



THE CHALLENGE OF ENVIRONMENTAL SUSTAINABILITY: COMMUNICATION ACTION OF CITOREK'S YOUNG GENERATION

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Abstract

Efforts toward environmental sustainability in geopark development often encounter tensions between traditional wisdom and modern policy, particularly within indigenous communities. This study investigates how the youth of Citorek, Indonesia, navigate these challenges by integrating ancestral customs with government-driven Bayah Dome Geopark initiatives. Using a descriptive qualitative method, data were gathered through in-depth interviews with 11 key informants, six months of participant observation at 15 cultural-environmental events, and critical discourse analysis of 22 documents, including customary laws and UNESCO guidelines. The findings reveal that Citorek youth act as mediators between tradition and modernity through hybrid communication strategies. They sustain cultural rituals like Seren Taun while resisting environmental threats such as mining through digital campaigns on platforms like Instagram and local websites. They also bridge intergenerational and institutional gaps by promoting customary land management (ngamit lembur) within formal geopark frameworks and use traditional forums (musyawarah adat) alongside social media to support sustainable tourism. However, fragmented stakeholder collaboration and limited policy awareness persist. This study concludes that Citorek youth exemplify how hybrid, culturally rooted communication supported by social capital and Habermasian communicative action can enhance environmental governance. Their model aligns with SDGs 11 and 13, demonstrating that youth can be vital agents in culturally grounded sustainability. Recommendations include institutionalizing youth led digital platforms, scaling the Citorek model to other indigenous settings, and formalizing intergenerational knowledge transfer through mentorship programs.

Keywords: Environmental Communication; Social Capital; Youth Generation; Geopark Sustainability; Traditional-Modern Hybridity; Kasepuhan Citorek

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INTRODUCTION

Young people in many countries have unique interactions with environmental issues and are increasingly seen as central actors in sustainability efforts. In recent years, the role of youth in environmental preservation and sustainable development has become more visible and vital. Young people are now not only the primary audience for environmental campaigns but also active agents of change in climate action movements. In Indonesia, the younger generation has emerged as an influential group in promoting environmental advocacy and supporting national commitments to reduce carbon emissions.

According to Ramdani et al. (2024), this demographic is increasingly engaged in climate change mitigation through various forms of activism, including digital campaigns and grassroots mobilization (Osepashvili, 2024). For example, youth-led initiatives such as the Kapuas River cleanup in Pontianak have mobilized young people to engage with their local environment and promote eco-conscious behavior (FISIP UNTAN, 2023). Through social media platforms and community advocacy, young people are fostering public awareness and contributing to local environmental solutions. This demonstrates their dual role as both communicators and practitioners of sustainability, making them key stakeholders in shaping future environmental strategies.

Over the past five years, Indonesia has witnessed a shift in its approach to regional development, particularly through the expansion of geopark-based tourism. Geoparks represent an innovative strategy for achieving sustainable development by integrating geological heritage, environmental conservation, and community empowerment. Defined as unified geographic areas with significant geological features of scientific, educational, cultural, or aesthetic value, geoparks serve as a model for conservation-linked development (Henriques & Brilha, 2017; UNESCO, 2025).

One such example is the Bayah Dome Geopark, located in Lebak Regency, Banten Province. Covering 201,537 hectares and encompassing 15 sub-districts, the Bayah Dome has been formally recognized under Presidential Regulation No. 9 of 2019 and designated a geological heritage site under Ministerial Decree No. 164.K/HK.02/MEM.G/2022 (BPSDM ESDM, 2022). In line with this, the local government has enacted Lebak Regent Regulations No. 133/2020 and No. 54/2021 to manage and support the development of this geopark (Asdiarman, 2020). These policy frameworks provide a legal foundation for integrated environmental protection, scientific research, and sustainable economic development. However, despite these regulatory efforts, significant challenges remain in public awareness and institutional coordination.

The regulation is the basis for the central and regional governments to develop Lebak Regency as a national and even international class geopark (Ikhsan et.al., 2024). One of the characteristics of geopark development is encouraging innovative and collaborative community empowerment and involving pentahelix elements in ensuring the preservation of natural resources. The Lebak Regency Government involves indigenous peoples, local governments, academics, practitioners, and the private sector to carry out sustainable regional development through three main pillars: protection, education and research, and community economic development.

According to Fatahillah and Cadith (2022), public outreach and stakeholder engagement have been limited, with insufficient collaboration among key sectors, especially private enterprises and media outlets. Many local residents remain unaware of the geopark's existence or its significance, undermining both conservation and development goals. Furthermore, governance at multiple levels national, provincial, and local often lacks clarity in

the division of responsibilities. Without effective socialisation strategies and grassroots participation, the geopark risks becoming an elite-driven project with minimal community ownership. Therefore, stronger mechanisms are needed to institutionalise public engagement and environmental literacy, especially among youth, who are often more receptive to participatory and digital modes of communication.

One of the development support communities of the Bayah Dome Geopark is the Citorek indigenous community that implements a traditional social life system in Adat Kasepuhan Citorek. Daily, they show diversity in maintaining ancestral cultural heritage (Fathurrozi & Kustanto, 2023). The Citorek Customary Community has a habit of keeping a clean and dirt-free environment to preserve natural habitats and improve the overall quality of life of the community. The government paid attention by having these customs formally recognised through the Lebak Regency Regional Regulation No. 8 of 2015 on the Recognition, Protection, and Empowerment of Kasepuhan (RMI, 2019b).

The youth within the Kasepuhan Citorek community play a critical role in maintaining this cultural legacy while navigating the demands of modern environmental challenges. Young members are actively involved in cultural rituals, environmental conservation efforts, and the transmission of indigenous knowledge. Their involvement reflects a hybrid form of engagement that combines traditional values with contemporary communication tools, including social media and participatory forums (RMI, 2019a). These youths serve as cultural brokers who bridge generational and ideological divides, ensuring that custom (*adat*) principles remain relevant in a rapidly changing world. By promoting indigenous rights, participating in eco-cultural tourism, and advocating for sustainable land use, the younger generation strengthens both environmental stewardship and cultural identity (KLHK, 2024). Their adaptability and commitment to community empowerment demonstrate the dynamic role that indigenous youth can play in geopark development and broader environmental governance.

This study seeks to answer two central research questions: (1) How do traditional practices of communities like the Citorek indigenous group contribute to sustainable development in geopark areas? and (2) How do young people in Indonesia utilise digital and traditional communication tools to advocate for environmental conservation, particularly in geopark areas? By exploring these questions, this research aims to uncover the transformative roles played by youth in fusing customary traditions with modern advocacy tools. In doing so, it contributes to a better understanding of how bottom-up environmental actions can be integrated into formal sustainability frameworks. Additionally, the study will map the communication strategies employed by youth to maintain customary values while addressing contemporary environmental issues. This dual focus on tradition and innovation positions young people as vital agents in advancing sustainable and culturally grounded environmental governance.

Sustainability, Local Wisdom, and Communicative Action

Sustainable development today demands more than economic growth; it requires a harmonious balance between social, environmental, and economic dimensions. This paradigm, reflected in the United Nations Sustainable Development Goals (SDGs), positions environmental sustainability as a foundational pillar for ensuring long-term planetary and human well-being. Recent studies emphasise that environmental sustainability is not only a matter of technology and policy but also deeply intertwined with human values, local practices, and participatory communication (Ali & Li, 2024; Uslu et al., 2023). The success of sustainability initiatives increasingly depends on how effectively communities can mobilise social capital and local wisdom to protect ecosystems, foster inclusive participation, and adapt to environmental challenges.

Environmental communication has emerged as a strategic tool to address ecological issues by linking human behaviour, cultural values, and nature. Servaes (2020) explains that environmental communication integrates knowledge systems and encourages people to engage with nature responsibly. Its function extends beyond information dissemination ecological dialogue builds awareness, nurtures collective identity, and shapes behavioural change (Pezzullo & Cox, 2017). As seen in sustainable tourism development frameworks, environmental communication enhances community involvement, transparency, and governance (Capucho et al., 2023). Through participation in environmental dialogue and civic action, communities develop stronger social networks, a process that cultivates social capital a vital resource in managing shared environments (Abuhay et al., 2023).

Social capital refers to the network of relationships characterised by trust, reciprocity, and shared norms that enable collective action. Its significance in environmental governance is evident, especially in rural and indigenous communities where informal institutions remain strong (Seok et al., 2024). Studies show that community-driven initiatives thrive when social capital is present in both bonding (close ties within a group) and bridging (links to external actors) forms (Uslu et al., 2023). For example, in sustainable tourism and geopark programs, trust among stakeholders and shared environmental values significantly affect cooperation and outcomes (Singtuen & Gałka, 2024). Such capital enables communities to build resilience, organise environmental actions, and sustain participatory mechanisms essential for long-term conservation.

In Indonesia, local wisdom serves as a foundational element of environmental sustainability and social cohesion. It encompasses a set of beliefs, values, norms, and practices that have evolved over generations to ensure ecological harmony. In the Citorek indigenous community, such wisdom is evident in customary land-use systems, ritual practices for forest conservation, and norms governing resource sharing. These customs are recognised by formal law (e.g., Law No. 32 of 2009), reflecting how traditional knowledge systems can be institutionalised to support sustainability. Capucho et al. (2023) argue that local wisdom not only preserves cultural identity but also offers effective frameworks for resource governance when integrated into broader sustainability efforts. Dryzek (2022) suggests that environmental governance is most effective when rational practices are ritualized within local institutions, allowing scientific reasoning to align with cultural norms and traditional wisdom.

This intersection between local wisdom and environmental governance also requires effective communicative action, a concept rooted in Habermas' theory of deliberative dialogue. Communicative action involves reaching mutual understanding through rational discourse, a process essential for democratic engagement and participatory environmental governance. In the context of indigenous peoples, traditional councils, ceremonial discussions, and intergenerational storytelling serve as platforms for ecological dialogue. These practices align with what Habermas (2012) and Muttaqien & Ramdan (2023) describe as the "lifeworld" spaces of shared meaning where validity claims (truth, rightness, sincerity) are negotiated. Further, asserts that communicative action allows for consensus-building around shared values, which is critical in contexts like sustainable tourism and geopark development.

Several recent studies support the role of communicative action in enhancing participatory governance. In geopark areas, for instance, the success of sustainable tourism development correlates strongly with stakeholder collaboration, cultural sensitivity, and deliberative dialogue (Ali & Li, 2024; Suroto et al., 2023). Platforms that encourage open communication between indigenous groups, local governments, NGOs, and youth networks have

shown higher success in balancing environmental protection and community economic development. However, challenges remain in ensuring these dialogues are inclusive and sensitive to local wisdom. Therefore, to advance environmental sustainability in geopark and ecotourism contexts, it is essential to strengthen local communicative capacities, valorise indigenous knowledge, and invest in social capital. Young people can be strategic actors in this process. Equipped with digital tools and rooted in ancestral knowledge, they can bridge tradition and innovation in environmental advocacy. Their active involvement in eco-cultural campaigns, intergenerational storytelling, and collaborative planning reflects a new form of hybrid environmental citizenship that is crucial for sustainable futures.

METHODOLOGY

This study employs a descriptive qualitative methodology to investigate how the younger generation of the Citorek Indigenous community negotiates the complex interplay between ancestral customs and modern environmental governance frameworks. Focusing on their involvement in the Bayah Dome Geopark initiative, the research examines youth as pivotal agents who simultaneously preserve Kasepuhan Citorek cultural heritage and advance ecological sustainability. This dual role embodies a dynamic form of environmental citizenship grounded in local wisdom and enacted through communicative practices. The inquiry adopts a phenomenological lens to capture lived experiences, aligning with Rule and John's (2024) emphasis on context-sensitive case studies that illuminate "the challenges and prospects of social phenomena within their natural settings". By documenting intergenerational knowledge transmission and everyday environmental practices, the study positions youth as crucial actors in localising Sustainable Development Goals (SDGs), particularly SDG 11 (sustainable communities) and SDG 13 (climate action). Kociatkiewicz and Kostera's (2024) anti-naturalist epistemology further informs this approach, recognising indigenous ontologies as legitimate knowledge systems rather than folkloric artifacts.

Data collection integrated three qualitative methods to ensure robust triangulation and contextual fidelity. First, semi-structured interviews engaged 11 purposively selected participants youth leaders (n=5), traditional elders (n=3), community members (n=2), and government officials (n=1) yielding narrative-rich accounts of environmental value internalisation. Interviews followed O'Sullivan's (2023) dialogic protocol, using visual stimuli (geopark maps, ritual artifacts) to elicit nuanced responses about policy interfaces. Second, participant observation spanned six months across 15 community events, including *seren taun* (harvest ceremonies), forest stewardship activities, and geopark planning workshops. Field notes documented non-verbal communication and power dynamics between state and customary actors, adhering to Rule and John's (2024) call for "thick description of performative sustainability narratives". Third, document analysis interrogated 22 textual artifacts (e.g., *awig-awig* [customary law] codifications, regional spatial plans, UNESCO geopark guidelines), applying critical discourse analysis to trace institutional contradictions. All methods complied with Creswell and Poth's (2018) ethical framework for indigenous research, ensuring reciprocity via member-checking workshops.

The study's analytical framework is grounded in three interrelated theories (Kriyantono, 2022). First, social capital theory provides a lens to understand how trust, reciprocity, and social networks enable collective environmental action. In the context of Citorek, bonding social capital within the custom (*adat*) community supports knowledge continuity, while bridging capital fosters collaboration with external actors such as government agencies and NGOs (Uslu et al., 2023; Capucho et al., 2023). Second, environmental communication theory helps analyse how ecological narratives are constructed and communicated through both traditional and digital means. Communication strategies deployed by the youth such as storytelling, ritual performance, and online campaigns

serve to bridge ancestral wisdom with contemporary conservation language (Ali & Li, 2024). Third, Habermas's theory of communicative action frames the dialogical processes in which the community seeks mutual understanding, particularly in reconciling traditional ecological knowledge with state-led development agendas. This theory also highlights the importance of inclusive discourse arenas such as village meetings, ceremonial councils, and policy forums as spaces for negotiating sustainable futures (Muttaqien & Ramdan, 2023).

Data analysis applied qualitative domain analysis to identify patterns and themes across three domains: ecological knowledge, cultural continuity, and geopark-based development. The coding process emphasised meanings attached to nature, ritual obligations, and generational roles in sustainability (Creswell & Creswell, 2018). Attention was given to symbolic practices that communicate environmental ethics and customary taboos that regulate land use factors that anchor local wisdom within practical conservation behavior. The findings point to a new generation that not only inherits but also reinterprets custom (*adat*) values to respond to modern environmental challenges (Silverman, 2020). Their communicative actions both traditional and digital show how sustainability can be culturally embedded and socially negotiated rather than imposed from above.

Ultimately, this study underscores the transformative role of youth as mediators between traditional authority and modern environmental policy. By synthesising the relational strengths of social capital, the messaging power of environmental communication, and the deliberative logic of communicative action, this research offers a culturally grounded model of sustainable development. The Citorek youth exemplify how local ecological knowledge can be revitalised and mobilised in ways that align with global sustainability goals, thus reinforcing both cultural resilience and ecological stewardship at the community level.

RESULTS AND DISCUSSION

The Rise of Bayah Dome Geopark

The geological community has long acknowledged the Bayah Dome Geopark, particularly since Dutch geologist Van Bemmelen wrote about it in his 1949 book *Geology of Indonesia*. Van Bemmelen described in his work how the Bayah Dome, a volcanic terrain that dates from the Neogene to the Quaternary (about 23 to 0.01 million years ago), was formed. The region is known as the "gold district" because of its abundance of precious mineral reserves, which include gold, silver, and other metallic minerals. Since the Dutch colonial era, the region has gained notoriety as a gold mine, and mining operations are still carried out in some locations today (Tun et.al, 2019).

In the north-central part of the Bayah Dome Geopark, there is a depression zone known as the Citorek Depression Zone, more popularly called "Land Above the Clouds." This depression adds to the uniqueness of the region's landscape and has significant geological value. The Bayah Dome area has also attracted international attention, especially among geologists, due to its unique structure and economic potential in mineral resources (Ikhsan, 2024).

As one of Indonesia's significant sites, Bayah Dome Geopark has excellent potential for further development as a geological tourism destination. Several geological studies and journals have discussed the area's importance not only from an economic perspective but also from a scientific perspective, especially related to the geological evolution of the West Java region (Geopark Bayah Dome, 2024).

Figure 1 (Citorek Depression Zone Maps) illustrates the unique geological context where youth-mediated environmental governance unfolds. This cartographic representation reveals the Citorek Depression Zone's position within the Bayah Dome Geopark a Neogene-Quaternary volcanic formation (23-0.01 MYA) renowned for its mineral wealth (Van Bemmelen, 1949). The depression's elevation (dubbed "Land Above the Clouds") creates microclimatic conditions that shape traditional agroecological practices, with youth leveraging this topography to advocate for customary land buffers against mining concessions (Geopark Bayah Dome, 2024). As depicted, the zone's proximity to Mount Kendeng anchors ancestral narratives of agricultural settlement since 1846, while modern road infrastructure (Rangkasbitung access route) symbolizes the interface between isolation and connectivity that youth navigate (Somantri, 2020).

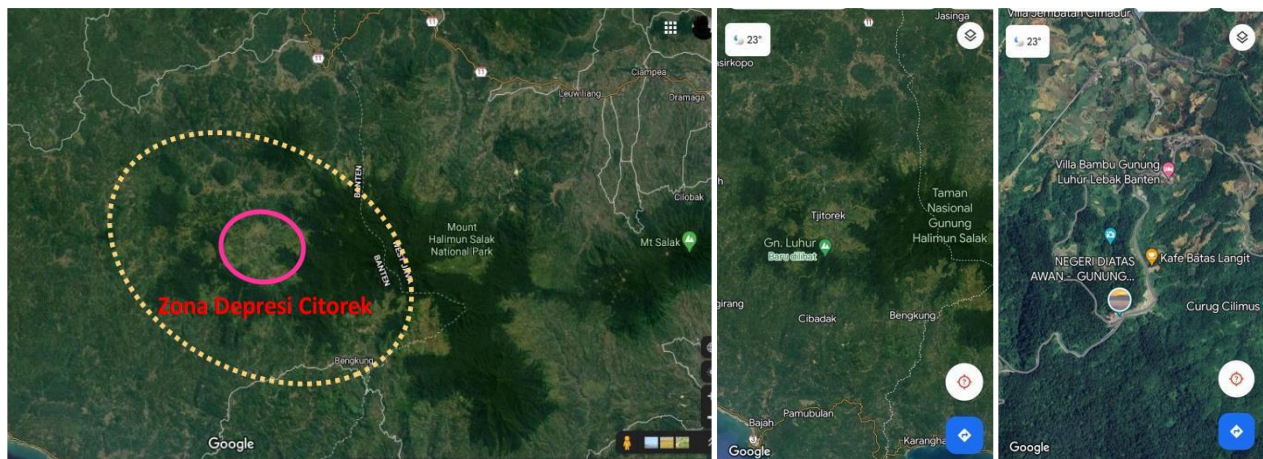


Figure 1: Citorek depression zone maps
(Source: Rosana 2020 and Google Maps, 2024)

The Kasepuhan Citorek community originated from Guradog (Jasinga) and settled in 1846. According to ancestral instructions, the community initially moved to find agricultural land around Mount Kendeng. Until now, the community, which is included in the administrative area of Cibeber District, Lebak Regency, Banten, holds tightly to the traditions of their ancestors, with the majority of the population working as farmers. Adequate road access makes it easy for tourists to visit Citorek, about 180 kilometres from Rangkasbitung (Somantri, 2020).

Figure 2 (Citorek Landscape) visually encapsulates the synthesis of tradition and adaptation central to youth environmental citizenship. The terraced rice fields demonstrate ngamit lembur (territorial stewardship) principles, maintained through Dewi Sri fertility rituals despite post-2001 architectural shifts from kiray-leaf stilt houses to semi-permanent structures. Youth have transformed these landscapes into living laboratories for sustainability integrating heritage seed preservation with geopark ecotourism (RMI, 2019a). The cloud-forested ridges foregrounded in the image represent both sacred leuweung kolot (ancestral forests) protected by customary taboos and strategic carbon sinks incorporated into youth-led reforestation partnerships (Ali & Li, 2024).



Figure 2: Citorek landscape
(Source: Researcher Documentation, 2024)

While still respecting customs, the Kasepuhan Citorek Indigenous Community is more open to the outside world than the Baduy. The Citorek indigenous people greatly respect their elders and still adhere to customary rules, even though they are unwritten (RMI, 2019b). Before 2001, the Citorek indigenous community lived in traditional wooden stilt houses with kiray leaf roofs and doors facing north or south. The traditional leader's house, imah gede, was the centre of traditional activities. However, after a major fire in 2001, many houses began to change into permanent or semi-permanent houses for safety, although farming and customary traditions are still strictly maintained (RMI, 2019a & Somantri, 2020).

The change was even more pronounced after introducing electricity in 2004, which brought modern technology such as refrigerators and televisions into their homes, both on stilts and permanently. Even so, the Citorek community still holds tight to the farming tradition by using traditional rituals that honour *Dewi Sri*, a symbol of fertility (Somantri, 2020). Each stage in farming is initiated by the *Oyok* (traditional leader) and accompanied by typical arts such as goong to ward off bad luck. In addition to farming traditions, the Citorek community also carries out traditional ceremonies related to the human life cycle and Islamic religious traditions. *Gotong-royong* is the main social value that keeps the community intact and together, while their kinship system reflects the strong family ties and traditions passed down through generations (RMI, 2019a).

Kasepuhan Citorek Kidul, located in Lebak Regency, Banten, offers a cultural tourism experience that introduces the life of the Sunda Wiwitan Indigenous community. Visitors can learn about customs and the customary government system and participate in the local community's traditional ceremonies. Their daily life, which relies on conventional agriculture, allows tourists to see first-hand the process of traditional rice cultivation and even participate in the activity.

In addition to its strong culture, Kasepuhan Citorek Kidul also offers traditional Sundanese architecture with houses built from bamboo, wood, and palm fibre. Visitors can stay in homestays managed by residents, allowing them to experience the life of the Kasepuhan community more closely. The surrounding environment, surrounded by mountains and forests, provides a calm and fresh atmosphere, with various natural destinations such as hot springs, waterfalls, and trekking trails in the forest suitable for ecotourism.

The Kasepuhan Citorek Kidul community also holds various cultural activities and festivals, such as the *Seren Taun* ceremony, an annual ritual to express gratitude for the harvest. Travellers can also enjoy traditional

Sundanese cuisine and take home local handicrafts made from natural materials, such as woven bamboo and wood carvings, as souvenirs. This destination is suitable for those who want to learn about traditional culture and enjoy the beauty of nature.

The Role of Traditional Practices in Sustainable Development

Citorek Timur is an indigenous community in Banten that firmly upholds its ancestral traditions and culture while practising sustainable environmental management. Located in a mountainous region, the area boasts rich biodiversity and stunning natural landscapes. The people of Kasepuhan Citorek Timur rely on traditional, eco-friendly farming practices, cultivating crops such as rice, coffee, and various vegetables.

The community's philosophy is known as *Leuweung Hejo Masyarakat Ngejo*, which means that the forest is sustainable, and the community will prosper. This is related to the community's custom of protecting nature because their livelihood depends on it.

As explained by Khaerudin, as the Head of Cibeber Sub-District, who stated that:

“Their habitat is still in Gunung Halimun National Park; they were leuweung hejo incu putu ngejo. So when the forest is intact, it means they can eat. And support the community. So if you see that they keep the conservation, they are already a geopark.”

They continue to preserve the "Seren Taun" tradition, an annual ceremonial event to express gratitude for a bountiful harvest. Additionally, the community's social structure is supported by a strong system of customary law, where the village elders play a crucial role in decision-making and resolving issues. Collective activities like "gotong royong" reflect the community members' strong sense of solidarity and togetherness.

Regarding the Bayah Dome Geopark, Puun Citorek Timur said that living in harmony with the environment is ingrained in people's daily lives. They consider nature as a biological mother that needs to be protected because it has given life.

“As indigenous peoples, we have long lived in harmony with nature, taking care of our forests, rivers, and farmlands in ways we believe in. We believe that nature is a mother who must be protected and respected, for it is from her that we derive life and well-being.”

The pristine natural surroundings of South Citorek are a testament to the local community's commitment to sustainable forest management. Sharing many similarities with East Citorek, the village boasts its unique traditions, including the "seren taun" ceremony and other rituals tied to agriculture and everyday life. Beyond farming, the people of South Citorek have embraced handicrafts and small-scale enterprises as supplementary sources of income. Their strong sense of community, fostered by cooperation and familial bonds, has created a harmonious and supportive environment.

The response from various community leaders in Kasepuhan Citorek reflects a deep sense of pride and optimism regarding the Geopark Bayah Dome program. Puun Citorek Kidul expressed that acknowledging Bayah Dome as a geopark is an honour for the region and emphasises the importance of preserving the environment and

local wisdom that the community has upheld for centuries. He underscores that the community has always lived harmoniously with nature, seeing it as a mother that must be protected and respected because it sustains life.

“We at Kasepuhan Citorek Kidul welcome the recognition of the Bayah Dome Geopark. This recognition brings honour to the Kasepuhan region and emphasises the importance of environmental preservation and local wisdom that we have upheld for centuries.”

Puun Citorek Timur reiterated this sentiment, emphasising that environmental harmony is ingrained in the people's daily lives. He hopes the geopark will serve as a platform to introduce Citorek's rich cultural and natural heritage to a broader audience while stressing the importance of preserving the ecosystem. He calls for any development associated with the geopark to be carried out sustainably and without disrupting the balance between culture and nature.

Geopark Bayah Dome's program manager, Dasep, affirmed that the program has been well-received by the Citorek community. He sees the local support as essential for successfully implementing the project, which focuses on preserving nature and local culture. He hopes the geopark will become a model of sustainable resource management and cultural preservation, providing long-term benefits for both the environment and the local people.

“The Bayah Dome Geopark program has been well received by the Kasepuhan Citorek community; they welcome it as a positive step in preserving nature and local culture. Support from the community is an essential asset in running this program successfully.”

Similarly, Sukmandi, a tourism initiator, emphasised the geopark's potential for promoting environmental conservation and sustainable tourism. He highlighted the importance of collaboration between local communities, governments, and academics to ensure the program's success and sustainability. Lastly, Oyok Didi, a traditional elder from Kasepuhan Citorek Timur, echoed these sentiments, emphasising the need for inclusive decision-making processes involving local communities in the geopark management to ensure balanced, sustainable development that benefits everyone.

“As a youth and Pokdarwis activist, I strongly support the Geopark program because it has great potential to increase awareness and the importance of environmental conservation while developing sustainable nature-based tourism.”

Puun Citorek Timur also hoped the geiparad would introduce and expand the people's understanding of cultural wealth. He even emphasised that natural and cultural preservation should be the government's concern in developing the Bayah Dome Geopark.

“With this geopark, we hope to introduce our natural and cultural wealth to the outside world. However, we also emphasise that every step of development must pay attention to the principles of wise preservation of nature and culture, without damaging the ecosystem and disturbing the lives of indigenous peoples.”

In short, the Geopark Bayah Dome initiative is a promising opportunity to preserve Citorek's rich cultural and natural heritage while promoting sustainable economic development. The community's strong connection to

nature and collaborative efforts between various stakeholders offer a hopeful path toward balancing progress with conservation for future generations.

Youth as Bridges Between Tradition and Modernity

Social capital often includes the level of trust and confidence between individuals in a community. High levels of trust can help strengthen social networks and facilitate better cooperation. The traditional rituals accompanying agricultural activities are an integral part of the religious life of the Kasepuhan Citorek community. Two essential aspects colour their religion: religion and beliefs inherited from their ancestors. The religion adopted by the Citorek Indigenous Community is Islam. Khaerudin, as the Cibeber sub-district head, said that:

“In Citorek there is also a mosque, a pesantren, in the wewengkon, the village with the most scholars is Citorek Sabrang. Because it used to be one village, now there are five villages, one of which was split into five. In the Citorek area, there are many kyais, even the head of the boarding school leadership forum is from the Citorek area in the entire sub-district. If you look at the people of Citorek in the past five years, the interest in going for Hajj has exceeded that of other regions.”

Social capital is also related to an individual's level of participation in social activities, such as community organisations, volunteer groups, or other community activities. This participation can strengthen social capital because individuals who are active in social activities often have greater access to information and resources. Sukmandi, as the initiator of the advancement of Gunung Luhur tourism, said that:

“That Sunday night, we had a literary coffee. We chatted about where this person's fashion is and when this person is suitable for digital, and we directed them. To become a content creator, some basic knowledge of farming is required, which means that this person is suitable for agriculture. And the plan yesterday was to chat with friends. Let's make a creative village; we gather content creators together so that the content is its village.”

From the information above, it is known that this statement describes how local communities try to develop individual potential according to their respective interests and talents and their plans to advance the village through creative collaboration. The results of interviews conducted by researchers with the manager of the Bayah Dome Geopark, Dasep, who said that:

“We hope to continue to grow and provide sustainable benefits for the community and the environment. We hope that this program can be a good example of natural resource management and cultural preservation in Indonesia. With hard work and joint commitment, I am sure that Bayah Dome Geopark will become a leading tourism destination that benefits all parties.”

From the results of interviews conducted by researchers with the initiator of tourism at Gunung Luhur, Sukmandi, who stated:

“We also realise that the development of this program has its challenges; therefore, we need to work together with the government, academics, and local communities in designing and implementing this program wisely.”

Sukmandi, as the initiator and chairman of the Pokdarwis, emphasised the importance of a holistic approach in developing the Bayah Dome Geopark program, where environmental preservation, local economic empowerment, education, and cultural preservation go hand in hand to create sustainable benefits for the community and the environment. Sukmandi built a community reading park that collaborates with the community, the city government of Bangalore, the Cibeber sub-district head, the Geopark Manager, and the national library. Sukmandi, as the initiator of Gunung Luhur tourism, also built a community reading park.

“The concept of literacy is all knowledge and skills. If I have any books in front of me, I put them all in. I used to have many books; the last one was sent from the National Library. Yesterday, I asked to go to elementary school, and hopefully, it will be realised soon because I already made an MoU on behalf of my TBM in Citorek yesterday.”

The Citorek community is known for actively participating in various social activities to develop human resources. One activity that stands out is the community gathering, which is routinely held to strengthen social relations and improve the community's quality of life.

Inclusion and belonging are also established in the Citorek community. Creating an inclusive environment where fellow individuals feel they have a role and responsibility in the community empowerment process strengthens the sense of belonging to the goals and initiatives undertaken. The community assisted one of the neighbours in growing chili, guiding and accompanying the process.

Individual empowerment also continues to take shape in particular communities. The more the communication network grows, the more empowered the community becomes, having self-confidence and enough knowledge to take positive action. Individuals who feel empowered tend to be more active in creating change. People try to plant other crops to protect the earth.

Utilisation of Digital Tools for Environmental Advocacy

The findings on developing and promoting Geopark Bayah Dome highlight significant community participation in branding and promotion efforts. Local initiatives, such as the Geopark Youth Forum, Tourism Awareness Groups, and managers of tourist villages and geosites, have played a crucial role in bottom-up approaches. These groups have actively engaged in education, training programs, study visits, and focused discussions. Furthermore, collaboration extends to artists, schools, and universities, which have been involved in proactive dialogues regarding program development. The younger generation of Kasepuhan Citorek has effectively utilised social media and technology to promote their cultural heritage and tourism. Based on Figure 3, the website Lebak Unique provides detailed information about Kasepuhan Citorek, offering a platform for locals and visitors to learn more about the region's traditions, customs, and natural beauty. This website is a key tool for enhancing the visibility of Kasepuhan Citorek's unique cultural assets. Similarly, Figure 4 highlights the Instagram account of Kasepuhan Citorek, which showcases the area's daily life, traditional events, and scenic landscapes. By leveraging visual content, the youth can engage a broader audience and increase interest in the local culture and eco-tourism. The use of these digital platforms reflects how the younger generation is adapting to modern communication tools while preserving and promoting their rich cultural heritage.

Figure 3 (Lebak Unique Website) and Figure 4 (Kasepuhan Citorek Instagram) demonstrate how youth leverage digital tools to transform ancestral wisdom into contemporary environmental advocacy. The lebakunique.id portal (Figure 3) strategically frames Citorek as a "living heritage landscape," embedding UNESCO geopark criteria within indigenous ecological narratives. Interactive trail maps overlay sacred sites (*punden*) with biodiversity hotspots, while agricultural calendars synchronize *seren taun* rituals with climate-smart harvesting techniques effectively bridging Kasepuhan cosmology with SDG 2.4 (sustainable food systems). This digital curation exemplifies what O'Sullivan (2023) terms visual knowledge repatriation, where youth reclaim narrative authority from external commercial platforms.

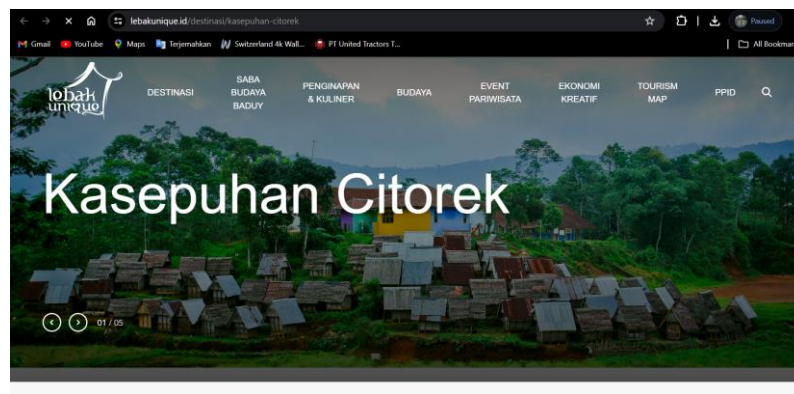


Figure 3: Lebak Unique website about Kasepuhan Citorek
(source: <https://lebakunique.id/destinasi/kasepuhan-citorek>, 2024)

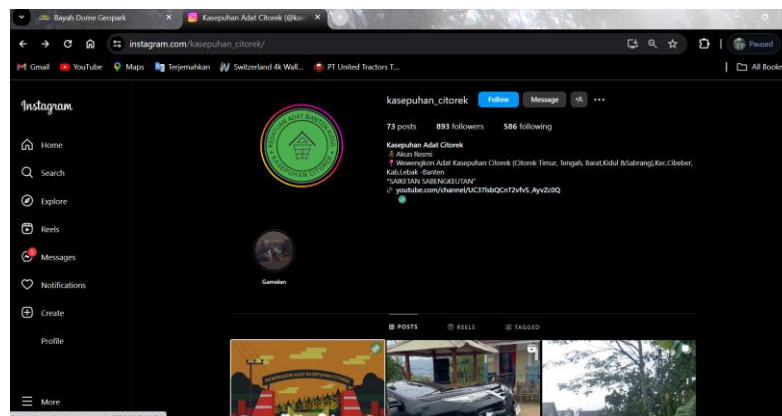


Figure 4: Instagram account of Kasepuhan Citorek.
(source: https://www.instagram.com/kasepuhan_citorek, 2024)

Therefore, technology can promote environmental awareness and provide accurate information on how to protect the environment. For example, through social media applications, young people can share information and conduct digital campaigns to protect the environment. Technology can strengthen the environmental communication process and increase public awareness about the importance of protecting the environment. The communication actions in the context of Geopark Bayah Dome's development and promotion revolve around collaborative, community-driven efforts that integrate traditional and modern communication methods. These actions highlight

how various stakeholders ranging from local communities to formal institutions engage in structured and dynamic dialogues to achieve mutual goals.

Three distinct yet interconnected forms of communication actions drive Citorek's environmental governance model. First, community engagement and participation manifest through grassroots collectives like the Geopark Youth Forum and Tourism Awareness Groups (Pokdarwis), which facilitate bottom-up dialogues in environmental education workshops and inter-village exchanges. These platforms transform community members into co-architects of conservation strategies, operationalizing Habermas's (2012) ideal of egalitarian discourse (Muttaqien & Ramdan, 2023). For instance, *musyawarah adat* (customary deliberations) during rice-planting rituals (*marak*) enable farmers to integrate *leuit* (communal granaries) into UNESCO geopark food sovereignty programs, directly advancing SDG 2.4 while preserving intergenerational stewardship norms.

Second, collaborative actor networks create a synergy scaffold connecting *kuncen* (customary guardians), geologists, village governments, and youth organizations. Through formal channels like geopark management boards and informal exchanges during shared agricultural labor, these stakeholders align ancestral wisdom with scientific expertise. A notable example includes Universitas Indonesia researchers collaborating with elders to translate Van Bemmelen's (1949) volcanic soil analyses into terrace-farming guidelines, while corporate partners fund youth-led geotrail mapping that overlays mineral data with sacred land boundaries (*punden*). This embedded collaboration ensures erosion studies by Fatahillah and Cadith (2022) inform policies honoring *Gemah Ripah Loh Jinawi* (harmony-with-nature principles).

Third, the integration of traditional and digital media enables youth to bridge ontological worlds. Digital platforms like the lebakunique.id portal (Figure 3) and @kasepuhan_citorek Instagram (Figure 4) transform *seren taun* harvest rituals into viral conservation pedagogies (#PamaliRiverGuardians), while TikTok tutorials on seed preservation using *koja* (bamboo containers) globalize local knowledge. This media hybridity exemplifies Castells's (2018) "networked cultural production," where YouTube documentaries on sacred forests fund landslide sensors proving digital tools amplify rather than displace epistemic traditions.

Collectively, these actions form a communicative ecology: participation grounds decisions in lived experience, collaboration weaves scientific and ancestral knowledge, and media hybridity scales local wisdom globally. By embedding policy dialogues within cultural performances such as debating mining moratoriums during *tingkepan* ceremonies Citorek validates Dryzek's (2022) assertion that "environmental governance thrives when rationality is ritualized." This framework offers Indigenous communities worldwide a replicable model to counter extractive industries while advancing planetary sustainability goals.

Additionally, various actors have been involved in these collaborative efforts, including Tourism Awareness Groups, tourist village managers, traditional leaders, academics, youth, village and district governments, companies, and university students. These diverse stakeholders have come together to foster discussions, share ideas, and actively participate in initiatives to promote and sustain the Geopark Bayah Dome, highlighting the strength of community-based collaboration.

Table 1 below highlights the roles and actions of Citorek's youth in cultural and environmental preservation, activism, and initiatives. It focuses on three key aspects: policy and program, initiative and social

capital, and adaptation. Regarding policy and program, Citorek's youth leverage digital platforms to preserve and promote their local culture. They actively document traditions and promote local tourism through digital media, safeguarding cultural continuity and driving regional economic growth through tourism.

Regarding initiative and social capital, the youth play a pivotal role in cultural documentation and outreach through digital platforms. Digital skills are crucial in promoting cultural preservation, enabling them to reach a wider audience and ensure that cultural values are passed on to future generations. Their efforts go beyond merely maintaining traditions; they focus on adapting and disseminating these traditions in a way that remains relevant in the modern era.

In the adaptation aspect, Citorek's youth act as agents of change, ensuring that cultural heritage remains visible and sustainable amidst contemporary developments. They maintain the continuity and visibility of cultural traditions through efforts aligned with current conditions, such as using digital media to bridge ancestral traditions with modern challenges. This role is essential in keeping Citorek's cultural heritage relevant, ensuring that these traditions continue to evolve and thrive in contemporary society.

Table 1 underscores the active role of Citorek's youth in bridging the past and present through technology. Their efforts in cultural documentation, promotion of local tourism, and digital initiatives highlight how they preserve cultural and environmental heritage while adapting it to modern societal needs. By acting as change agents, youth ensure that the traditions of Citorek remain visible, valuable, and integrated into the contemporary world. Their use of digital platforms and skills demonstrates a forward-looking approach to cultural preservation, one that balances respect for tradition with innovation and adaptability in an increasingly digital age.

These actions benefit cultural sustainability and contribute to the local economy by fostering tourism, indicating the multifaceted impact of youth involvement in their community. The integration of digital media allows for a broader outreach, ensuring that local traditions do not remain isolated but are shared globally, providing both cultural preservation and modern relevance.

Table 1: Citorek's Young Generation Action and Movement

Aspects	Youth's Role and Actions	
	Cultural and Environmental Preservation	Activism and Initiatives
Policy and Program	Youth use digital platforms to preserve and promote local culture	Youth document traditions and promote local tourism through digital media
Initiative and Social Capital	Cultural documentation and digital outreach	Digital skills and cultural preservation are key drivers
Adaptation	Ensuring the continuity and visibility of cultural heritage	Youth as change agents, ensuring cultural relevance in the modern era

(Source: Data Analysis, 2024)

Synergizing Traditional and Digital Communication

The younger generation in Citorek exemplifies how traditional and digital communication can be synergized to advance environmental sustainability. By engaging in conventional communication methods, such as seeking

advice from elders and participating in community meetings, they uphold the social capital embedded in their cultural practices. Simultaneously, they leverage digital tools like social media to amplify their environmental advocacy, bridging local efforts with broader audiences. This dual strategy strengthens collaboration among indigenous groups, local governments, and environmental organizations, aligning diverse stakeholders toward implementing geopark policies. It underscores how hybrid communication approaches can drive sustainable development in culturally significant regions.

Communication actions in the Geopark Bayah Dome case are characterized by inclusivity, multi-stakeholder involvement, and the effective combination of traditional and digital communication methods. These actions ensure community participation and align the interests of diverse stakeholders with the preservation and promotion of the region's cultural and environmental heritage.

Their activism, bolstered by digital skills and social capital, positions them as agents of change who bridge the gap between the past and present. Through these efforts, they safeguard their culture and contribute to local economic growth and community development, ensuring that Citorek's rich cultural legacy continues to thrive in the face of contemporary challenges.

Through a blend of traditional communication with elders and advanced digital communication skills, the youth effectively demonstrate adaptability while maintaining their cultural identity. This synergy showcases their respect for local customs and their compliance with national and regional government directives, positioning them as key agents in cultural preservation and sustainable development.

However, this transformative process faces challenges. Limited collaboration among stakeholders, inadequate dissemination of geopark policies, and the tension between modernization and traditional values hinder full realization of sustainable development goals. Despite these barriers, opportunities abound, particularly in the innovative use of digital literacy and youth energy. By harnessing these strengths, the younger generation can enhance public awareness, integrate traditional knowledge with modern practices, and lead sustainable initiatives within geopark areas.

From the perspectives of environmental sustainability, social capital, local wisdom, and communicative action, the Citorek youth's efforts reveal a dynamic interplay between tradition and modernity. Environmental sustainability is pursued by maintaining ecological harmony, while social capital fosters trust and collective action within the community. Local wisdom offers a foundation for environmental conservation, ensuring modernization respects cultural identity. Through communicative action, the youth mediate between traditional leaders and modern stakeholders, creating a dialogue that integrates diverse viewpoints into cohesive environmental strategies.

CONCLUSION

Citorek's younger generation is actively preserving their cultural heritage and driving sustainable development in geopark areas by cleverly merging traditional knowledge with modern digital tools. They leverage digital platforms to document local customs and boost tourism, ensuring their heritage remains vibrant and relevant. This innovative blend of old and new communication methods positions them as a powerful force for progress.

Their initiatives extend beyond cultural preservation, also catalyzing environmental activism. These community-led efforts demonstrate a potent model for achieving broader conservation goals. This research highlights the significant potential in enhancing their communication strategies, offering valuable insights into how these hybrid approaches can effectively tackle complex environmental issues within geopark regions.

Ultimately, Citorek's youth showcase an impressive ability to integrate traditional values with contemporary technology. Their work is essential for safeguarding Kasepuhan Citorek's cultural and environmental legacy, perfectly aligning with both customary social systems and government conservation policies. This study underscores the transformative role of youth in blending traditional practices with modern advocacy, providing crucial insights into how grassroots environmental actions can be formally integrated into sustainability frameworks, thus positioning young people as key players in culturally grounded environmental governance. To further enhance these positive impacts, we propose several strategic actions. This includes developing formal digital literacy training specifically for cultural documentation and environmental advocacy, fostering intergenerational knowledge transfer through mentorship, and establishing a centralized, community-owned digital platform for their content.

Finally, we recommend exploring how their successful communication strategies can be integrated into regional policies. The "Citorek model" should be replicated in other indigenous communities, serving as a best practice. Furthermore, future research should measure the quantitative and qualitative impact of these youth-led initiatives, providing concrete evidence of their effectiveness in both cultural preservation and environmental outcomes. These recommendations aim to solidify the enduring efforts of Citorek's youth, ensuring continued sustainable development and cultural resilience.

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