ISSN:2356-0770
E-ISSN: 2685-2705
SEUNEUBOK LADA: Jurnal Ilmu-Ilmu Sejarah, Sosial, Budaya dan Pendidikan
Vol. 13 No. 1 (2026): 167-179 ; DOI. https://doi.org/10.33059/jsnbl.v13i1.14433
Received: 04/29/2026 Revised: 05/25/2026 Accepted: 05/30/2026

THE MEANING OF THE *NGIRIM BANYU* TRADITION AS LOCAL WISDOM OF THE COMMUNITY IN CLAKET VILLAGE, MOJOKERTO

Trio Utami[1], Berlian Aprilia[2] , Elsa Wahyu Nabawi[3] , Sugiantoro[4]

24041344033@mhs.unesa.ac.id[1] , 24041344013@mhs.unesa.ac.id[2],
24041344024@mhs.unesa.ac.id[3], sugiantoro@mhs.unesa.ac.id[4]

[1,2,3,4]State University of Surabaya

ABSTRACT

This study aims to analyze the meaning of the Ngirim Banyu tradition, which reflects local wisdom in the lives of the Claket Village community. The methodology used in this study is qualitative with a descriptive design. Data were obtained through participatory observation, in-depth interviews with key informants such as the village head, traditional leaders, religious leaders, and community members, as well as documentation studies. Data analysis was conducted using an interactive model that includes data reduction, data presentation, and interpretation, while ensuring data validity through source triangulation. The research findings indicate that the Ngirim Banyu tradition reflects local wisdom values from four perspectives. From a religious perspective, this tradition serves as an expression of gratitude to God for the gift of water. From a social perspective, it strengthens solidarity through collective participation. Culturally, Ngirim Banyu is a time-honored tradition rich in symbols and meaning. Meanwhile, from an ecological perspective, this tradition fosters awareness of the need to preserve water sources. A unique finding of this study lies in the strong integration of spiritual values and ecological awareness within a single traditional practice. Unlike similar traditions, Ngirim Banyu is not merely ritualistic but also serves as a means of fostering concrete behavior in environmental conservation, particularly regarding spring water sources In a cultural context, this tradition serves as a way to transmit values and norms that regulate community behavior from generation to generation. From an ecological perspective, this tradition reflects a shared awareness of preserving water resources based on cultural values. Furthermore, the management of water resources through local institutions demonstrates the interconnectedness between social, cultural, and economic aspects of community life. These findings confirm that the Ngirim Banyu tradition is not only symbolic but also a socio-cultural system that contributes to maintaining a balanced relationship between humans, the environment, and the social structure of society.

Keywords: *local wisdom, Ngirim Banyu, social cohesion, cultural ecology, local community*

ABSTRAK

Penelitian ini bertujuan untuk menganalisis makna tradisi *Ngirim Banyu*, yang mencerminkan kearifan lokal dalam kehidupan masyarakat Desa Claket. Metodologi yang digunakan dalam penelitian ini bersifat kualitatif dengan desain deskriptif. Data diperoleh melalui observasi partisipatif, wawancara mendalam dengan informan kunci seperti kepala desa, tokoh adat, tokoh

agama, dan anggota masyarakat, serta studi dokumentasi. Analisis data dilakukan dengan menggunakan model interaktif yang mencakup reduksi data, penyajian data, dan interpretasi, sekaligus memastikan validitas data melalui triangulasi sumber. Hasil penelitian menunjukkan bahwa tradisi *Ngirim Banyu* melambangkan sistem nilai-nilai kearifan lokal yang terjalin dalam berbagai aspek kehidupan masyarakat. Dari sudut pandang keagamaan, tradisi ini berfungsi sebagai sarana untuk mengekspresikan spiritualitas dengan memandang air sebagai anugerah dari Tuhan. Dari aspek sosial, tradisi ini memperkuat ikatan dan solidaritas masyarakat melalui partisipasi kolektif. Dalam konteks budaya, tradisi ini berfungsi sebagai cara untuk mentransmisikan nilai-nilai dan norma-norma yang mengatur perilaku masyarakat dari generasi ke generasi. Dari perspektif ekologi, tradisi ini mencerminkan kesadaran bersama dalam melestarikan sumber daya air berdasarkan nilai-nilai budaya. Selain itu, pengelolaan sumber daya air melalui lembaga-lembaga lokal menunjukkan keterkaitan antara aspek sosial, budaya, dan ekonomi dalam kehidupan masyarakat. Temuan ini menegaskan bahwa tradisi *Ngirim Banyu* tidak hanya bersifat simbolis, tetapi juga merupakan sistem sosio-budaya yang berkontribusi dalam menjaga hubungan yang seimbang antara manusia, lingkungan, dan struktur sosial masyarakat.

Kata kunci: kearifan lokal, Ngirim Banyu, kohesi sosial, ekologi budaya, masyarakat lokal

INTRODUCTION

Problems in water resource management are still widely found in various regions, especially among rural communities that depend on agriculture and the utilization of natural resources for their livelihoods. Water not only functions as a basic necessity in daily life but also plays a significant role in supporting the economic activities of the community. When water resource management is not carried out optimally, various impacts may arise, such as decreased agricultural productivity, the emergence of potential conflicts in resource utilization, and disruptions to community welfare. Therefore, water management needs to be understood more broadly, not only from a technical perspective but also through social and cultural approaches that develop within community life.

In the context of local communities in Indonesia, water management practices are often closely related to cultural values passed down from generation to generation. This local wisdom reflects a system of knowledge as well as social practices used by the community to maintain environmental balance. According to Berkes (2018), local knowledge is an essential part of sustainable development because it integrates ecological experience, cultural values, and community social practices. Thus, local traditions not only serve as cultural heritage but also function as a means of maintaining a harmonious relationship between humans and the environment (Berkes et al., 2000).

One form of such local wisdom can be found in Claket Village, Mojokerto, East Java, through the *Ngirim Banyu* tradition. This tradition is carried out by the community as an expression of gratitude for the existence of water springs, as well as a form of respect for the source of life that supports agricultural activities, domestic needs, and social life. In practice, this tradition involves collective prayers, community participation, the use of cultural symbols, and the strengthening of social relationships among residents. Based on field research findings, this tradition is still practiced collectively and has become an important part of the identity of the people of Claket Village.

However, scientific studies on local traditions related to water resources have mostly focused on technical aspects, such as environmental conservation, irrigation systems, and natural resource management. On the other hand, studies that position tradition as a system of social and cultural values have not yet been widely developed in depth, particularly in understanding the symbolic meanings and social functions of these traditions in community life. Specifically, research examining the *Ngirim Banyu* tradition in Claket Village as a representation of local wisdom remains relatively limited. In fact, this tradition contains various important values, such as mutual cooperation, social solidarity, gratitude, and awareness in maintaining the balance between humans and the environment.

emphasizes the importance of community-based institutions in managing common-pool resources. Meanwhile, Fikret Berkes (2000, 2018) explains that resource management cannot be separated from the interconnections between social and ecological systems. Meanwhile, Berkes (2000) discuss the relationship between social and ecological systems in maintaining resource sustainability. The Ngirim Banyu tradition can be understood as a form of culture-based local institution that serves to regulate community behavior regarding water resources. This tradition serves as a theoretical bridge because it functions not only as a symbolic practice but also as a social mechanism that reinforces collective rules (as per Ostrom's concept) while maintaining the balance between human and environmental relationships (in line with Berkes's perspective). Thus, Ngirim Banyu demonstrates that local cultural practices can function as a sustainable resource management system. However, these studies do not specifically address the *Ngirim Banyu* tradition as part of local wisdom that holds social and cultural meaning for the people of Claket Village. As a result, this research focuses on positioning

the *Ngirim Banyu* tradition as a representation of the values of local wisdom that exist and develop within the community.

This research aims to analyze how the Ngirim Banyu tradition is interpreted by the people of Claket Village in terms of religious beliefs, social solidarity, cultural preservation, and environmental awareness, as well as to examine the local wisdom values reflected in the community's relationship with water resources and collective social life.

The argument proposed in this study is that the *Ngirim Banyu* tradition is not merely an annual ritual but a representation of a value system that encompasses social, cultural, religious, and ecological dimensions. These values reflect the community's local wisdom in maintaining harmonious relationships between humans, the environment, and their social life.

This study is expected to enrich the discourse on local wisdom within communities while also contributing to efforts to preserve cultural traditions amid the dynamics of modern social change.

METHODS

This study employs a qualitative approach with a descriptive research design. This approach was chosen because the objective of the study is to explore in depth the meaning of the *Ngirim Banyu* tradition as part of the local wisdom of the community in Claket Village, Mojokerto, which cannot be measured quantitatively but must be examined through the understanding, experiences, and perspectives of the local community. The research location is Claket Village, an area that continues to preserve the *Ngirim Banyu* tradition to this day. The study was conducted using direct observation methods to obtain a real depiction of the implementation of the tradition as well as the social conditions of the community.

Data were collected through three main methods. First, direct observation was conducted through participant observation, in which the researcher attended and observed the Ngirim Banyu tradition at the water source without actively participating in the ritual process. Second, in-depth interviews conducted with key informants such as the village head, traditional leaders, religious leaders, and community members who participate in the tradition. The purpose of these interviews was to gather information regarding the

history, implementation, and meaning of the tradition from the perspective of the local community. Third, documentation, which includes the collection of secondary data such as photographs of activities, field notes, and archives related to the *Ngirim Banyu* tradition. Informants were selected using purposive sampling, meaning they were deliberately chosen based on the consideration that they possess knowledge of and involvement in the *Ngirim Banyu* tradition. These informants included the village head, traditional leaders, religious leaders, and community members who utilize the water source.

Data analysis in this study uses the interactive analysis model developed by Matthew B. Miles and A. Michael Huberman, which consists of three steps: data reduction, data display, and conclusion drawing. Data reduction was carried out by filtering and selecting relevant information, data display was presented in the form of descriptive narratives, and conclusion drawing was conducted by interpreting the meaning of the collected data. To ensure the validity of the data, this study employs source triangulation techniques by comparing data obtained from interviews with various informants with the results of observations and documentation. This approach aims to ensure that the data obtained has a stronger level of validity and can be scientifically justified.

FINDING AND DISCUSSION

1. The History of the *Ngirim Banyu* Tradition in Claket Village

One form of local wisdom in Claket Village is the *Ngirim Banyu* (water-sending) tradition, which is closely related to the existence of water springs that are essential for the lives of the Claket community. This tradition is generally interpreted as "sending water," but in this context it has a different meaning: it is carried out directly at the water spring as a way for the community to express gratitude for the water source (Pakidi & Tambaip, 2025). The water is considered to have spiritual, social, and cultural value that must be preserved, not merely as a physical necessity. The position of this tradition within the Claket community aligns with perspectives found in other local communities, which often view nature as part of a sacred life system integrated with cultural values and beliefs (Berkes, 2018).

The *Ngirim Banyu* tradition in Claket Village is inseparable from its historical background, particularly the origins of the tradition and the water source system currently utilized by the local community. Based on information obtained from interviews with several informants, the tradition originated from an agreement made between the early settler (forest clearer) of Claket Village and a guardian spirit believed to reside at the main water source, before the water was channeled into several sources as it is today. This agreement became the foundation of the tradition, which has since been practiced continuously and passed down through generations.

Historically, the guardian believed to inhabit the main water source stated that whoever was willing and brave enough to sacrifice a buffalo annually would gain the right to channel water to their area. The early settler of Claket Village declared that he and his community were willing to fulfill this condition. This commitment was then realized through the sacrifice of a buffalo as a prerequisite for water to flow into Claket Village. However, the buffalo sacrifice is not carried out within the *Ngirim Banyu* tradition itself, but rather in the *Ruwat Desa Claket* tradition. This indicates that water is not obtained directly, but must pass through symbolic stages believed by the local community.

The early settler instructed the community to continue preserving this tradition and pass it on to future generations. In this context, the *Ngirim Banyu* tradition is also regarded as a social and cultural obligation that must be continuously maintained. During the process of channeling the water, the guardian of the main source used *blarak* (coconut leaves) as a medium to divert the water flow toward Claket Village, as the natural direction of the flow did not lead directly to the village. The use of *blarak* as a simple tool reflects local knowledge in water resource management. Interestingly, through this method, water flowed abundantly into Claket Village, while other areas that did not meet the requirements did not receive water flow at all.

After the water distribution process, smaller springs began to emerge and spread across various parts of Claket Village, fulfilling the daily needs of the community, particularly in agricultural irrigation, plantations, domestic use, and drinking water. Among these, there are seven main springs that serve as focal points in the implementation of this tradition: Sumber Kemado, Sumber Lakgedang, Sumber Dandang, Sumber Genitri, Sumber Gunung Kejen, Sumber Tegal Babatan, and Sumber Gendis.

Each is located in different areas and at varying distances. These seven sources follow the same structure and timing of the tradition, although led by different customary and religious leaders at each location. The use of water for agricultural irrigation shows that this tradition is not only related to spiritual aspects but is also closely connected to the life cycle of the community, especially in agriculture.

The history of the *Ngirim Banyu* tradition reflects a cultural practice shaped by a combination of community beliefs, collective experiences, and the need for sustainable water resources. Several studies also indicate that local traditions related to water sources generally emerge from long-standing interactions between humans and the environment, eventually developing into cultural systems passed down through generations (Niman et al., 2023; Weningtyas & Widuri, 2022; Ramadani et al., 2024). Research on ritual practices accompanying water management also highlights the integration of spiritual, social, and ecological values in community life (Hadi & Sarjan, 2024; Syamsuddini et al., 2025). Thus, the *Ngirim Banyu* tradition can be understood as a social construction formed from the historical experiences of the community in managing and interpreting water resources.

2. The Implementation of the *Ngirim Banyu* Tradition in Claket Village

The *Ngirim Banyu* tradition is carried out simultaneously at various water spring locations spread across Claket Village, totaling more than sixteen sites. However, this study focuses only on seven main springs that share similar traditional patterns. The tradition is performed regularly every Friday Legi in the month of Rojab according to the Javanese calendar, coinciding with the beginning of the rice planting season, starting in the morning and ending no later than 2:00 PM (WIB). The tradition involves community members, especially those who rely on the water sources for daily needs such as agricultural irrigation, plantations, and household use. This level of participation indicates that the tradition is not merely ceremonial but also strengthens social cohesion within the community. Several studies suggest that traditional rituals play an important role in building social solidarity and collective identity.

Substantively, the *Ngirim Banyu* tradition is conducted through collective prayers at the water source using two approaches: Javanese customary practices and religious (Islamic) practices, accompanied by specific offerings in the form of traditional foods.

This practice reflects a harmonious relationship between humans, nature, and spiritual values. After the entire sequence of rituals is completed, the community believes that the water from the prayed-over source will flow more abundantly into irrigation channels as a symbol of blessing. Water is therefore not only viewed as a source of life but also as a medium for distributing blessings to the community. This aligns with the concept of local wisdom in water resource management, which emphasizes traditional values, cultural practices, and community participation in maintaining environmental sustainability (Weningtyas & Widuri, 2022; Mulyanti, 2022).

The local community actively participates in the systematic implementation of the *Ngirim Banyu* tradition. Based on interviews with a customary leader, Mr. Ahmadun, the tradition is generally conducted in the morning, starting around 08:30 AM and lasting approximately one hour. The water source area, which plays a vital role in community life, serves as the focal point of the entire event. Initially, community members prepare required items and traditional dishes from their homes, as previously announced by each neighborhood group (*Rumpun Warga*). One of the main components is *cokbakal*, an essential ritual element. Residents then bring various traditional foods with symbolic meanings, such as *dawet*, *urap-urap*, grilled chicken or duck, and rice shaped into *golong*, to their respective water sources. As an expression of gratitude to God, the community gathers to perform a *kenduren* led by a customary leader using a Javanese *ujub*.

According to interviews with a religious leader, Mr. H. Mahmudin, after the Javanese *ujub*, a collective prayer is conducted led by religious leaders at each water source. This prayer follows Islamic practices, as 99% of the Claket population is Muslim, while 1% adheres to other religions. The prayer sequence includes recitations from the Qur'an: Surah Al-Fatihah (4 times), Al-Ikhlas (3 times), Al-Insyirah (3 times), Ayat Kursi (3 times), *shalawat* (11 times), a prayer for safety, and concludes with the "*Sapu Jagad*" prayer, which has remained unchanged over time. The prayers are dedicated to the Prophet, saints, village elders, and Prophet Khidir, who is believed to bestow blessings upon the water. Islam serves as a medium in the ritual process, yet the tradition still demonstrates tolerance toward other religions.

As a sign of respect for the environment and an effort to preserve water sustainability, a small portion of the prepared food is taken and released into the water flow during the offering process. After completing the ritual stages, the community

exchanges food, which is then shared or taken home. Social values such as unity, solidarity, and harmony are reflected in this process. Thus, the implementation of the *Ngirim Banyu* tradition represents not only ceremonial elements but also the interaction between humans, nature, and social life in Claket Village (Ahmadun, Interview, 2026).

3. The Meaning of the *Ngirim Banyu* Tradition in Claket Village

Each element used in the *Ngirim Banyu* tradition holds symbolic meaning that reflects the principles of community life, while also serving as complementary components. According to a local cultural figure, Mas Winarto, water is seen as a representation of life, blessings, and prosperity. It is regarded not only as a physical necessity but also as a spiritual medium. The community believes that water brings benefits, especially in supporting agriculture and daily life. The location of the ritual near water sources is considered a sacred space where life begins and where humans connect with natural and spiritual forces.

The offerings also carry deep symbolic meanings. *Cokbakal*, as the main ritual element, symbolizes the beginning of life and intention, consisting of flowers, incense, leaves, and other natural materials representing completeness and respect for nature. *Nasi golong* symbolizes continuous sustenance, reflecting hopes for a stable life. The rice itself comes from locally cultivated crops. *Dawet* symbolizes flowing sustenance and abundant water, while *urap-urap* represents harmony and balance, consisting of various vegetables that symbolize diversity in unity (Ahmadun, Interview, 2026).

Additionally, *botokan* (steamed tofu and tempeh) symbolizes simplicity, purity, and closeness to nature, as it is prepared without frying. Similarly, chicken or duck must be grilled, symbolizing sacrifice and gratitude. The use of duck in eastern areas represents protection from disease, while chicken in western areas reflects local resource availability. The prohibition of frying emphasizes purity, simplicity, and moderation in life. Community actions such as gathering, praying, offering food to water, and sharing meals symbolize social solidarity, togetherness, and gratitude. These practices reflect harmonious relationships between humans, nature, and God.

The community believes that all ritual requirements must remain unchanged, as they are part of a sacred agreement. Violations are believed to bring negative consequences. For example, one case involved replacing offerings with *tumpeng*, which

led to reported personal misfortunes. This reinforces the community's commitment to preserving the authenticity of the tradition.

Water sources in Claket Village also hold economic value. They are managed collectively through institutions such as HIPA (Water Users Association) and HIPAM (Drinking Water Users Association). These organizations manage water distribution for daily use and consumption, contributing to both community welfare and village income.

From a theoretical perspective, this phenomenon can be analyzed through symbolic interactionism (George Herbert Mead), collective consciousness (Émile Durkheim), embedded economy (Karl Polanyi), and political ecology (Son et al., 2021; Venkatesan et al., 2019; Huang et al., 2021; Widjoyo et al., 2024). These perspectives highlight how water is not only a natural resource but also a social, cultural, and economic construct shaped by community interactions (Kelvin & Afa, 2013).

a. Religious Meaning

The tradition reflects gratitude to God and integrates cultural and religious values harmoniously.

b. Social Meaning

It strengthens solidarity, cooperation, and interfaith tolerance within the community.

c. Cultural Meaning

It represents inherited traditions that regulate social behavior and preserve cultural identity.

d. Ecological Meaning

It promotes environmental awareness and sustainable water management through cultural practices.

Thus, water sources in Claket Village hold not only religious and cultural significance but also function as collectively managed economic assets. This shows that the *Ngirim Banyu* tradition is not merely symbolic but also has real implications for the social and economic systems of the community.

CONCLUSION

Based on the findings of this study, the Ngirim Banyu tradition in Claket Village continues to be preserved and practiced collectively by the community as part of their local wisdom. The study found that the implementation of the tradition involves collective prayers, symbolic ritual offerings, active community participation, and community-based water resource management practices. These elements indicate that the tradition functions not only as a cultural ritual but also as a social mechanism that strengthens the relationship between humans, nature, and community life (Kelvin & Afa, 2013).

The findings also show that the Ngirim Banyu tradition contains various meanings and values in the lives of the Claket Village community. In a religious context, this tradition functions as a medium for expressing gratitude to God for the existence of water sources that sustain life, as reflected in the practice of collective prayers that harmoniously combine traditional and religious elements. From a social perspective, this tradition strengthens solidarity, mutual cooperation, togetherness, and harmonious social relationships within the community.

From a cultural perspective, Ngirim Banyu is an ancestral heritage that continues to be preserved across generations and serves as a system of values that guides community behavior through norms and taboos that must be maintained. From an ecological perspective, this tradition reflects the community's awareness of preserving the sustainability of water resources, where water is understood not only as a practical necessity but also as a symbol of life that must be protected. In addition, the tradition also has an economic dimension, as water resource management is carried out collectively through local institutions such as HIPA and HIPAM, which contribute to community welfare and village income (Krone, 2022).

In conclusion, the Ngirim Banyu tradition is more than merely a cultural ceremony; it represents a comprehensive system of local wisdom encompassing religious, social, cultural, ecological, and economic dimensions. This tradition demonstrates the important role of local wisdom in maintaining harmony between humans, the environment, and social life amid ongoing social change.

BIBLIOGRAPHY

Berkes, F. (2018). *Sacred Ecology* (4th ed.). Routledge.

Berkes, F., Colding, J., & Folke, C. (2000). Rediscovery of Traditional Ecological Knowledge as adaptive management. *Ecological Applications*, *10*(5), 1251–1262. https://doi.org/10.1890/1051-0761(2000)010[1251:ROTEKA]2.0.CO;2

Bloom, R. F. (2004). In memoriam: Milton V. Kline 1923–2004. *International Journal of Clinical and Experimental Hypnosis*, *52*(4). https://doi.org/10.1080/00207140490883

Hadi, S., & Sarjan, M. (2024). Menjaga Sumber Daya Air melalui Pendekatan Kearifan Lokal di Pulau Lombok. *Kappa Journal*, *8*(1), 62–69. https://doi.org/10.29408/kpj.v8i1.25949

Huang, Y. C., Lee, C. M., & Hong, Y. R. (2021). Water supply portfolio planning and policy evaluation under climate change: A case study of central Taiwan. *Water (Switzerland)*, *13*(4), 1–21. https://doi.org/10.3390/w13040567

In Memoriam: Milton V. Kline 1923-2004. (2004). *International Journal of Clinical and Experimental Hypnosis*, *52*(4), 333–334. https://doi.org/10.1080/00207140490883905

Kelvin, B. A., & Afa, J. T. (2013). *Determination of the Structural Integrity of a Wind Turbine Blade Using Ultrasonic Pulse – Echo Reflectometry*. *3*(5), 517–525.

Krone, A. (2022). *Religion, Animals, and Technology*.

Mulyanti, D. (2022). Community Local Awareness Towards Water Resources as A Conservation and Environmental Resources Management. *Bina Hukum Lingkungan*, *6*(3), 410–424.

Niman, E. M., Tapung, M. M., Ntelok, Z. R. E., & Darong, H. C. (2023). Kearifan Lokal Dan Upaya Pelestarian Lingkungan Air: Studi Etnografi Masyarakat Adat Manggarai, Flores, Nusa Tenggara Timur. *Paradigma: Jurnal Kajian Budaya*, *13*(1), 1–16. https://doi.org/10.17510/paradigma.v13i1.1160

Ostrom, E. (1990). Governing the commons: the evolution of institutions for collective action. *Governing the Commons: The Evolution of Institutions for Collective Action*, *32*(2). https://doi.org/10.2307/3146384

Pakidi, C. S., & Tambaip, B. (2025). Ketahanan Air dan Kearifan Lokal: Studi Kasus Pengelolaan Sumber Daya Air Berbasis Komunitas Adat di Merauke. *Jejak Digital: Jurnal Ilmiah Multidisiplin*, *1*(3), 660–676. https://doi.org/10.63822/q8m27758

Ramadani, T. W., Nurhakim, I., & Veriansyah, I. (2024). *Analisis Geografi Budaya Ritual Buang Ke Air Sebagai Kearifan Lokal Di Desa Batu Barat Kecamatan Kayong Utara Fakultas Ilmu Pendidikan Dan Pengetahuan Sosial Program Studi Pendidikan Geografi Universitas PGRI Pontianak Latar belakang Indonesia secara geog*. *4*(3), 237–246.

Son, D. M., Yoon, Y. A., Kwon, H. J., An, C. H., & Lee, S. H. (2021). Automatic detection of mandibular fractures in panoramic radiographs using deep learning. *Diagnostics*, *11*(6), 1–19. https://doi.org/10.3390/diagnostics11060933

Syamsuddini, M. N., Soleh, A. K., & Barizi, A. (2025). Selametan Sumber Air: Ritual Tradisional dan Kearifan Lokal Muslim di Perbukitan Watu Lumbung, Pasuruan. *Jurnal Ilmiah Gema Perencana*, *4*(2), 803–816. https://doi.org/10.61860/jigp.v4i2.240

Venkatesan, A., Begay, D., Burgasser, A. J., Hawkins, I., Kimura, K., Maryboy, N., & Peticolas, L. (2019). Towards inclusive practices with indigenous knowledge. *Nature Astronomy*, *3*(12), 1035–1037. https://doi.org/10.1038/s41550-019-0953-2

Weningtyas, A., & Widuri, E. (2022a). Pengelolaan_Sumber_Daya_Air_Berbasis_Kearifan_Loka. *Volksgeist: Jurnal Ilmu Hukum Dan Konstitusi*, 129–144.

Weningtyas, A., & Widuri, E. (2022b). Pengelolaan Sumber Daya Air Berbasis Kearifan Lokal Sebagai Modal Untuk Pembangunan Berkelanjutan. *Volksgeist: Jurnal Ilmu Hukum Dan Konstitusi*, *5*(1), 129–144. https://doi.org/10.24090/volksgeist.v5i1.6074

Widjoyo, E. C. K., Zildzan, A. R., Haqqani, A. R., Aulia, O. E. A., Fariz, T. R., & Heriyanti, A. P. (2024). *Bentuk Kearifan Lokal Dalam Pengelolaan Air Di*. 643–652.