

Climate Change Education in Indonesia: A Marketing Strategy Social-Based on Community

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ABSTRACT

Climate change is a global challenge that requires active public participation and context-sensitive communication strategies. This study analyzes community-based social marketing strategies for climate change education in Indonesia through a case study of the Peribumi community, with particular attention to the marketing mix, segmentation-targeting-positioning (STP), and the use of communication media. This study employed a qualitative case-study approach. Data were collected in May 2025 through in-depth interviews with [N] informants, consisting of the community founder as the key informant, administrators, and participants involved in Peribumi programs. The study purposively selected informants based on their direct involvement in planning, implementing, or participating in Peribumi's educational activities. Data were analyzed using an iterative qualitative case-study procedure involving data reduction, categorization, data display, pattern identification, and conclusion drawing. The findings show that Peribumi's community-based social marketing strategy delivers climate-related education through messages connected to everyday life and local values, combines digital communication channels with interactive educational activities, and involves community members and educational partners in collective environmental activities. The findings further indicate that locally relevant narratives and participatory communication facilitate community engagement with climate change issues. However, limited resources and difficulties in scaling up the programs remain important challenges. This study suggests that integrating social marketing principles, community participation, and locally contextualized communication can provide a useful framework for developing community-based climate change education programs in Indonesia.

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1. INTRODUCTION

Climate change is one of the most pressing environmental and social challenges facing contemporary societies. Indonesia is particularly exposed to climate-related risks because of its archipelagic geography, extensive coastal areas, dependence on climate-sensitive sectors, and uneven levels of local adaptive capacity. The *Climate Risk Country Profile: Indonesia*, jointly published by the World Bank Group and the Asian Development Bank, identifies flooding, extreme heat, sea-level rise, changes in rainfall patterns, and risks to agriculture and livelihoods as major climate-related concerns for the country [1]. Indonesia's national climate-resilience policy also emphasizes that responding to climate change requires collaboration among government institutions, non-governmental organizations, communities, and other stakeholders rather than relying solely on centralized interventions [2].

Education is an important component of this response because climate action requires not only scientific information but also the knowledge, skills, values, attitudes, and opportunities needed to translate understanding into action. Environmental education is a broad educational field concerned with relationships between individuals, society, and the natural and built environment and seeks to develop environmental awareness, knowledge, attitudes, skills, and participation. Climate-change education, by contrast, represents a more specific educational focus concerned with understanding the causes and consequences of climate change as well as mitigation, adaptation, resilience, and climate action. In this sense, climate-change education can be understood as a specific area within the broader fields of environmental education and Education for Sustainable Development. UNESCO emphasizes that climate-change education should move beyond transmitting scientific knowledge toward action-oriented learning that builds the capacity and agency needed to respond to climate change [3].

An important challenge for climate and environmental education is the gap between environmental awareness and actual behavior. Pro-environmental behavior refers to individual or collective actions intended to reduce negative impacts on the environment or contribute to environmental sustainability. Such behavior may include reducing unnecessary consumption, conserving energy, minimizing waste, reusing materials, participating in environmental activities, and supporting sustainable practices. However, knowledge and environmental concern do not automatically lead to behavioral change because behavior is also shaped by social norms, habits, perceived costs, infrastructure, opportunities, and contextual constraints [4], [5]. Consequently, climate-change education requires approaches that connect knowledge with practical opportunities for participation and action.

One approach relevant to this challenge is social marketing. Social marketing applies marketing principles and techniques to encourage voluntary behaviors that are expected to benefit individuals and society [6]. Rather than selling commercial products, social marketing identifies a desired social behavior and develops strategies to make that behavior more understandable, acceptable, accessible, and relevant to a target audience. Concepts such as audience segmentation, targeting, positioning (STP), and the marketing mix, including product, price, place, and promotion, can therefore be used to understand how

environmental messages and behavioral alternatives are designed and communicated [7]. In climate-change education, social marketing provides a strategic framework for examining how educational messages are adapted to particular audiences and communicated through appropriate channels.

Community-Based Social Marketing (CBSM) is related to social marketing but places stronger emphasis on behavior change within specific community contexts. CBSM begins by identifying the barriers and perceived benefits associated with a particular sustainable behavior and subsequently uses community-level strategies to facilitate participation and behavioral adoption [8]. Unlike communication approaches that primarily transmit information, CBSM recognizes that behavior is embedded in social relationships, community norms, local constraints, and everyday practices. Previous research has applied CBSM to environmental behaviors including water conservation, waste reduction, recycling, and energy conservation [9], [10]. Thus, social marketing provides the broader strategic lens, particularly through the marketing mix and STP, while CBSM explains why community context and participation matter for translating educational messages into socially relevant practices. The foundational CBSM literature specifically presents the approach as a process for making behavioral and psychological knowledge usable in community sustainability programs.

Within a community-based approach, local wisdom and community participation perform different but complementary functions. Local wisdom refers to knowledge, values, norms, interpretations, and practices that have developed within a particular social and cultural context through interaction between communities and their environment. In environmental education, local wisdom can provide culturally familiar narratives that connect abstract environmental problems to everyday experience. Community participation, meanwhile, refers to the active involvement of community members in processes such as identifying problems, exchanging knowledge, implementing activities, and contributing to collective environmental action. Local wisdom therefore provides contextual and cultural meaning, whereas community participation is the process through which community members become actively involved rather than merely recipients of environmental messages. Community-based environmental initiatives may become more context-sensitive when program design incorporates these elements [11].

The concepts used in this study are therefore related but analytically distinct. Environmental education provides the broad educational context, while climate-change education focuses specifically on climate-related knowledge, mitigation, adaptation, and action. Pro-environmental behavior represents the practical behavioral domain toward which educational activities may be directed. Social marketing provides strategies for designing and communicating desirable social behaviors, whereas CBSM emphasizes the barriers, opportunities, and social processes operating at the community level. Local wisdom provides culturally relevant knowledge and values for contextualizing messages, while community participation concerns the involvement of community members in educational and collective processes. Together, these concepts provide a framework for examining how climate-related education can move from communicating information to contextualized community engagement.

In this study, climate-change education is addressed broadly rather than being limited to plastic-waste management. Activities such as reducing plastic use, managing household waste, conserving energy, reusing materials, and participating in environmental initiatives are treated as practical forms of pro-environmental behavior through which broader ideas of sustainability and climate responsibility can be communicated. These behaviors should not be interpreted as equivalent to climate change itself. Instead, they serve as accessible entry points through which participants can relate broader environmental and climate issues to everyday practices. This distinction is particularly important for community-based education, where abstract climate issues must be connected to actions participants can recognize and take in their daily lives. UNESCO's current guidance similarly emphasizes that climate education should link knowledge to mitigation, adaptation, resilience, values, and meaningful action rather than concentrate solely on climate science [3].

The Indonesian context further strengthens the relevance of this approach. The country's climate vulnerabilities vary considerably across geographical and social settings, which means that environmental communication cannot always rely on standardized messages. At the same time, behavioral responses are influenced by community resources, social relationships, cultural values, and opportunities for collective action. Indonesia's climate-resilience policy explicitly recognizes the contribution of non-governmental actors and collaboration in strengthening climate resilience [2]. Therefore, community organizations can provide an important setting for examining how environmental and climate-related messages are contextualized and communicated to diverse audiences.

Peribumi offers a relevant case for examining these processes because its educational activities combine community interaction, environmental messages, digital communication, and everyday sustainable practices. Rather than assuming these activities directly cause increased environmental awareness or behavioral change, this study examines how Peribumi designs and implements its community-based social marketing strategy and how it contextualizes climate-related messages within its programs. It pays particular attention to the application of the marketing mix and segmentation-targeting-positioning (STP), the use of communication media, and the roles of community participation and locally relevant narratives. Accordingly, this study aims to analyze how community-based social marketing is implemented in Peribumi's climate-change education activities and how its communication strategies facilitate engagement with climate and environmental issues in the Indonesian community context.

2. METHOD

Research Design and Case Selection

This study employed a qualitative single-case instrumental case-study design. Peribumi was treated as a single bounded case because the study focuses on how one community-based organization designs and implements social marketing strategies in climate-change education. The study is instrumental because it examines Peribumi as a case through which the broader phenomenon of community-based social marketing, environmental communication, and community engagement can be understood, rather than solely describing the organization itself.

The case-study approach was considered appropriate because the research questions examine how social marketing strategies are implemented within their actual organizational and community context. The application of the marketing mix, segmentation-targeting-positioning (STP), communication media, community participation, and locally relevant educational messages cannot be meaningfully separated from the setting in which Peribumi operates. A qualitative case study therefore allows these interconnected practices to be examined within a real-world context and through the perspectives of individuals directly involved in the organization [12].

Case Boundaries and Unit of Analysis

The case was bounded organizationally to Peribumi, a non-profit educational community established in 2021 and operating independently since 2024. The study was not restricted to a single physical location because many Peribumi activities are conducted through online platforms and involve participants from different regions of Indonesia. Therefore, the geographical boundary of the case refers to Peribumi's organizational and educational activities within the Indonesian context, including its digitally mediated community interactions.

Programmatically, the study focused on Peribumi's environmental and climate-related educational activities and communication practices. Programs discussed in the study include Captain Kepik, Mother ASAKA, Cikal, LMS training, PERI PONG, and digital communication through Peribumi's social-media platforms. The study examined these programs as manifestations of the organization's broader educational and community-engagement strategy rather than as separate cases.

The participant boundary included the community founder, administrators, and program participants who had direct involvement in Peribumi's activities. Data collection was conducted in May 2025. The unit of analysis was Peribumi's community-based social marketing strategy for climate-change education. Accordingly, individual programs, social-media communication, and participant experiences were treated as sources of evidence for understanding the strategy rather than as separate units of analysis.

Informant Selection and Data Collection

Informants were selected purposively based on their direct knowledge of and involvement in Peribumi's programs and communication activities. The informants included [N] individuals: one community founder as the key informant, [N] administrators, and [N] program participants. The founder provided information on the organization's objectives, program development, and strategic decisions, while administrators contributed information on program implementation and communication practices. Participants provided perspectives regarding their involvement in Peribumi's educational and community activities.

Data were collected through in-depth interviews conducted during May 2025. The interviews focused on Peribumi's educational programs, application of social marketing principles, audience segmentation and targeting, communication channels, community participation, locally contextualized messages, and the implementation of pro-environmental

activities. The interviews were used to obtain information from different organizational positions and participant perspectives relevant to the unit of analysis.

Data Analysis

The interview data were analyzed through an iterative qualitative case-study procedure. The analysis began by organizing the data around the research questions and informants' roles. Relevant information was then reduced and categorized by recurring issues related to the marketing mix, STP strategy, communication media, community participation, and the contextualization of environmental and climate-related messages.

The resulting categories were compared across informants to identify recurring patterns and differences in how Peribumi understood and implemented its strategy. The findings were then organized into narrative analytical categories corresponding to the study's theoretical framework. The researchers repeatedly checked interpretations against the original interview data and refined preliminary conclusions throughout the analytical process. This iterative process of data reduction, categorization, data display, pattern identification, and conclusion drawing maintained consistency between the empirical evidence and the study's interpretation.

3. RESULTS AND DISCUSSION

The findings indicate that Peribumi packages environmental and climate-related messages into accessible educational programs, with participation costs that are primarily non-monetary in the form of time, effort, and commitment. Online platforms expand access beyond geographical boundaries, while promotional activities rely on Instagram, facilitators, moderators, and internal community networks. The findings also suggest that local and family-oriented narratives may support participant engagement by increasing perceived relevance, strengthening social interaction, and encouraging peer and family support. At the same time, limitations in organizational resources and program scalability remain important challenges. These findings are context-specific to the Peribumi case and should not be generalized to all Indonesian communities.

Impact of Indigenous Products on Giving Education

This study indicates that Peribumi's educational products and climate-related programs offer participants opportunities to engage with pro-environmental issues through accessible, community-oriented activities. The approach to education based on local wisdom, such as the "Cikal" program Parongpong, "workshop", "Captain Ladybug," and LMS Training, shows that Natives are capable of conveying messages about climate change in easy language, understandable and relevant to daily community life [13]. The findings indicate that Peribumi's educational programs encourage participants to engage with practical environmental issues such as household waste reduction and energy conservation. However, this study does not quantitatively measure changes in participants' environmental behavior; therefore, the findings are interpreted in terms of program implementation and participant engagement rather than measurable behavioral effects. These findings align with

the social marketing theory that product education must offer tangible benefits to trigger behavior change [14].

"After the Captain Kepik workshop, the Captain Kepik ambassadors were asked to present the results of their projects, and they were very enthusiastic." (Interview, May 16, 2025). These interview accounts suggest that participant engagement may be supported not only by the educational content itself but also by social interaction and family support. In the Captain Kepik program, children were encouraged to present their projects, while parents were involved in supporting their participation. This pattern may be interpreted through observational learning, in which individuals learn partly through observing and interacting with relevant social models such as parents, facilitators, and fellow participants. In this case, the theory explains a possible mechanism underlying engagement rather than claiming that observational learning was directly measured.

Peribumi's strategy through the Captain Kepik workshop reached the hearts of its members, inspiring and encouraging them to carry out projects that positively impacted Climate Change. This inspiring strategy was also evident in the members' enthusiasm in each workshop session.

"In addition to the children attending the workshop, their parents were also given education and motivation always to support and machildren'sir children's mood until they complete the workshop and their project." (Interview, May 16, 2025)

However, the factor that inspired participants' interest in the Captain Kepik workshop activity was not the only factor. Another factor is the enthusiasm and support from the participants' parents. According to social learning theory put forward by Hammer[15], a person can learn and develop through observations of a person (individual) or model. In this case, the model is the individual or unit being observed. In children, the objects they observe are generally their surroundings, such as parents, television characters, friends, and teachers at school [16]. However, if related to this study, the models in question can be training participants, Peribumi administrators, and trainers/teachers invited directly to the LMS training activities. This observation falls under the Observational Learning stage, an essential aspect of social learning theory in which individuals learn and adopt a person's or model's behavior by observing [16].

Impact of Indigenous Products on Understanding Climate Change

Peribumi's educational activities provide a community-based setting where participants encounter climate and environmental issues through locally relevant, practical narratives. One of its flagship programs, "Mother Asaka," combines traditional knowledge with modern science to explain how climate change affects the ecosystem. According to research by Yasir et al. [17], the approach is community-based. It is practical because it uses relevant narratives from daily life and increases participants' acceptance and involvement. This program builds theoretical understanding and encourages concrete action through a simple approach, such as the Mother House ladder, as a form of sustainable management.

In addition, other Peribumi use digital media such as Instagram and other websites to spread climate change information in an accessible format, such as infographics and documentary videos. A study by Gustafson et al. [18] shows that narratively presented visual

content about climate change can increase public awareness and concern. One real impact of this strategy is increased youth participation in campaign environments, such as the #BijakBerplastik movement initiated by Native. According to Peribumi's internal program survey, 65% of surveyed participants reported changes in environmentally related practices after participating in educational activities. Because the survey relied on self-reported responses and was not designed as an experimental evaluation, the figure is treated as descriptive program-monitoring evidence rather than as evidence of causal behavioral change.

Research by Putra et al. [19] found that material contextual education aligned with local conditions is more effective at driving sustainable adoption behavior than a top-down government approach. Through collaboration with agency education, Peribumi successfully integrates traditional knowledge with modern solutions, making the program more accepted at the grassroots level.

Overall, the impact of programs and products Native seen from improved literacy, climate change, and changes in community behavior. A long-term evaluation by Nurfatiriani [20] against a community shows that the approach based on local capability creates agents of sustainable change. Findings This strengthens the argument that a social marketing-based community, as Peribumi has done, is an effective strategy for facing the challenge of climate change.

Price

Price in social marketing is not always monetary but the sacrifice made in time and energy [21]. The various efforts that the Peribumi team has made to be able to run this community have certainly taken their time and energy.

Over the past year, our movement has grown tremendously. In our motherhood workshops, we went from 55 ambassadors and 11 facilitators to 250 and 50 people, respectively. With 865 applicants this year, those who were not selected will join our existing 2022 community, bringing our total to over 1,500 mothers. In 2023, we are running workshops for teachers and primary school children, urging schools to incorporate Education for Sustainable Development (ESD) into their curriculum.

"Because it starts from Together, we grow. Together, we act; of course, the costs incurred from activities and programs are not a fundamental consideration in achieving our goals." (Interview, May 16, 2025)

Participants will create projects that address local challenges, supported by increased collaboration and additional grants for education programs, surpassing our achievements in 2022. In addition, through collaborative efforts, we have organized impactful events and made meaningful contributions, including PERI PONG, a waste management initiative. Toy waste is collected, processed, and used to create play equipment. In addition, as a partner, we also build community gardens in Jakarta.

In the Peribumi case, these non-monetary costs help explain participation as a behavioral issue rather than simply a financial one. Online participation may reduce some barriers, particularly travel and geographic distance, although participants still need time, digital access, and sustained motivation.

Place

Peribumi is a community formed in 2021 after the COVID-19 pandemic, so online media is an effective medium for activities and interactions. So, it is not surprising that most of the places where the Peribumi community carries out activities are in online spaces.

"Because we see online as more effective for participants from outside the region, the region's scope does not limit it. We want programs accessible and followed by all registered participants from anywhere." (Interview, May 16, 2025)

Social media marketing is connected to the location of the audience. Thanks to rapid technological advances during the pandemic, the best way to engage in social marketing is online or on online platforms. By utilizing online channels for social media marketing, the Peribumi Team can reach a broader and more engaged audience. The use of online platforms reduces some geographical barriers and allows participants from different regions to access Peribumi's activities more easily. This finding suggests that digital delivery may reduce participation barriers, although its usefulness still depends on internet access, digital literacy, and participant availability. In other words, the Peribumi space is wide and flexible.

The Peribumi community uses social media and websites to disseminate information. However, Peribumi uses Zoom, an online-based teleconferencing medium, to conduct its discussion events. This shows that online media allows meetings to be held anywhere, even though each member is not in one location.

With the use of social media and Zoom, Peribumi focuses on online media. It is undeniable that the Internet user market is currently enormous. The Indonesian Internet Service Providers Association (APJII) announced that Indonesian internet users in 2024 will reach 221,563,479 people out of a total population of 278,696,200 people in 2023. The results of the Indonesian Internet Penetration 2024 released by APJII show that Indonesia's internet penetration hits 79.5%. Compared with the previous period, there is an increase of 1.4%. Based on these facts, Peribumi has a vast opportunity to disseminate its information through digital channels.

Promotion

Promotion is one of the key elements in the marketing mix (4P: Product, Price, Place, Promotion) and has a very strategic role in social marketing. Unlike commercial marketing, which aims to increase sales, promotion in social marketing focuses on changing social behavior by spreading educational, persuasive messages and mobilizing collective action [22]. Promotion in this context includes advertising and communication campaigns, social media, influencer engagement, and community mobilization to encourage awareness and adoption of new behaviors.

According to Andreasen [23], the effectiveness of promotion in social marketing depends on audience segmentation, selection of communication channels, and framing of messages by community values. For example, a campaign to reduce plastic waste will be more effective if it uses an emotional approach through residents' testimonies rather than scientific facts. Research by Thackeray et al. [24] also shows that community participation-based promotion strategies (such as workshops, challenges on social media, or collaboration with influential figures) are more successful in creating sustainable change than one-way

communication approaches. Like commercial marketing, promotion is carried out so that the message or product to be "sold" reaches its audience. However, in social marketing, promotion is a way to encourage desired behavior through various messages spread through the media [23].

The Peribumi community has carried out several promotional strategies.

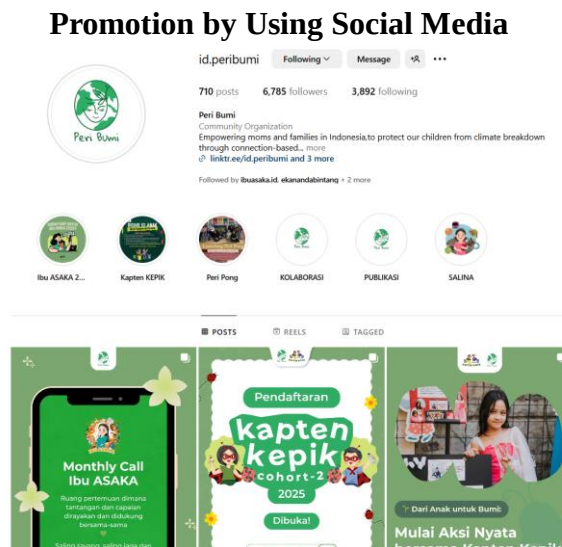


Figure 1. Instagram id. Peribumi

Because Peribumi's dissemination of information is entirely online, of course, Peribumi has social media in the form of Instagram. Dewing [25] explains that social media uses the Internet and mobile-based services to exchange information online, distribute content, and join communities. Referring to Dewing's understanding of social media, Peribumi uses social media to disseminate information, create content, and even form communities.

The social media used by Peribumi is Instagram (@id.Peribumi), and the number of followers is 6785. Instagram is a social media platform that distributes photos and videos, and it contains user interaction features through the comments column or message-sending feature [26]. Instagram is a social media platform for sending messages from the Peribumi community to the public. This is because the content presented by Peribumi is image-based, namely banners containing information related to programs and activities. In addition, Peribumi also uses social media to communicate and interact with its followers, which can be done via Instagram. In addition to the features offered by Instagram, there are many Instagram users in Indonesia. The Indonesian Internet Service Providers Association (APJII) announced that Indonesian internet users in 2024 will reach 221,563,479 people out of a total population of 278,696,200 people in 2023.

The results of the Indonesian Internet Penetration 2024 released by APJII show that Indonesia's internet penetration hits 79.5%. Compared with the previous period, there is an increase of 1.4%. So, it can be seen that the market for Instagram users in Indonesia is vast and can be used as an opportunity for Peribumi to expand its audience. The broad audience

that can be reached using social media allows Peribumi to carry out its activities widely, not only for its regular members, but new members can also get it. That way, Peribumi's social marketing activities can be carried out widely and are not limited to certain people.

Messenger Used For Promotion

The person who delivers the message to the audience also greatly influences the success of the social marketing strategy. Kotler and Lee [22] said that the message giver and distribution media are among the elements that influence social marketing promotion activities.

"In Peribumi too, community members can meet directly (in online space) with other members and administrators, ask questions, and have open discussions without worrying about differing opinions" (Interview, May 9, 2025)

The spokesperson used by Peribumi is the founder or a trainer brought in from other agencies during workshops or training activities scheduled every month. Because Peribumi's activities are diverse every month, the speakers differ. From here, using a spokesperson does not always have to be an inspiring person or someone with significant influence. Influencers influence a specific market population [27].

In addition to using trainers/presenters from certain institutions to encourage the enthusiasm of its members, Peribumi also invites community members to become moderators for each discussion. Therefore, each debate's atmosphere will differ depending on the moderator's demeanor. In addition, the use of familiar faces among members can encourage readers to join the discussion and adopt the reading habits of fellow members. In this way, Peribumi creates a safe, comfortable, and supportive environment to form chemistry between members.

The use of facilitators and community members as moderators may contribute to engagement through familiarity, trust, and social identification. Participants may be more willing to interact when communication is mediated by individuals who are perceived as part of the same community environment. This interpretation does not imply that trust or identification was directly measured, but it offers a plausible explanation for the interaction patterns observed in the case.

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Using Connection

In marketing, especially social marketing, having connections is very important. Without connections, it is not that marketing cannot run, but it will take quite a long time. Because the Peribumi marketing team has quite a few followers on social media, they use this to disseminate information related to activities that are being carried out and will be carried out in the future by the community.

"From various regions in Indonesia, the ASAKA mothers gathered virtually through Monthly Call space, a comfortable place where they each other share spirit, stories, and challenges in effort guard." (Interview, May 17, 2025)

The Peribumi marketing team extensively utilizes the power of connections to spread information. In addition to using influencers, Peribumi also utilizes its team, which has many followers on social media. By doing so, the message that wants to be conveyed will be faster and easier to reach a larger audience.

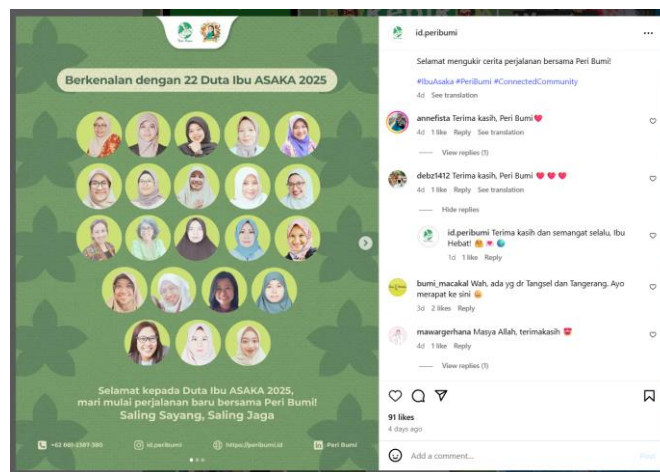


Figure 2. Example Interaction in the Instagram feed id.Peribumi

4. CONCLUSION

This study provides context-specific insights into how Peribumi implements community-based social marketing in climate and environmental education. The findings show that Peribumi packages environmental messages into accessible educational programs, relies primarily on non-monetary forms of participation such as time, effort, and commitment, and uses digital platforms to expand access across geographical locations. Its promotional activities combine Instagram, facilitators, community moderators, and internal networks, while locally relevant and family-oriented narratives appear to support participant engagement. The findings also indicate that social interaction, family support, and accessible communication channels are important features of Peribumi's approach. However, this study does not measure program effectiveness or establish causal changes in participants' environmental awareness or behavior. Therefore, the findings should be understood as insights into the implementation of Peribumi's strategy rather than evidence that the approach is effective across different Indonesian communities.

For Peribumi, the findings suggest the importance of developing more clearly differentiated message packages for specific participant groups, formally documenting target audiences, and establishing measurable behavioral indicators for each educational program. Future program evaluation should include pre-program and post-program measurements to assess changes in knowledge, engagement, and actual environmental practices. Peribumi may also strengthen its activities by combining online programs with locally organized offline activities, improving facilitator training, expanding partnerships, developing longer-

term funding mechanisms, and improving digital accessibility for participants with different levels of technological access.

The practical implications also extend to other stakeholders. Government agencies and NGOs can support community-based environmental education by providing institutional partnerships, technical assistance, funding, and access to environmental education resources. Schools can integrate community-based activities with classroom learning and involve students and families in practical environmental projects. Community educators can adapt environmental messages to the everyday experiences, needs, and cultural contexts of their audiences. Environmental campaign designers should consider audience-specific communication, participation barriers, local narratives, interpersonal communication, and the combination of digital and face-to-face engagement when designing community-based campaigns.

This study has several limitations. It focuses on a single organization and therefore does not represent the diversity of environmental communities in Indonesia. The study primarily examines organizational strategies and participant-related accounts within the Peribumi case, and it does not provide longitudinal measurements of actual behavioral change. In addition, digital engagement and program outcomes were not evaluated through standardized behavioral indicators. Future research should compare several environmental communities across different Indonesian regions, include both program beneficiaries and non-participants, and employ longitudinal designs to examine changes over time. Further studies should also measure actual pro-environmental behavior, evaluate patterns of engagement with digital media, and examine whether the analytical framework identified in the Peribumi case can be transferred to communities with different social, cultural, and geographical characteristics.

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