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The Role of Social Media in Advocating Sustainable Utilization of Coconut Husk Waste: A Case Study at Gedebage Wholesale Market, Bandung

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Abstract: This research explores the role of social media in advocating for the sustainable utilization of coconut husk waste at the Gedebage Wholesale Market, Bandung. Coconut husk waste is a significant natural resource with great potential but often underutilized. Employing a qualitative approach with a focus on a case study, this research utilizes online observation techniques, in-depth interviews, and content analysis of social media platforms (Instagram and Facebook) involving relevant stakeholders. Data analysis reveals that social media plays a key role in raising awareness and mobilizing support for sustainable coconut husk waste utilization. Social media platforms such as Instagram and Facebook are utilized to disseminate information about the benefits and potential of coconut husk waste, promote sustainable products made from such waste, and facilitate interactions among producers, consumers, and other stakeholders. The study also identifies challenges and opportunities in using social media for coconut husk waste utilization campaigns. Challenges include difficulty in reaching the right audience, managing the risk of inaccurate information, and building sustainable engagement. On the other hand, opportunities include the ability to create compelling narratives, connect communities with similar interests, and raise broader awareness about the importance of sustainable waste utilization. This research provides insights into the potential and crucial role of social media in driving social change towards more sustainable coconut husk waste utilization. Practical implications include the importance of developing effective communication strategies via social media to support sustainable waste utilization efforts in local and global markets.

Keywords: Social media, Waste utilization, Sustainable campaigns, and Communication strategies

INTRODUCTION

Coconut waste is one of the abundant types of organic waste in many tropical and subtropical regions worldwide, including Indonesia (Kamil et al., 2024). Coconut waste is commonly generated from coconut industries, including coconut milk and oil production,

among others (Kamil, 2023). However, managing coconut waste often poses a significant challenge, with negative impacts on the environment and human health (Nustini & Allwar, 2019). One of the main issues associated with coconut waste is its accumulation and uncontrolled burning, resulting in air and soil pollution detrimental to the environment and public health. Additionally, coconut waste also poses a potential source of water pollution if not managed properly. These negative impacts highlight the urgency to find sustainable solutions in coconut waste utilization (Bondra et al., 2018).

The utilization of coconut waste is becoming increasingly important in the context of sustainable development. Coconut waste has significant potential to be converted into value-added products such as coconut fiber, activated charcoal, briquettes, organic fertilizers, and raw materials for other industries (Anggoro et al., 2018). By sustainably utilizing coconut waste, we can reduce pressure on the environment, decrease pollution, and create economic opportunities for local communities. In addition to environmental and economic benefits, coconut waste utilization also contributes to the achievement of sustainable development goals set by the United Nations (UN). In the 2030 Sustainable Development Framework, waste utilization is one of the key elements to achieve goals such as poverty reduction, environmental sustainability, and the creation of sustainable employment. Coconut waste management has become an increasingly important issue in this modern era as coconut waste can have negative environmental impacts if not properly managed. Coconut waste, generated from various industries such as food processing, coconut oil, and handicrafts, often accumulates in landfill sites or is burned uncontrollably, causing air, soil, and water pollution. Coconut husk waste can be processed into strong and durable fibers. Coconut fibers are used in various applications such as making woven products, sacks, mattresses, and wall panels (Indahyani, 2011). Coconut shell waste can be converted into activated charcoal through carbonization processes. This activated charcoal has various uses, including as a raw material in the pharmaceutical industry, water treatment, and air filter production. Coconut fiber waste can also be used as raw materials for making briquettes or charcoal (Budi, 2017). Coconut briquettes are an environmentally friendly and efficient alternative as biomass energy sources for cooking and heating purposes. Coconut waste can be processed into organic fertilizers rich in nutrients such as potassium, phosphorus, and magnesium (Syahputra et al., 2023). These organic fertilizers can be used to improve soil fertility and agricultural productivity naturally.

The utilization of coconut waste to produce value-added products as mentioned above not only helps reduce the negative impacts of waste on the environment but also creates new economic opportunities for local communities. By developing appropriate technologies and innovations, coconut waste can become a valuable and sustainable resource to support sustainable development in various industrial sectors. Gedebage Wholesale Market, located in Bandung, is one of the largest traditional markets in West Java, Indonesia. As a major trading center for various agricultural products and other commodities, this market plays a significant role in the local and regional economy. However, like many other traditional markets, Gedebage Wholesale Market also faces waste management issues, including coconut waste.

In this market, coconut waste is generated from various activities such as coconut sales, coconut milk production, and the production of coconut-based foods and beverages. Coconut waste, especially husks and shells, often becomes significant organic waste that is difficult to process. The accumulation of coconut waste in this market can lead to environmental problems such as pollution and the spread of diseases, as well as disrupt the comfort and safety of market visitors. Additionally, coconut waste management at Gedebage Wholesale Market is also a concern due to its untapped economic potential. Coconut waste has the potential to be converted into various value-added products that can increase income and create job opportunities for local communities.

The issue of coconut husk waste management at Gedebage Wholesale Market, Bandung, is a crucial focus in the context of efforts to maintain environmental and local economic sustainability. Coconut husk waste, generated in large quantities as a byproduct of various activities at the market, often becomes a source of environmental pollution if not properly managed. The accumulation of coconut husk waste in the market can lead to various problems, including air, soil, and water pollution, as well as disrupting the market's aesthetics and visitors' comfort. Amidst these issues, the role of social media stands out as an essential tool in advocating for the sustainable utilization and environmental management of waste (Kampanyeet al., 1875; Natasari, 2024). Social media provides an effective platform for disseminating information, rallying support, and mobilizing action from the public, stakeholders, and industry players (Rizki & Lubis, 2014). By utilizing social media as a communication tool, campaigns for coconut husk waste utilization can reach a wide audience, including consumers, producers, government, and non-governmental organizations. A case study at Gedebage Wholesale Market, Bandung, is relevant because the market serves as a focal point for trading activities involving numerous traders, buyers, and industry players. Through an analysis of the role of social media in campaigning for coconut husk waste utilization at this market, effective communication strategies, challenges faced, and opportunities to enhance awareness and participation in sustainable waste utilization efforts can be identified. With a deep understanding of the role of social media in advocating for coconut husk waste utilization, concrete steps can be taken to improve waste management, build community awareness, and encourage active participation in maintaining environmental and economic sustainability at Gedebage Wholesale Market and its surrounding areas. Therefore, research on coconut waste issues is urgent and essential in developing effective and sustainable solutions for managing coconut husk organic waste.

Environmental Campaigns Through Social Media

Although environmental campaigns regarding coconut waste through social media have become increasingly common, there are still several issues that need to be addressed, including: Limited Access, Inadequate Information Dissemination, Concerns about Validity and Credibility, Low Engagement Levels, and Challenges in Building Compelling Narratives. Overcoming these issues requires careful communication strategies, collaborative efforts between environmental organizations and communities, and the use of appropriate technology and innovation to effectively and sustainably reach target audiences. Not all layers of society have equal access to social media. Especially communities that are less connected to the internet and have limited access to information about coconut waste environmental campaigns. Although information about coconut waste utilization may be available on social media, the presentation and dissemination of this information may not be adequate to reach a wider audience or may not be easily understood by the general public. In the social media environment, which is sometimes filled with unverified information, people may doubt the validity and credibility of the information conveyed in coconut waste campaigns. This can reduce the effectiveness of the campaign. Although many people may view content about environmental campaigns on social media, the level of active engagement, such as sharing information or taking tangible actions, may be low. This can diminish the real impact of the campaign.

Building compelling and inspiring narratives about coconut waste utilization may pose a challenge. Without strong and engaging stories, campaign messages can lose their appeal and struggle to capture public attention. Social media, including Instagram and Facebook, have become powerful platforms for disseminating environmental messages and rallying support for sustainable initiatives. Research by Kaplan and Haenlein (2010) suggests that social media has significant potential to influence individuals' behaviors and attitudes towards

environmental issues. Instagram, as a popular platform for sharing photos and videos, has been widely used to advocate for environmental issues. Research by Schemerhorn et al. (2017) found that posting engaging images of sustainable practices, including coconut waste utilization, can increase public awareness and participation in environmental efforts. Facebook, as a social media platform that allows for deeper and more diverse interaction, has also proven effective in campaigning for environmental issues. Research by Rizki (2015) found that environmental messages posted on Facebook can influence users' attitudes and behaviors, especially when conveyed by trusted sources. The importance of engaging and relevant content in environmental campaigns on social media cannot be underestimated. According to research by Lee and Shin (2014), creative, informative, and inspiring content tends to be more effective in capturing the attention and engagement of social media users towards environmental issues, including coconut waste utilization. Collaboration among various stakeholders, including environmental organizations, industry players, and social media influencers, also plays a crucial role in enhancing the impact of environmental campaigns. Studies by Soares and Van Aelst (2016) indicate that campaigns involving cross-sector collaborations tend to be more successful in achieving environmental goals. By understanding the role of social media, especially Instagram and Facebook, and the factors influencing the success of environmental campaigns, more effective communication strategies can be designed to advocate for sustainable coconut waste utilization through these platforms.

METHOD

This study employs a qualitative approach with a focus on case studies at Gedebage Wholesale Market, Bandung. The qualitative approach enables researchers to gain a deeper understanding of the role of social media in advocating for the sustainable utilization of coconut husk waste through the collection of descriptive data and analysis of broader contexts. Informant selection is done by considering the diversity of stakeholders involved in coconut husk waste utilization at Gedebage Wholesale Market, including traders, buyers, local government officials, environmental organizations, and the local community. Research informants for this study will include several stakeholder groups engaged in coconut husk waste utilization at Gedebage Wholesale Market, Bandung. These include; Traders selling coconut products or products using coconut husk waste as raw materials, Buyers who frequently shop at Gedebage Wholesale Market and have an understanding of coconut husk waste and its products, Representatives from the Bandung local government involved in waste management and local environmental organizations active in waste utilization efforts in Bandung, Individuals or groups influential on social media, especially Instagram and Facebook, who have promoted environmental issues or coconut waste utilization. Each of these informant groups will provide different and valuable insights into the role of social media in the campaign for sustainable coconut husk waste utilization at the market. Through in-depth interviews and participatory observation, informants will be able to provide deep insights into the dynamics, challenges, and opportunities related to the campaign. Data collection is gathered through various methods, including participatory observation at the market, in-depth interviews with relevant stakeholders, and analysis of social media content (Instagram and Facebook).

Observations will be conducted to directly understand interactions and dynamics at the market, while interviews will be used to gather perspectives and experiences from stakeholders. The collected data is analyzed thematically, where main themes and patterns emerging from the data are identified and analyzed. Social media content analysis involves identifying trends, patterns, and sentiments from posts, comments, and interactions related to coconut husk waste utilization. Validity and reliability are maintained through various

strategies, including data triangulation (using multiple data sources), in-depth recording, and researcher reflexivity. Additionally, research findings are validated through discussions with relevant experts and stakeholders. Through this research method, it is hoped that a better understanding of the role of social media, especially Instagram and Facebook, in advocating for sustainable coconut huskwaste utilization at Gedebage Wholesale Market, Bandung, can be gained. The results of this study are expected to provide valuable insights and contributions to stakeholders regarding the effectiveness of environmental campaigns through social media.

RESULT AND DISCUSSION

Social media, particularly Instagram and Facebook, have played a crucial role in raising public awareness about the potential utilization of coconut husk waste. Posts, videos, and other creative content shared by environmental organizations and social media influencers have successfully captured the public's attention and built awareness about the importance of sustainable coconut waste utilization. Social media has empowered traders at Gedebage Wholesale Market to communicate sustainable products made from coconut husk waste to their customers. By using platforms like Instagram and Facebook, traders can directly promote their products to a wider audience, thereby increasing sales potential and supporting coconut waste utilization efforts. Community engagement in coconut husk waste utilization campaigns through comments, likes, and content sharing enables the public to lend support to these sustainable initiatives and contribute to spreading positive messages about coconut waste utilization. The use of social media, particularly Instagram and Facebook, as communication tools in coconut husk waste utilization campaigns at Gedebage Wholesale Market, Bandung, has significant implications in efforts to create a more environmentally conscious and sustainable society. By leveraging social media, traders and environmental organizations can reach a broader audience, increase public awareness, and promote sustainable practices in coconut waste utilization.

Contribution and Advocacy of Social Media

Social media significantly contributes to supporting the sustainable utilization of coconut husk waste through effective advocacy and widespread information dissemination. Platforms like Instagram and Facebook enable environmental organizations, traders, and influencers to share creative content that raises public awareness about the benefits of coconut husk waste. With various posts, videos, and inspiring stories, social media successfully captures attention and educates the public on innovative ways to utilize this waste. Additionally, social media facilitates community engagement through comments, likes, and content sharing, which strengthens support for sustainable initiatives. Through collaborative and coordinated campaigns, social media promotes eco-friendly practices and encourages behavior change, thereby contributing to efforts to create a cleaner and more sustainable environment.

Below is a diagram illustrating the role of social media in supporting the sustainable utilization of coconut husk waste at Gedebage Wholesale Market, Bandung. The diagram visualizes five key categories that demonstrate how social media contributes to this advocacy:

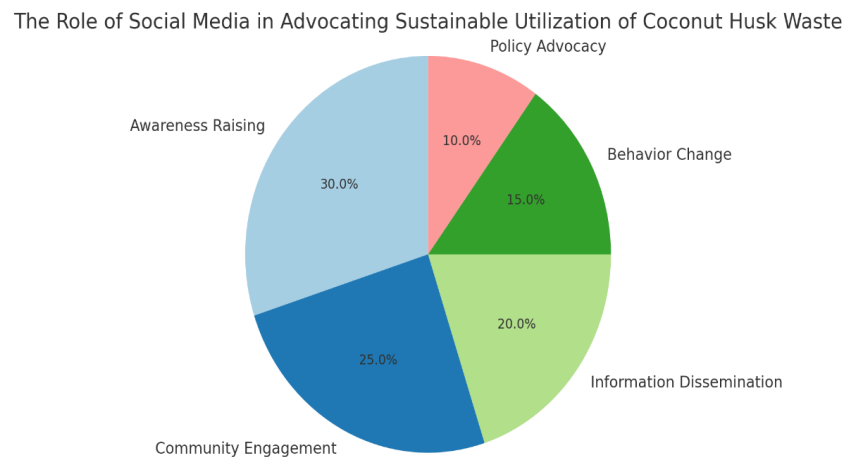


Figure 1. Five categories of social media contributions to environmental education

From the diagram above, it can be explained that:

1. Awareness Raising (30%): Raising public awareness about the importance of utilizing coconut husk waste.
2. Community Engagement (25%): Involving the community in activities related to waste utilization.
3. Information Dissemination (20%): Disseminating information about ways to utilize coconut husk waste.
4. Behavior Change (15%): Encouraging behavior change in the community regarding waste utilization.
5. Policy Advocacy (10%): Advocating for policies that support the sustainable utilization of coconut husk waste.

In efforts to enhance the utilization of coconut husk waste, Awareness Raising (30%) serves as a key element that emphasizes the importance of public awareness. When people understand the benefits of utilizing coconut husk waste, they are more likely to support sustainable initiatives. This heightened awareness then encourages active participation in various activities related to waste utilization, as reflected in Community Engagement (25%). Community involvement in these activities is crucial for fostering a sense of ownership and shared responsibility for the environment, allowing different societal groups to collaborate in achieving common goals. Next, Information Dissemination (20%) plays a vital role in spreading knowledge about effective ways to utilize coconut husk waste. Well-delivered information can educate the public on the various methods and technologies available, which in turn can trigger Behavior Change (15%). This behavioral shift is essential in encouraging people to adopt more environmentally friendly and sustainable practices. Finally, Policy Advocacy (10%) ensures that adequate policy support is in place to facilitate and strengthen efforts to utilize coconut husk waste. Although it has a smaller proportion, policy advocacy is critical in establishing a framework that supports these initiatives in the long term, resulting in broader and more sustainable impacts.

Campaign for the Utilization of Coconut Waste by Stakeholders Through Social Media.

The combination of all these categories significantly contributes to creating awareness and positive action towards the utilization of coconut husk waste in the community. In this study, several parties were selected as research informants. The following are the proportions of stakeholders who participated in the coconut waste utilization campaign :

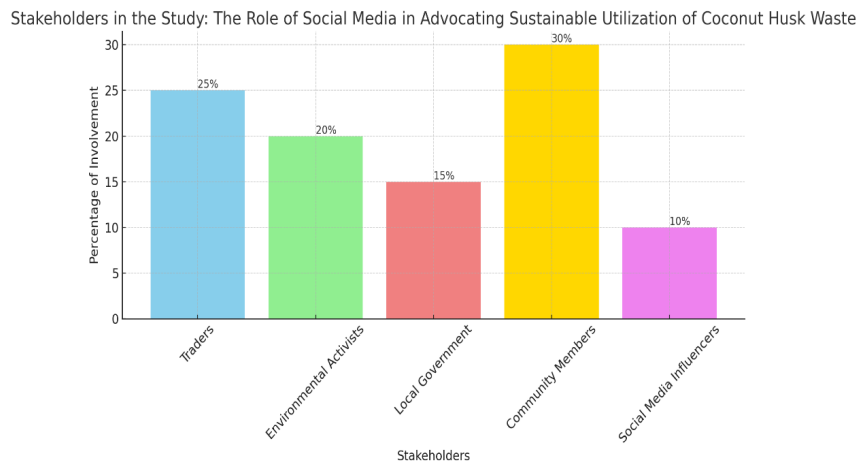


Figure 2. The proportion of stakeholder involvement in the socialization and campaign for coconut waste utilization at Gedebage Wholesale Market.

Based on the data presented, the local community plays the largest role, with 30% involvement. This indicates that community members are highly active in supporting and spreading information about the benefits of coconut husk waste utilization through social media platforms. The high level of community participation reflects a collective awareness and commitment to supporting this sustainable campaign, particularly in creating a cleaner and healthier environment. Additionally, traders and environmental activists also show significant contributions to the campaign, with 25% and 20% involvement, respectively. Traders use social media to promote coconut husk-based products to a broader audience, while environmental activists focus on education and information dissemination to raise public awareness. On the other hand, the local government and social media influencers serve as campaign supporters, with 15% and 10% involvement, respectively. Although their contributions are smaller, the government's involvement demonstrates official efforts to support the campaign, while influencers help reach a wider audience with creative and engaging content.

Meanwhile, Informants in this study., particularly traders and environmental activists, emphasize the importance of social media in raising public awareness about the benefits of coconut husk waste utilization. Posts and informative content on Instagram and Facebook have successfully educated the public about various products that can be derived from coconut waste and their positive environmental impact. Traders at Gedebage Wholesale Market have directly benefited from using social media to promote coconut waste utilization products. By sharing product photos and information about the production process, they can reach potential customers beyond the market and increase product sales. Meanwhile, key informant representatives from the local government affirm that the local government is committed to supporting environmental initiatives, including coconut husk waste utilization. The local government has collaborated with various stakeholders, including traders and environmental organizations, to promote coconut husk waste utilization through various social media platforms.

As Febriyanti's study (2023) suggests, cocopeat and cocofiber in various sectors, including agriculture, livestock farming, and other industries, are more effectively promoted through social media platforms. The role of Social Media in Government Communication has become an effective communication tool for local governments to disseminate information about environmental programs and encourage community participation (Kamil, 2018). By using platforms like Instagram and Facebook, the local government can reach a wider audience and raise awareness about coconut husk waste utilization. The local government has actively collaborated with traders, environmental organizations, and other parties in coconut waste utilization campaigns. Through joint efforts, they have created strong synergy to enhance

campaign effectiveness and achieve environmental goals. Interviews with local government informants highlight the importance of the government's role in supporting and facilitating sustainable coconut husk waste utilization campaigns through social media. By engaging in communication and collaboration with various stakeholders, including traders and environmental organizations, the local government plays a key role in creating a cleaner and more sustainable environment. However, challenges such as resource allocation and inter-agency coordination need to be addressed to enhance the effectiveness of these campaigns. Therefore, continuous efforts are needed to strengthen cooperation between the government, private sector, academia, and the community in promoting sustainable coconut waste utilization. With the right synergy, the potential of coconut husk waste utilization can be optimized to create a more sustainable environment at Gedebage

Wholesale Market, Bandung. Based on interviews with community environmental informants, such as Walhi and the Indonesian Conservation Cadre Communication Forum (FK3I), these community and environmental volunteers contribute insights into the role of social media in campaigning for waste utilization, particularly coconut husk utilization, at Gedebage Wholesale Market, Bandung. Informants emphasize the importance of environmental activists' role in mobilizing community support for coconut husk waste utilization.

They are actively using social media, especially Instagram and Facebook, to share information about the benefits of coconut waste and mobilize the community to participate in waste utilization efforts. According to environmental volunteers, inspiring educational content is highly effective in capturing the public's attention. Videos, pictures, and inspirational stories about coconut husk waste utilization can motivate people to take tangible actions in supporting coconut waste utilization. Social media has empowered the community to play an active role in coconut waste utilization campaigns. Through online communities and discussion groups, people can share experiences, ideas, and suggestions on creative and sustainable ways to utilize coconut waste with multi-stakeholder support and collaboration. FK3I emphasizes the important role of social media in campaigning for sustainable coconut husk waste utilization at Gedebage Wholesale Market, Bandung.

Environmental activists have become powerful agents of change in disseminating information, raising awareness, and motivating positive actions in the community through social media. In this context, cooperation between local governments, traders, media, and the public is key to creating a cleaner and more sustainable environment. Further collaborative efforts are needed to strengthen these campaigns and ensure that coconut husk waste utilization becomes an integral part of sustainable development efforts at Gedebage Wholesale Market, Bandung. Meanwhile, interviews with social media influencer informants indicate that they play a crucial role in campaigning for sustainable coconut husk waste utilization at Gedebage Wholesale Market, Bandung. With significant influence on social media platforms, influencers can create a domino effect in increasing awareness and changing community behaviors regarding this issue. Informants highlight the positive impact of social media influencer influence in spreading environmental messages about coconut husk waste utilization. Through creative and engaging content, influencers can reach a large audience and motivate them to adopt sustainable practices. Influencers tend to use popular social media platforms such as Instagram and YouTube to disseminate their messages. With a large and diverse following, influencers can make a significant impact in increasing public awareness and participation in coconut husk waste utilization efforts. As Erika Kurnia's research (2023) suggests, the use of social media influencers has a positive and significant impact on increasing awareness, interest, and audience participation. Creative and educational content plays a crucial role in coconut husk waste utilization campaigns. Through tutorial videos, inspirational photos, and inspiring stories, influencers can help the public understand the benefits of coconut waste and ways to

use it sustainably. Here is a diagram illustrating the presence of social media as a means of socialization and campaign in the utilization of coconut waste, and Reach, Engagement, and Conversion from Instagram and Facebook over several months :

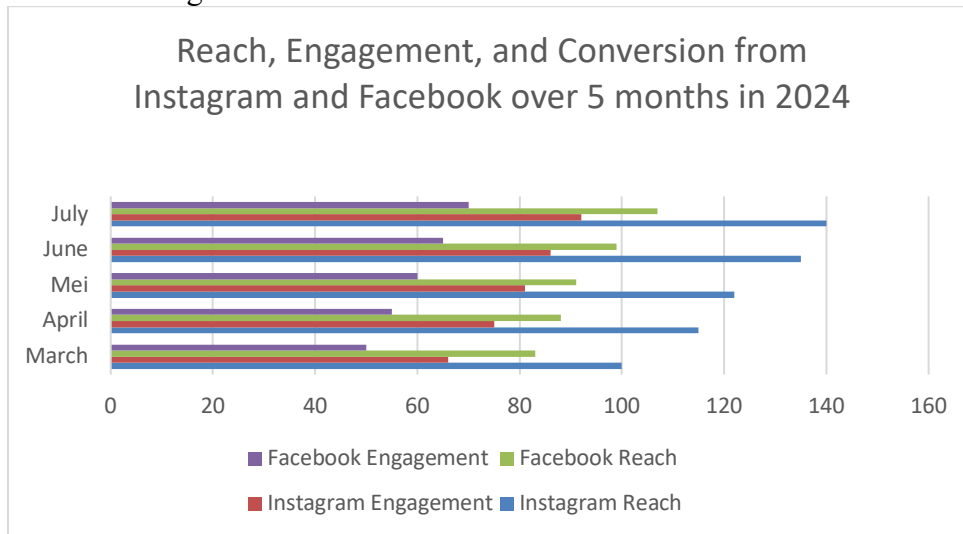


Figure 3. Reach, Engagement, and Conversion from Social Media Platforms

The research findings indicate that social media, particularly Instagram and Facebook, played a significant role in the socialization and campaign for the utilization of coconut waste at Gedebage Market over several months. The campaign's reach successfully extended to hundreds of users on both platforms, with the majority of the audience located in the Bandung area. The campaign effectively raised awareness about coconut waste-based products, such as cocopeat and coir, by utilizing various social media features like image posts, videos, and stories to attract a broader audience. Moreover, a high level of engagement was recorded on several key pieces of content, especially those involving direct interaction with users, such as Q&A sessions and product reviews by local influencers. The conversion rate from this campaign also showed positive results, with a number of users who engaged in the campaign subsequently purchasing products or signing up for more information. Overall, this research confirms that the use of social media can effectively enhance awareness, engagement, and conversion in campaigns for the utilization of coconut waste, particularly in local markets like Gedebage Market.

Reach refers to the total number of unique users who see content about the utilization of coconut waste, such as cocopeat and coir products, on social media. It measures how broadly your campaign is spreading awareness about these valuable products. A higher reach indicates that more people are exposed to information about the benefits and uses of coconut waste products, helping to raise overall awareness and interest in these sustainable solutions. Engagement tracks how users interact with content promoting coconut waste products through likes, comments, shares, and other interactions. High engagement suggests that the audience is not only seeing the content but is also interested and involved with it. This active participation helps to amplify the campaign's message, encouraging further sharing and discussion about the products. Conversion measures the number of users who take a specific action after engaging with the content, such as purchasing cocopeat or coir products, or signing up for more information. Conversion indicates the effectiveness of the campaign in turning interest and engagement into tangible actions, which is crucial for the success of promoting and commercializing these coconut waste products.

CONCLUSION

The role of social media in campaigning for sustainable coconut husk waste utilization

at Gedebage Wholesale Market, Bandung, has shown a significant impact in raising public awareness, mobilizing participation, and facilitating cross-sector collaboration. Through interviews with various informants, including traders, local government officials, environmental activists, and social media influencers, various important aspects of this campaign have been revealed.

1. Public awareness of sustainable coconut husk waste utilization has significantly increased through the use of social media. Educational, creative, and inspiring content shared by traders, environmental activists, and social media influencers have successfully reached a wide audience and built a better understanding of the benefits of coconut waste.
2. Social media has empowered traders to promote their sustainable products to potential customers beyond the physical market. By using platforms like Instagram and Facebook, traders can reach a wider audience and increase sales of sustainable products while promoting sustainable practices to the community.
3. Community engagement in the campaign for coconut waste utilization has also increased through social media. Through comments, likes, and content sharing, the public can support these sustainable initiatives and expand the reach of positive messages about coconut waste utilization.
4. Collaboration between local government, traders, environmental organizations, and social media influencers is key to creating a cleaner and more sustainable environment. Local governments play a crucial role in supporting and facilitating this campaign, using social media as a communication tool to disseminate information about environmental programs and encourage community participation.

However, there are several challenges to be addressed in campaigning for sustainable coconut husk waste utilization through social media. One of them is information validity and varying levels of community engagement are challenges that need to be addressed. Thus, joint efforts among government, traders, environmental organizations, social media influencers, and the public are needed to ensure the continuity of this campaign. Cross-sector collaboration, the use of effective communication strategies, and community empowerment through social media are steps that can be taken to overcome these challenges and enhance the impact of the campaign for sustainable coconut husk waste utilization at Gedebage Wholesale Market, Bandung, and in other regions.

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