study reveal that the partnership-based environmental communication model developed by the UKM GA plays a significant role in reducing pollution in the coastal areas of West Aceh. This partnership operates through two primary dimensions: internal and external collaboration. Internal partnerships are manifested through the optimization of bonding and bridging social capital, which strengthen commitment, solidarity, and collective awareness among community members. Meanwhile, external partnerships are developed through linking social capital, enabling the UKM GA to collaborate with various social actors beyond the campus, such as the GPL.

These collaborations not only expand social networks and reinforce the legitimacy of environmental movements but also enhance community capacity in fostering collective action and public education on environmental sustainability. The reflection of these findings underscores that the success of local environmental movements is largely determined by a community's ability to build and sustain cross-sectoral partnerships over time. Thus, this study offers a theoretical contribution to the development of a partnership-based environmental communication model grounded in social capital theory, as well as a practical contribution in strengthening the role of student communities as agents of change in sustainable environmental management in coastal regions. Finally, the authors would like to express sincere gratitude to the Institute for Research and Community Service (LPPM) at Teuku Umar University for supporting this study through the University's Excellent Basic Research Scheme (RDUU).

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