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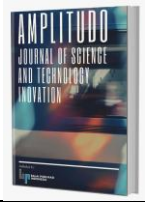

Reconstructing Community Knowledge into Scientific Knowledge of Ecotourism at Lemor Botanical Garden and Lemor Spring Tourism

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Abstract: This study examines the reconstruction of community knowledge into scientific knowledge related to ecotourism in Lemor Botanical Garden and Lemor Spring Tourism. The local community possesses a profound understanding of the conservation and ecological functions of these areas; however, a gap remains between local wisdom and scientific concepts. This research employs a qualitative case study approach, utilizing field observations, in-depth interviews, and documentation. The findings reveal that the community recognizes Lemor Botanical Garden as a center for the conservation of rare plant species, an educational site, and an environment-based ecotourism destination. Meanwhile, Lemor Spring Tourism is believed to offer health benefits and spiritual value, some of which can be scientifically explained through the mineral composition of the water and its balanced ecosystem. Certain traditional aspects, such as customary rituals and beliefs in misfortune, are more symbolic than scientifically grounded. The reconstruction of this knowledge is crucial for enhancing the sustainable management of these areas, optimizing the scientific potential of ecotourism, and improving community welfare through a conservation and sustainable tourism approach. Thus, the synergy between science and local wisdom can strengthen more effective and sustainable management strategies for both areas.

Keywords: Ecotourism; Conservation; Local Wisdom; Lemor Botanical Garden; Lemor Spring Tourism

Introduction

Indonesia, with its vast natural wealth, holds significant potential for developing conservation-based ecotourism. One of the areas that demonstrate great promise in this regard is Lemor Botanical Garden and Lemor Spring Tourism. These destinations not only offer breathtaking natural beauty but also embody a rich repository of local knowledge concerning plant conservation and natural resource management (Rengganis, 2023). Despite its importance, local knowledge often remains limited in its practical application and has yet to be fully utilized to support sustainable area management (Kholifah et al., 2021). This suggests that while the local community possesses extensive knowledge about the existence and functions of these sites, the integration of local and scientific knowledge requires further enhancement (Tagueha & Liur, 2021).

The local community's understanding of Lemor Botanical Garden, for instance, reflects their awareness of its role as a conservation center for rare and endemic plant species (Jupri et al., 2022). Additionally, they perceive the garden as a vital recreational site for students and tourists (Wigati et al., 2022). Meanwhile, Lemor Spring Tourism, known for its water sourced from Mount Rinjani, holds profound significance for the local community, serving as a daily water source and a

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component of traditional healing practices (Putri et al., 2022). However, while this local knowledge carries high cultural value, it is often limited to empirical understanding and lacks systematic scientific explanations (Rusmaniah et al., 2023).

Reconstructing community knowledge into scientific knowledge is a crucial step in enhancing understanding and management of these areas (Andriyani et al., 2021). This process involves integrating traditional insights with scientific findings derived from ecosystem research, conservation studies, and natural resource management (Risamasu et al., 2023). For example, the community's belief in the medicinal properties of Lemor Spring water, if scientifically examined, could provide valuable insights into its biological potential (Ilhami et al., 2020). Similarly, Lemor Botanical Garden, often understood as an ex-situ conservation site, could be further reinforced as an effective conservation center when combined with scientific biodiversity conservation studies (Praharjo & Ramadhan, 2021).

This reconstruction process is vital as it provides a strong foundation for developing sustainable ecotourism (Siregar, 2021). Conservation-based ecotourism, supported by scientific approaches to plant conservation and natural resource management, can create synergy between environmental preservation and local community welfare (Novianti et al., 2021). Furthermore, a deeper scientific understanding can enrich the educational experiences of visitors, including students and university researchers, who utilize these areas for learning purposes (Wardani & Putra, 2020). Therefore, it is imperative for researchers and area managers to explore and systematically compile community knowledge within a broader scientific framework to establish more integrated management policies and strategies (Apriana et al., 2020).

Method

This study employs a qualitative approach using a case study method to explore community knowledge regarding Lemor Botanical Garden and Lemor Spring Tourism. Data were collected through a combination of field observations, in-depth interviews, and documentation over a three-month period. Field observations aimed to identify community interactions with these areas and to understand how the presence of the botanical garden and spring influences their daily lives. In-depth interviews were conducted with local community members, site managers, and visitors who have direct knowledge of these ecotourism sites. This interview technique was designed to gain comprehensive insights into their understanding of the ecological and economic functions of these areas, as well as their perspectives on their potential management within the context of ecotourism and conservation.

Subsequently, the collected data were analyzed using a thematic analysis approach, where empirical and traditional community knowledge was linked to theories and scientific findings in the fields of ecology, conservation, and natural resource management. The knowledge reconstruction process involved comparing and conceptualizing information obtained through interviews with relevant contemporary scientific references. The findings from this analysis are expected to provide a clear understanding of the potential for developing a more integrated and sustainable conservation-based ecotourism model.

Result and Discussion

This study focuses on reconstructing community knowledge related to Lemor Botanical Garden and Lemor Spring Tourism to identify and explore existing local understandings while integrating them with scientific concepts in ecosystem management, conservation, and ecotourism. The knowledge reconstruction process aims to enrich scientific perspectives while simultaneously supporting the sustainable management of these areas. The findings and discussion of this study are presented in two main sections: community knowledge about Lemor Botanical Garden and community knowledge about Lemor Spring Tourism.

Lemor Botanical Garden

Lemor Botanical Garden, located in East Lombok, West Nusa Tenggara, is widely recognized by the local community as a vital conservation area that protects various plant species, including endemic and rare species. The community's understanding of the botanical garden's role as a plant conservation center aligns with the ecological conservation concept, which involves the protection of species both in their natural habitat (in situ) and outside their native environment (ex situ). Scientifically, conservation is a valid approach to preventing species extinction, particularly when natural habitats can no longer support species survival. In this context, Lemor Botanical Garden functions as a conservation laboratory preserving more than 1,200 plant species. The reconstruction of community knowledge confirms that the botanical garden's role as a conservation center is an integral part of scientific biodiversity preservation strategies. There is no element of myth in this understanding, as it fully corresponds to established scientific conservation principles.

Table 1. Reconstruction of initial community knowledge into scientific knowledge related to Lemor Botanical Gardens

Aspects	Public Knowledge	Reconstruction into Scientific Knowledge	Description
Plant Conservation Center	Lemor Botanical Garden is an ex-situ plant conservation center that preserves various endemic species.	Explains how botanical gardens function as laboratories for the conservation of rare plant species (Anggrella, 2023).	Lemor Botanical Garden serves as an area to protect endangered plant species and enhance diversity.
Recreation and Education Area	The public knows Lemor Botanical Garden as a natural and educational tourist spot for students.	Botanical gardens support direct environmental science learning integrated with ecotourism (Waru et al., 2021).	Educational recreational facilities help the community and students learn about the environment directly.
Diverse Plant Collection	Lemor Botanical Garden has many plant species, including orchids and fruit trees.	These plant collections support biological studies on species and ecosystem diversity (Ujiandri, 2023).	The collection includes more than 1,200 species, providing insight into plant diversity and conservation.
Source of Income for the Community	Small stalls around the garden provide additional income for the local community.	Conservation-based ecotourism improves the welfare of local communities in a sustainable manner (Pattiwael, 2018).	Ecotourism helps boost the local economy by utilizing the potential of nature as a tourist attraction.
Botanical Gardens as a Place of Study	The existence of Lemor Botanical Garden has increased the price of land around it.	Botanical gardens become natural laboratories for researchers and students to study ecosystems, botany, and ecology (Waru et al., 2021).	The Botanical Garden as a natural laboratory for students and pupils enhances the potential for ecosystem-based field education.
Community Role in Maintenance	This garden is often used for research and field learning by universities and schools.	Community participation in the management of conservation areas shows an important role in the preservation of natural resources (Setiawan, 2021).	The involvement of local communities in conservation shows the important role of collaboration in protecting the environment.
Ecotourism Potential	The community is indirectly involved in maintaining cleanliness and water utilization in this area.	Sustainable ecotourism provides a balance between economic benefits and environmental preservation (Hasanah et al., 2019).	The development of ecotourism facilities in the Botanical Garden can increase community awareness and welfare in a sustainable manner.
Lack of Educational Facilities	Lemor Botanical Garden has great potential as an ecotourism destination that can be further developed.	Improving educational facilities in ecotourism areas is needed to enrich visitors' experiences and knowledge (Pattiwarl, 2018)	Improvement of educational facilities can provide a more informative and interesting experience for visitors.
Wealth of Protected Forest Ecosystems	The community is aware that educational facilities such as information boards are still very limited.	Protected forest ecosystems have an important function in maintaining ecological stability and being a source of scientific knowledge (Syah et al., 2019).	The forest ecosystem of Lemor Botanical Garden makes a major contribution to the preservation of ecology and biodiversity.

Beyond its conservation function, Lemor Botanical Garden is also recognized as a recreational and educational site. For the local community, this area is not only a natural tourist destination but also an important learning space for students and researchers. This perception is supported by scientific perspectives, as botanical gardens play a crucial role in environmental education. The reconstruction of this knowledge links the botanical garden to the concept of experiential learning, allowing students to understand ecosystems through direct observation. Visitors can learn about the ecological functions of plants, plant life cycles, and species interactions within ecosystems. This approach fully supports ecological education and scientific research, reinforcing the botanical garden's role as an environmentally based educational center. There is no mythical element in this knowledge, as educating communities through direct interaction with nature is an empirically proven and scientifically supported method.

The community also recognizes that Lemor Botanical Garden houses a diverse collection of plants, including orchids and fruit-bearing trees. From a scientific perspective, this plant diversity reflects the richness of biodiversity, which is essential for ecosystem balance. The reconstruction of this knowledge strengthens community awareness of the importance of biodiversity in maintaining ecosystem stability and resilience to environmental changes. In botany and

ecology, species diversity plays a crucial role in sustaining ecological balance and providing ecosystem services, such as carbon sequestration, soil fertility maintenance, and habitat provision for other species. Therefore, the community's understanding of plant diversity aligns with scientific approaches to environmental conservation and genetic research. There is no mythological aspect in this knowledge, as it is based on verifiable scientific facts.

Figure 1. Condition of Lemor Botanical Gardens with old trees equipped with nameplates and orchid gardens, as well as educational boards

Economic Perspective and Sustainable Ecotourism

From an economic perspective, the local community views Lemor Botanical Garden as a source of income through small businesses such as food stalls and souvenir shops operating around the area. This concept can be scientifically reconstructed as part of sustainable ecotourism, which aims to provide economic benefits to local communities without compromising environmental preservation. Sustainable ecotourism allows local communities to participate in conservation-based tourism activities, where visitors can enjoy nature while learning about the importance of ecosystem protection. This approach not only generates additional income for the local population but also raises awareness about environmental conservation. In scientific reconstruction, sustainable ecotourism has been proven to be an effective model in balancing economic and ecological interests. Therefore, the community's knowledge of the economic benefits of Lemor Botanical Garden is fully supported by scientific principles, without any mythical elements.

The community also notes that land prices around Lemor Botanical Garden have increased along with the area's development as a conservation and tourism destination. From a scientific perspective, this phenomenon can be explained through land economics theories and the economic impact of ecotourism. When an area possesses high environmental and aesthetic value, demand for land increases, subsequently affecting land prices. The rise in land prices also reflects the economic potential of well-managed tourist areas, where environmentally friendly infrastructure development and attractive tourism activities can enhance the economic value of the region. This scientific reconstruction indicates that economic changes surrounding conservation areas result from market dynamics and well-executed tourism management. There is no mythical component in this knowledge, as economic phenomena can be logically explained through established economic principles.

Research and Educational Hub

Lemor Botanical Garden has long been recognized by the community as a site frequently used for research and learning. The community understands that the botanical garden is not merely a tourist location but also a strategic scientific research center. The scientific reconstruction of this perspective reinforces that Lemor Botanical Garden is an ideal location for field research in ecology and botany. With its diverse plant species, the botanical garden serves as a living laboratory where researchers and students can conduct direct observations of plant species, ecological interactions, and ecosystem functions. This research activity plays a crucial role in supporting species conservation and providing a deeper scientific understanding of local ecosystems. This confirms that the botanical garden's function as a research site is entirely based on scientific principles, without any mythological underpinnings.

Community participation in preserving Lemor Botanical Garden is also a form of strong local wisdom. Local residents are actively involved in various conservation activities, such as communal efforts to clean the area and maintain water sources. The scientific reconstruction of this role highlights that community-based conservation is crucial for maintaining ecological balance. Scientific studies also support the notion that successful conservation programs often rely on the active involvement of local communities living around the area. Such participation not only helps protect natural resources but also fosters a sense of ownership and responsibility for the environment. Therefore, the community's role in maintaining Lemor Botanical Garden is fully explainable through scientific principles, with no mythical components involved.

Potential for Sustainable Ecotourism

Lemor Botanical Garden is also recognized by the community as a destination with significant potential for sustainable ecotourism development. The local perception suggests that the area could attract more

tourists while maintaining its natural integrity. Scientific reconstruction supports this idea by explaining that sustainable ecotourism emphasizes the balance between environmental conservation and economic benefits for local communities. Ecotourism is designed to provide educational nature experiences, promote awareness of conservation, and support local economic welfare. At Lemor Botanical Garden, biodiversity, natural beauty, and ecological education potential can be further developed as primary attractions for ecotourism. This approach is entirely consistent with scientific principles, without any mythical elements.

However, the community also recognizes shortcomings in the educational infrastructure at Lemor Botanical Garden, such as the lack of informational signage or scientific guides available for visitors. The scientific reconstruction of this concern highlights the importance of adequate educational infrastructure in conservation and ecotourism sites. Clear, science-based informational boards and supporting facilities, such as trained tour guides, can enhance visitor experiences while raising environmental awareness. Education is one of the main pillars of sustainable ecotourism, and improving educational facilities can help visitors better understand the importance of conservation. Therefore, community criticism regarding the lack of educational facilities at Lemor Botanical Garden is valid and can be explained through scientific principles that support environmental education in conservation areas.

Role of Protected Forests in Biodiversity Conservation

The local community around Lemor Botanical Garden recognizes that the protected forest in this area supports a rich ecosystem and is vital for biodiversity conservation. They understand that the forest serves not only as a habitat for various plant species but also as a refuge for diverse local fauna. The scientific reconstruction of this knowledge reveals that protected forests play a fundamental role in ecology as ecosystem buffers. In ecological science, protected forests function to safeguard biodiversity, regulate water cycles, absorb carbon, and prevent soil erosion. These functions make protected forests an essential component of overall ecosystem stability.

Scientifically, forests are among the most complex ecosystems, where each plant and animal species plays a crucial role in maintaining ecological balance. Protected forests provide natural habitats for endangered species and contribute to biodiversity conservation. This reconstruction of community knowledge demonstrates that the local understanding of forest functions aligns with scientific conservation principles, emphasizing the necessity of protected forests for ecological sustainability and biodiversity preservation.

Additionally, protected forests support the concept of ecosystem services, referring to the indirect ecological benefits provided to humans. These services include rainfall absorption, carbon sequestration, oxygen production, and habitat provision for wildlife. In this regard, Lemor Botanical Garden and its surrounding protected forests play a crucial role in maintaining ecological stability. The forest also serves as a living laboratory, enabling scientific research on environmental conservation and natural resource preservation.

The scientific basis underlying the community's understanding aligns with ecological conservation concepts, highlighting the indispensable role of protected forests in sustaining environmental balance and biodiversity conservation. Lemor Botanical Garden's protected forest functions as an ecological buffer that ensures the sustainability of various species while protecting the environment from the negative impacts of human activities. There is no mythical component in this perspective, as the community's understanding is grounded in scientific facts that emphasize the essential role of forests in biodiversity conservation and ecological functions.

Lemor Spring Ecotourism

Lemor Spring is a natural resource of significant importance to the local community. One of the primary understandings among residents is that the water from this spring originates from Mount Rinjani. The scientific reconstruction of this knowledge confirms that this perception is accurate and supported by the principles of the hydrological cycle. Rainwater that falls in the Mount Rinjani region is absorbed into the ground and percolates through layers of rock, eventually emerging at various spring sources, including Lemor Spring.

This phenomenon is a fundamental part of the water cycle, in which atmospheric water undergoes precipitation, infiltrates the soil, and then moves through aquifers before resurfacing as spring water. From a scientific perspective, this hydrological cycle explains how water appearing at Lemor Spring originates from mountainous regions, remains clear, and is enriched with minerals due to natural filtration through rock layers during its journey to the surface. In this context, the local community's understanding of the spring's origin is entirely aligned with scientific knowledge, with no mythical elements involved.

Table 2. Reconstruction of initial community knowledge into scientific knowledge related to Lemor Spring Tourism

Aspects	Community Knowledge	Reconstruction into Scientific Knowledge	Description
Water Source from Mount Rinjani	The water in Lemor Spring comes from a natural channel connected to Lake Segara Anak in Rinjani.	This spring is part of the hydrological cycle that supports the surrounding ecosystem and human water needs (Widiyaningsih et al., 2021).	Lemor spring is part of a hydrological system that is important for the local ecosystem and surrounding community.
Therapeutic Efficacy of Water	The water from this spring is believed to have healing properties for various diseases.	Water with certain mineral content is believed to provide healing effects based on tradition and modern research (Amalia, 2023).	Lemor spring water is believed to contain natural minerals that provide health benefits, especially for traditional medicine.
Prohibitions on Taking Water	There is a customary rule to replace the water taken by throwing stones into the spring.	This local wisdom reflects the way traditional communities maintain the ecological balance of natural resources sustainably (Mulyana, 2019)	Local wisdom plays an important role in maintaining the balance of the ecosystem by maintaining local traditions.
Prohibition on Cutting Trees	There is a customary prohibition against cutting down trees around the spring.	This prohibition reflects the importance of vegetation in maintaining the quality and quantity of water resources.	This prohibition helps maintain the quality and quantity of water, and prevents erosion around Lemor spring.
Belief in Bad Luck		This traditional belief shows that people align their behavior with the surrounding environment to maintain ecological balance (Nurkidam, 2023).	The community's belief in the balance of nature is reflected in traditions that are passed down from generation to generation.
Use of Water for Medicine	If customary rules are ignored, the community believes that bad luck can occur such as meeting a snake.	The use of spring water mixed with local plants provides benefits that are supported by local wisdom and scientific evidence (Amalia, 2023; Bella, 2022).	The community uses water together with local plants for traditional medicine which is considered very effective.
Use of Water for Daily Use	This water is often mixed with certain leaves to increase the effectiveness of traditional medicine.	Water from this spring plays an important role in supporting people's lives, both for cleanliness and skin health (Sudarmadji et al., 2016).	Water from Lemor spring is widely used by the community to maintain healthy skin and internal organs.
Balanced Ecosystem	The water is used for various daily needs and skin treatments.	A well-maintained ecosystem ensures that the springs continue to provide benefits to the environment and the community (Sudarmadji et al., 2016).	A balanced spring ecosystem reflects maintained biodiversity and good ecological function.
Minimal Visitors	The community is aware of the importance of maintaining the ecosystem around the spring.	The lack of visitors affects the local economic potential, although these springs have the potential to be developed (Sudarmadji et al., 2016).	Good tourism management can improve the local community's economy which is currently still sluggish due to the lack of tourist visits.
Fresher Water	There are still very few tourists visiting Lemor Spring, so economic activities are sluggish.	This water is believed to be fresher and healthier because it comes from natural mountain sources, which have certain mineral content.	The clear and natural water from Lemor spring is considered to have better quality for consumption and use by the local community.

The local community also believes that the water from Lemor Spring possesses healing properties, particularly for skin diseases and fever. The scientific reconstruction of this belief indicates that mountain spring water often contains certain minerals, such as calcium, magnesium, and sulfur, which can have soothing effects on irritated skin and support the body's natural healing processes (Bala, 2024). However, while the presence of beneficial compounds in the water may contribute to health maintenance, the belief that it can cure all types of diseases is more mythological in nature and lacks strong scientific evidence (Atmoko, 2023). This reconstruction differentiates between the scientifically proven health benefits of mineral-rich water and the traditional belief in its universal healing power, which is

more of a non-scientific cultural perspective developed within the community.

Figure 2. The conditions around the Lemor spring are filled with vegetation and have been equipped with water reservoirs and artificial pools for bathing tourism.

The community surrounding Lemor Spring also upholds a unique cultural tradition in which they throw stones into the spring after collecting water. They believe that this act helps maintain environmental balance, symbolizing their spiritual connection with natural resources (Subhani, 2024). The scientific reconstruction of this practice views it as a form of local wisdom that primarily serves as a social and cultural symbol rather than an action with a scientific basis (Bala, 2024). Such traditions are commonly found in various communities, where symbolic rituals play a role in maintaining harmony between humans and nature (Subhani, 2024). Although no direct scientific explanation supports the connection between water collection and stone-throwing, this tradition remains valuable as it embodies cultural values that are deeply meaningful to the community (Atmoko, 2023).

However, from a physics perspective, particularly when related to Archimedes' Principle, several intriguing aspects can be examined. Archimedes' Principle states that "an object immersed in a fluid experience an upward buoyant force equal to the weight of the fluid displaced by the object." In the context of throwing a stone into the water, when a stone is thrown into the spring, it displaces a certain volume of water in accordance with this principle. The volume of displaced water depends on the size and mass of the stone.

Although this traditional practice of throwing stones is intended to maintain environmental balance, from a physics standpoint, the action results in water displacement. A stone sinking to the bottom displaces an amount of water equivalent to its volume, causing a slight rise in the water level (Atmoko, 2023). However, from the perspective of physical laws, Archimedes' Principle does not explain spiritual balance as believed by the community. Scientifically, throwing a stone only affects the displaced volume of water but does not have a significant impact on the ecosystem or environmental equilibrium in a broader ecological sense (Bala, 2024).

From this perspective, it can be understood that although there is a physical connection between throwing stones into the water and the displacement effect explained by Archimedes' Principle, the balance referred to in traditional beliefs cannot be explained by physics alone. The traditional concept of balance is more related to spiritual and social harmony, where any extraction of natural resources must be symbolically compensated to maintain equilibrium (Subhani, 2024). Meanwhile, Archimedes' Principle quantitatively explains the displacement of water but does not directly relate to the spiritual or ecological meaning attributed to it by the community (Atmoko, 2023).

From a physics perspective, a stone thrown into water causes displacement and generates buoyant force, but the impact is minimal and limited to a physical change in water volume (Atmoko, 2023). In the context of traditional customs, this act is more symbolic, serving as a way to "give something back" to nature after taking water (Subhani, 2024). The tradition is not intended to cause any tangible physical changes in the water volume but is ritualistic in nature. Although Archimedes' Principle is relevant in explaining the physical effects of throwing stones, it cannot be used to interpret the spiritual and cultural aspects of the practice (Atmoko, 2023).

The Ecological Justification for the Prohibition of Tree Cutting

The prohibition against cutting down trees around the spring is another significant belief upheld by the community. Scientific reconstruction reveals that this prohibition has a strong ecological foundation (Bala, 2024). Vegetation surrounding the spring plays a crucial role in preserving water quality, preventing soil erosion, and maintaining a stable water supply throughout the year (Bala, 2024). Trees and plants act as natural filters, with their roots absorbing water and filtering contaminants, while their canopies reduce the intensity of rainfall impact, preventing excessive soil erosion.

Thus, this customary restriction aligns with environmental conservation principles, demonstrating that this traditional belief is not merely a superstition but has a scientifically validated function in maintaining water resources. The scientific reconstruction of this practice reveals that the cultural prohibition serves both

ecological and hydrological functions, supporting long-term sustainability.

Superstitions and the Concept of Misfortune

The community surrounding Lemor Spring also holds strong beliefs about misfortune that may occur if traditional customs are violated. One commonly held belief is that disregarding customary laws, such as taking water without performing the proper rituals, may lead to bad luck, such as encountering a snake. The scientific reconstruction of this belief does not find any empirical basis linking violations of traditional customs with an increased likelihood of encountering wildlife, as no logical or scientific correlation exists between breaking traditional rules and natural events such as encountering a snake.

Instead, this belief functions as a cultural and psychological mechanism that reinforces adherence to traditional norms and helps preserve the community's social structure. In many cultures, similar mythological warnings are used to encourage compliance with local customs and foster a sense of respect for nature. While scientific evidence does not support the supernatural aspect of this belief, its function as a social and moral guideline within the community is clear.

Traditional Medicine and Scientific Foundations

The local community also utilizes water from Lemor Spring in traditional medicine, often combining it with medicinal plants to enhance its effectiveness. The scientific reconstruction of this practice acknowledges that the use of mineral-rich water in traditional healing is supported by research, as many plants contain bioactive compounds with medicinal properties (Sari, 2024; Bestari, 2021). These compounds, including flavonoids and alkaloids, have been proven to have anti-inflammatory, antibacterial, and wound-healing properties (Fahrurin, 2023; Laut et al., 2020).

When these medicinal plants are combined with mineral-rich water, the resulting mixture may offer additional health benefits (Suhendra & Daulay, 2022). However, the effectiveness of traditional medicine depends on the specific plant species, mineral content, dosage, and method of application (Rizal et al., 2022). More scientific research is needed to fully evaluate the effectiveness of these traditional remedies (Lestari & Lagiono, 2018).

From a scientific perspective, traditional medicine involving water and medicinal plants has a strong foundation, as many plant-derived compounds have clinically validated benefits (Maulidiah et al., 2020). However, the belief that such remedies can cure all diseases is more aligned with traditional or spiritual beliefs rather than scientifically proven medical treatment (Sahusilawane, 2023). While some aspects of traditional medicine are scientifically valid, broad claims of universal healing power require further empirical studies (Dewi, 2019).

Daily Use of Spring Water for Health

Aside from its medicinal applications, the community uses Lemor Spring water for daily consumption, particularly for maintaining skin health and internal organ function. Scientific reconstruction supports the use of mineral-rich mountain spring water for dermatological health (Ayu, 2023; Firdaus, 2023). Clean water naturally enriched with minerals such as calcium and magnesium can strengthen the skin, maintain moisture balance, and accelerate the healing of minor wounds or irritations (Togatorop, 2024).

Additionally, mineral-rich water provides health benefits for internal organs, as regular consumption of clean water supports metabolic processes, detoxification, and overall bodily function (Lallo et al., 2018). From a scientific perspective, the benefits of clean water for maintaining bodily health are well established, as water is a fundamental component of homeostasis (Rahmasari, 2023). The natural mineral content of mountain spring water also contributes additional physiological benefits (Susanto, 2024).

Thus, the use of water from Lemor Spring for daily needs is fully aligned with scientific principles, which emphasize the importance of clean, mineral-rich water for health (Kursia et al., 2018). There are no mythical elements in the daily use of this water, as the health benefits of consuming clean, mineral-rich water are scientifically recognized (Rachman et al., 2018).

The community residing around Lemor Spring has a deep awareness of the importance of maintaining the ecological balance in the area. They recognize that the lush vegetation surrounding the spring plays a critical role in preserving environmental health and water quality (Rahmawati, 2024). A scientific reconstruction of this perspective confirms that vegetation near natural springs is essential for water preservation, erosion prevention, and biodiversity support in the region (Kusbiantoro & Purwaningrum, 2018). From a scientific standpoint, trees and plants near the spring help stabilize the soil, regulate water flow, and filter water as it passes through soil and rock layers (Jamun et al., 2020). Additionally, plant roots absorb water and nutrients, preventing erosion that could disrupt water flow and degrade soil quality.

In an ecological context, maintaining the balance of the spring's ecosystem is crucial. Vegetation serves as a primary support system that preserves ecosystem integrity, provides habitat for various animal species, and sustains the stability of the water cycle (Sajuri, 2023). Therefore, the community's understanding of the importance of vegetation conservation aligns with

modern ecological principles, which emphasize the interdependence of plants, water, and soil in sustaining ecosystems (Hartati et al., 2019). There are no mythical elements in this knowledge, as all components involved can be explained through proven scientific conservation and ecological principles.

Economic and Tourism Management Perspective

However, the community also acknowledges that despite Lemor Spring's natural beauty and healthy ecosystem, the number of tourists visiting the area remains relatively low. This situation affects the local economy, which has not developed optimally, as a lack of visitors results in minimal economic contributions to the region. A scientific reconstruction of this phenomenon relates it to tourism economics theory, which explains that the success of a tourist destination is heavily influenced by effective management and promotion strategies. Without adequate promotion and sustainable tourism management, the full potential of nature-based tourism remains untapped, failing to attract visitors.

In the context of sustainable ecotourism, it is essential to ensure that the development of tourist areas such as Lemor Spring does not solely focus on increasing the number of visitors but also integrates environmental conservation efforts and community welfare. This scientific reconstruction demonstrates that well-managed tourism can increase visitor numbers while simultaneously benefiting the local economy without harming the ecosystem. Consequently, the community's understanding of low tourist turnout and its economic impact can be explained through tourism economics analysis and destination management principles. There are no mythical elements in this observation, as the low visitation rate can be scientifically explained as an economic phenomenon that can be addressed through proper management and strategic promotion.

Perception of Water Quality and Scientific Justification

Additionally, the community believes that water from Lemor Spring is fresher and healthier than water from other sources. A scientific reconstruction of this belief reveals that mountain spring water, such as that from Lemor Spring, indeed tends to have higher quality compared to other sources. This is due to the natural filtration process that occurs as water percolates through layers of rock and soil, naturally removing contaminants and enriching the water with essential minerals such as calcium, magnesium, and potassium. Mountain spring water is also cleaner as it is far from industrial pollution and human activities, which often contaminate urban water sources.

From a scientific perspective, mineral-rich mountain water is not only more refreshing but also provides significant health benefits. The minerals present in the water help maintain electrolyte balance, support bone health, and enhance organ function. Therefore, the community's belief that Lemor Spring water is healthier and fresher is scientifically justified rather than a mere myth. This scientific reconstruction confirms that the superior quality of mountain spring water is supported by scientific knowledge of the physical and chemical properties of water, making this belief a fact backed by science rather than solely a traditional perception.

Conclusion

The findings from observations and interviews conducted at Lemor Botanical Garden and Lemor Spring Tourism reveal a disparity between the community's initial knowledge and scientifically validated knowledge. The community's preliminary understanding of Lemor Botanical Garden's functions—as a plant conservation center, an educational site, and an ecologically significant area—is fairly accurate and can be scientifically reconstructed into valid knowledge. The local population recognizes the importance of conserving rare and endemic plant species, which aligns with scientific conservation principles in ecology. Additionally, their awareness of ecosystem balance around Lemor Spring and the significance of preserving vegetation is consistent with scientific concepts related to water quality conservation and erosion prevention. However, several beliefs cannot be scientifically explained, such as the tradition of throwing stones into the spring after collecting water as a means of maintaining environmental balance. This belief is more spiritual and symbolic rather than scientifically justified. Nevertheless, this ritual reflects local wisdom, serving as a means of maintaining a harmonious relationship between humans and nature, despite the lack of scientific evidence supporting its direct impact on ecosystem balance. Additionally, the belief that Lemor Spring water possesses universal healing properties for all illnesses requires scientific reevaluation. While the mineral content of the water does offer health benefits, the claim of all-encompassing healing properties is non-scientific and is more closely associated with traditional medicine practices. Overall, the reconstruction of community knowledge into scientific knowledge demonstrates that, while the local population possesses a strong foundational understanding of key ecological aspects, there remain certain traditional beliefs that require scientific clarification. Through further education and the integration of modern science with local wisdom, the sustainable development of this area can be optimized, ensuring both environmental

conservation and economic benefits for the local community through scientifically informed ecotourism.

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Author Contributions
This study was conducted by Thufail Mujaddid Al-Qoyyim, Wardi Kurniawan and Doni Kurniawan, with Thufail Mujaddid Al-Qoyyim leading the conceptualization, research framework, data collection, and manuscript drafting. Wardi Kurniawan contributed to thematic data analysis, linking community knowledge with ecological and conservation theories, and synthesizing findings. Doni Kurniawan was responsible for methodological structuring, literature review, and integrating scientific references into the knowledge reconstruction process. All authors collaborated on data interpretation, manuscript refinement, and final approval to ensure the study's scientific rigor and alignment with research objectives.

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Conflicts of Interest
The authors declare no conflict of interest.

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