

Mate Taon seasonal calendar, ethnographic communication study of Semende Darat community

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Abstract

The Mate Taon calendar is a seasonal calendar typically used by the Semende Darat community, Muara Enim Regency, South Sumatra. This calendar serves as a reference for the agricultural activities of the community established by their ancestors. The aim of this research is to understand the characteristics of mate taon as well as the current knowledge and understanding of the community. This qualitative research employed the ethnographic communication approach. The findings indicate that mate taon represents the community's interpretation of the local natural environment since the time of the puyang and has persisted to the present day. Currently, there are variations in the understanding of the mate taon calendar, categorized among older generations, adults, and youth. The older generation tends to have a better understanding of mate taon, while adults also comprehend it, albeit not in a substantial manner. In contrast, the youth's understanding is largely superficial. Overall, mate taon continues to be practiced, although it is not substantially understood by the younger generation.

Introduction

The connection between humans and natural phenomena, along with the reliance on natural signs as guidelines for daily life, has begun to shift. The local wisdom that was once prevalent is increasingly becoming a narrative of the past, replaced by various aspects of modern technology (Abdulai et al., 2023; Filho et al., 2022; Shahraki et al., 2023).

Many factors contribute to the decline of local wisdom values within a community. Externally, this is influenced by the forces of globalization, advancements in information technology, and the waves of development initiated by various countries around the world (Onyancha, 2024; Zvobgo et al., 2022). Internally, it is caused by conditions within the community itself that demand changes affecting thought patterns. This internal aspect may be influenced by the overwhelming external factors that encroach upon it (Hidayat, 2021; Suyatno, 2011).

One of the cases which can be observed is how the Badui community in West Java maintains its traditions and local wisdom values, while also being unable to escape the context of ongoing changes. Altered environmental conditions, climate changes, and

evolving community needs necessitate certain adjustments. Although these changes have not yet resulted in fundamental transformations, adaptations have already occurred (Iskandar & Iskandar, 2017). Similarly, in the remote areas of South Sumatra, such as in Tanah Pilih Village, there is a need to adapt to the changing rhythms of nature and the pressures of plantation industrialization (Yenrizal, 2017). A comparable issue is evident among the Arfak tribe, which has traditionally relied on shifting cultivation, subsistence living, and other forms of knowledge. The pressures of modernization and the expansion of large plantation interventions have displaced these practices (Yuliana et al., 2020).

Previous research conducted by scholars has mainly focused on local wisdom within communities, which subsequently changes along with social transformations (Abdulai et al., 2023; Negi et al., 2023; Sakketa, 2023). Research by Shahraki in Iran indicates that local knowledge systems play a significant role in the management of agricultural systems; therefore, it is recommended that these local knowledge mechanisms be utilized by the government while also promoting modern knowledge (Shahraki et al., 2023). The combination of these two impacts can improve the agricultural sector and reduce the effects of drought. The purpose of this study was to investigate the factors affecting indigenous knowledge and the sustainable management of water resources for optimal water use in agriculture in the Sistan region of Iran. Alongside field research and interviews with 40 indigenous experts and experts from the Jihad-e-Agriculture sector of the Sistan region, the required information was collected by means of a questionnaire. Using the fuzzy hierarchy process (FAHP). A similar point is made by Abdulai, who explains that the local communication systems in Ghana are highly effective in implementing community agricultural systems. Similar to Shahraki, Abdulai also advocates for the collaboration of local knowledge with modern knowledge (Abdulai et al., 2023).

As social changes take place, collaboration between local and modern knowledge is unavoidable. From an environmental communication perspective, this is a form of the community's changing interpretation of its natural environment (Flor, 2004). Environmental communication studies emphasize that all human activities cannot be separated from how humans ascribe meaning to their surroundings (Littlejohn & Foss, 2008). There is a process of role substitution, a process of meaning-making, and ultimately an attitude toward the environment. The field of environmental communication understands that this connection is not solely within a context of human dominance, but rather reflects a relationship of equality (Cox, 2012; Flor, 2004; Haenn, 1999). This underscores that local wisdom fundamentally arises from how communities position themselves as equals with the regions in which they reside.

However, as previous research have demonstrated, there remains an aspect that has not been adequately investigated: the dynamic interactions among community members, which are not merely static human-nature relationships. Various conditions can lead to changes in both the intensity and even the substance of these interactions. The flow of energy, materials, and information is ever-present and may undergo alterations and shifts (Rambo et al., 1988). This phenomenon causes the relationship between humans and the natural environment, manifested in the form of local wisdom, to be dynamic and adaptive.

The focus on the dynamic interactions among humans within this natural phenomenon has not been adequately addressed by previous research. According to Cox and Flor, there exist dynamic mechanisms of interaction that can vary significantly among communities, adapting to their customs, traditions, and, of course, their environmental conditions (Flor, 2004; Ibuot et al., 2021; Pezullo & Cox, 2021). Therefore, emphasizing dynamic interactions will be the primary focus that distinguishes this research from other similar studies, including the involvement of communities in interpreting their natural environment.

The forms of human attachment to the environment exhibit a considerable degree of variation. This occurs because the interactions established are not limited to a single aspect; rather, they are comprehensive, encompassing all rhythms of human life (Lee & Chen, 2021; Young, 2016). This ranges from the formation of spatial governance and land use to the administration of regions. Essentially, all rhythms of life will influence and be influenced in this process.

One region that still implements this concept of local wisdom, while also being subject to ongoing dynamics of change, is Semende Darat in Muara Enim Regency, South Sumatra. This hilly area, part of the highlands of the Bukit Barisan mountain range that stretches along the island of Sumatra, still adheres to the existing natural rhythms (Mulyaningsih et al., 2021). Lack of agricultural land, job mobility, marriage with other than Semende tribe, which impacts the rights fulfilling and obligations of *tunggu tubang*. However, this shift has been responded to by innovations so that this traditional wisdom persisted. This research is to describe innovations in maintaining the traditional wisdom. This research uses descriptive quantitative method with 40 randomly chosen respondents. Data were taken from interviews using a questionnaire, and interviews with key informants. The data were analyzed quantitatively with frequency tables, given the meaning with the structural functional approach of Talcott Parson, that traditional wisdom still functions when able to adapt, goal attainment, integration, latent maintenance. The results showed: 92.5% *tunggu tubang* to get rights to houses, gardens, fields and carrying out their obligations, but 7.5% without these rights (*tepang bangkang*). This adherence is evident in various cultural institutions that have been created, ranging from customary systems, settlement patterns, land management, to the utilization of agricultural products (Martin et al., 2016). Among these, a unique form of agricultural land use is evident in the seasonal calendar known as *Mate Taon*.

Mate Taon is a form of lunar calculation and calendrical system created by the Semende Darat community, reflecting the local environmental conditions. While the Gregorian calendar recognizes January as the first month, *Mate Taon* designates April as the first month (*se*). The twelfth month corresponds to May in the Gregorian calendar (see Figure 1). Each month consists of 30 days, and within each month, there are different practices that can be undertaken by individuals, particularly in land cultivation (Yenrizal et al., 2022).

This seasonal calendar is implemented throughout the Semende Darat region, both in the Ulu and Tengah areas. This study focuses on Cahaya Alam Village, located in the Semende Darat Ulu subdistrict. All areas of Semende Darat share nearly identical characteristics. The selection of Cahaya Alam Village is due to its status as the most remote village, situated at the farthest point and considered a newly developing area. The customary order that prevails in the Semende region is still in use. The community also maintains a strong connection with the existing natural conditions, particularly in agricultural land management, rice cultivation, and settlement patterns.

However, as previously explained, local knowledge is dynamic, just as the community. This is also true for the Semende community, where social changes continue to unfold, climate and weather patterns shift, and the population transitions from one generation to the next. So, what about *Mate Taon*? This research addresses the following research question: how do the knowledge and understanding of the Semende community, particularly in Cahaya Alam Village, relate to the utilization of the *Mate Taon* seasonal calendar in the present day? This knowledge not only examines the past but is also connected to the current conditions of the community. These changes will be evident and impart a distinct character to the Semende Darat community.

Method

This qualitative research employed the ethnographic communication approach (Saville-troike, 2003). The approach is chosen considering that the Semende community is an oral society that lives within its customary and cultural institutions. Various life phenomena are transmitted through direct narration and action. It is within this context that understanding will be achieved through ethnographic communication. Troike's concept emphasizes that language is used in social interactions, including linguistic rules (language structure), interaction (rules of speaking), and culture (values and norms that influence communication) (Saville-troike, 2003). This concept is elaborated within the context of communication among the Semende Darat community as they perceive and interpret their environment, and establish the seasonal calendar within the *Mate Taon* system.

Practically, the researcher visited and resided for some time in the Semende Darat region, specifically in Cahaya Alam Village. The researchers conducted interviews with 12 informants from Cahaya Alam Village. Some informants were from other villages but had knowledge about the topic. The selection of informants was based on their knowledge and understanding of the community, rather than being limited to their location. Ethical approval was obtained from the Institutional Research Committee of Universitas Islam Negeri Raden Fatah Palembang for all facets of this study.

Observations of the area and knowledge of the natural conditions were also conducted. This observation included monitoring the methods of land clearing, determining farming times, communication practices, the language used, and the knowledge applied in daily life. Relevant documents were also collected and used as important materials for the research.

This research emphasizes the ethics of ethnographic research by considering emic and ethical aspects (Haapanen & Manninen, 2023; Saville-troike, 2003). From an emic perspective, the researchers value and understand the informants' viewpoints, specifically the Semende community's interactions with their environment. Local terms, specific values in various practices, and the processes undertaken are highlighted from the emic perspective. Meanwhile, from an ethical standpoint, the community's understanding is integrated with the views of the researchers and relevant experts, thereby revealing the correlation between the emic and ethical dimensions (Orb et al., 2021). The researchers acknowledge the existence of local values that have been held since ancient times and are believed by the informants. This is then collaborated with the ethical perspective to illustrate the common thread among the existing knowledge.

Data analysis was conducted qualitatively, taking into account the specificities of ethnographic communication. Troike's perspectives were employed as an analytical framework, particularly regarding linguistic rules, speaking norms, and cultural aspects that influence communication. The researchers performed coding, sorting, and formulating significant findings using the data collection tools. Data validation was carried out by integrating findings from interviews with various informants, observational results, and relevant documents. Emic-ethical principles were applied in this regard. The findings of the research are presented while adhering to the emic and ethical principles of ethnography.

Results and Discussion

The Semende Darat community resides in the highlands of South Sumatra, specifically in the Bukit Barisan region. Administratively, it is part of the Muara Enim Regency, which comprises three subdistricts (Semende Darat Ilir, Tengah, and Ulu). The Semende Darat Ulu subdistrict has the highest position. Historical records indicate that the initial settlement of

the population in this area began around the 18th century, initiated by the spread of Islam in the Uluan region (Rauf, 2022).

The entire community inhabiting this highland is of the same ethnic group, Semende. This ethnic group has historical ties with the oldest ethnic group in South Sumatra, the Besemah, leading to the view that the inhabitants of the highlands represent an inseparable connection between the two ethnicities, referred to as *Jagat Besemah Libagh Semende Panjang* (the wide Besemah and long Semende region). This ethnic similarity also results in a uniform customary order in Semende, known as *Adat Bemeraje Anak Belai*, often referred to as *adat Tunggu Tubang*. Likewise, the language used is consistent throughout the community.

Due to the community's residence in an area with similar characteristics (mountainous terrain and cool weather), their livelihoods are also similar, primarily as coffee, rice, and vegetable farmers. The harvests (especially coffee and vegetables) are distributed to various other regions, and Semende coffee has become a distinctive icon recognized as one of the finest coffee varieties. Currently, horticultural crops have emerged as a new icon, providing greater economic benefits for the community (Martin et al., 2016).

Meanwhile, Cahaya Alam Village, one of the villages in Semende Darat Ulu, also has distinctive characteristics similar to other villages in Semende. In this village, coffee and vegetable cultivation are the primary livelihoods. Rice fields are utilized as subsistence agricultural land to prepare food for families throughout the year. The population reaches 1,220 individuals, who are dispersed and form clustered settlements. All residents of this village share the same ethnic lineage, with the majority having familial ties. There are no other ethnic groups in this village; all are Semende people.

This village is neither closed off nor isolated. Although it is located at the end of the main road, transportation access is smooth, with well-maintained roads. Communication access is also adequate, as mobile phone networks are available, and electricity is consistently supplied. The village features a local market known as *Kalangan*, which operates every Thursday. Educational facilities, including a public elementary school and a junior high school, are present in the village, as well as places of worship, including one mosque and three prayer halls, which are actively used by the residents. Health facilities, in the form of a community health center, are functioning well. Clean water is sourced from the upstream water flow in the hills, which is channeled to the residents' homes.

As explained earlier, the residents of Cahaya Alam Village implement the provisions of the *Mate Taon* seasonal calendar in their daily agricultural activities. Specifically, *Mate Taon* is illustrated in the following image.

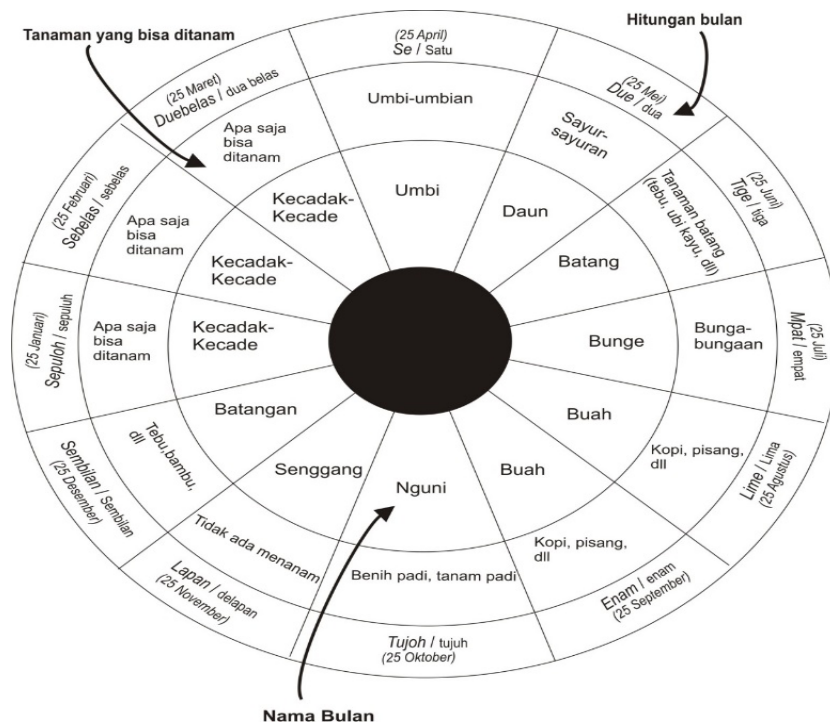


Figure 1. *Mate Taon* Seasonal Calendar

Source: adapted from Yenrizal (2015)

It is evident that the seasonal calculations in Semende Darat, including Cahaya Alam, possess a unique pattern that can be described as characteristic of Semende Darat. The first month is designated as the month of *Se*, occurring on April 25 in the Gregorian calendar. This counting continues through to the twelfth month in March. Each month has its own name, which is associated with the types of crops that can be planted. Accordingly, only specific plants can be cultivated during that month. For instance, the fruit month (the sixth month, or September 25 to October 25) allows for the planting of fruit crops only. Exceptions occur in months 10, 11, and 12 (January, February, March), during which any crops can be planted, hence referred to as the month of *kecadak-kecade*. Violations of this calendar's provisions are believed by the community to result in diminished harvests and lower quality of the crops planted.

According to Din Syarpuni (62 years old), a community leader in Cahaya Alam Village, the *Mate Taon* calendar is a teaching from *Puyang* (ancestors) that the community continues to adhere to to this day. Din himself has a good understanding of this calculation, which serves as his guideline in agricultural endeavors. The same view is mentioned by Mustar (45 years old), the Head of Cahaya Alam Village, who considers it a form of ancestral wisdom that must be followed by current generations. Although there are no customary sanctions or other penalties for violating these provisions, the risks include reduced harvests and poor-quality crops. This represents a significant risk for the farming community.

Mate Taon is indeed a teaching from the *Puyang*. This indicates that it has been established since the early days of the community's settlement in this area. Given the considerable time span, from the 18th century to the present, it is possible for distortions or even violations of the existing provisions to occur. There may be variations in the community's understanding, which could differ or change over time. The results of this research indicate that there are indeed variations in understanding or levels of depth of comprehension regarding *Mate Taon*, particularly within the community of Cahaya Alam

Village. The researchers categorized the population into three groups, according to the classifications recognized in Semende: the *Jeme Tue* (elderly), the *Batin* (adults), and the youth group. These three groups are dominant in land management, while other groups, such as children and women, play a lesser role, primarily following the practices of the aforementioned three groups.

The first group, known as *Jeme Tue*, consists of community members aged 50 and above. This group is relatively large, although not dominant, comprising approximately 96 individuals. Since most agricultural practitioners in this group are male, their understanding of agricultural practices is primarily derived from this demographic. For the *Jeme Tue*, the *Mate Taon* calendar has been recognized for a long time. They have a sufficient understanding that there are specific rules that must be adhered to in the management of agricultural land.

The primary source of this knowledge is the explanations of the elders and direct experience in managing land while considering the existing environmental conditions. Din Syarpuni acknowledges that this knowledge is significantly influenced by the conditions in Semende. "We know about this because the natural environment is like that; the rainfall is clear, and the dry season can also be identified. The *jeme tue* always provide examples, including knowledge about the existing environmental conditions, so we simply follow their guidance" (Interview on September 16, 2023). Din could explain when the months referred to as *nguni*, *kecadak-kecade*, *batang*, *buah*, *daun*, and so forth occur. He could also specify that these take place in certain months of the Gregorian calendar. However, Din admitted that the seasonal calendar benchmarks can no longer be applied accurately today. The issue lies in changing weather patterns. For instance, April used to be the rainy season, referred to as month *Se* (one), marking the beginning of rice planting. However, now April sometimes begins to be hot, although this does not occur every year. The community must certainly adapt to these changes.

The understanding of *Mate Taon* is well internalized among this older generation. They hold a strong belief that natural signs cannot be disputed and that the teachings of the *Puyang* are principles that must be adhered to. The experience of Munhar (65 years old) illustrates that disputing or disregarding the important messages of *Mate Taon* can lead to the failure of the crops planted. This was exemplified by a resident who attempted to cultivate soybeans. Ideally, these should be planted during the fruit planting season; however, the individual insisted on planting whenever he wished, provided he used chemical fertilizers. Local community leaders had warned that this would be futile. As a result, the crop failed. Although the plants appeared lush and the pods were large and plump, upon opening, they were found to be empty.

This experience further reinforces the knowledge among the older generation, and they continue to adhere to it to this day. Even with changes such as the use of fertilizers and the types of crops planted, compliance with natural signs remains understood by the older generation.

The second group is the adult group (*batin*). This age group consists of married men under the age of 50, who possess an understanding that is nearly equivalent to that of the older generation. They are also familiar with the *Mate Taon* calendar; however, among the *batin* group members under 30 years old, the understanding is not as profound. For instance, Joni (29 years old), who engages in rice farming while integrating aquaculture, admitted that he merely followed the practices of other members of the *batin* group. Nevertheless, what is important to him is that agricultural yields remain stable and that he can also obtain fish as a product.

In Semende, the *batin* group is dominant and categorized as a productive group. They are the ones who actually determine the implementation of agricultural activities in Semende, including in Cahaya Alam. The *batin* are heads of households, responsible for providing for their family members, and thus they engage in agricultural activities for their respective families. They also serve as the conveyers of information and knowledge regarding *Mate Taon* to others, particularly to the younger generations beneath them. Children tend to follow the practices of their parents. Therefore, their role is crucial in ensuring the continuity of *Mate Taon*, including the transmission of this knowledge to future generations.

The transmission of knowledge occurs through customary practices in Semende. They consistently use the Semende language, which features a structure rich in a flowing rhythm, seemingly mirroring the contours of the mountains. This linguistic structure is also characterized by parallelism; in other words, there is no distinction between the language used for adults and that used for children. All possess the same vocabulary. Syabudin (30 years old) acknowledges that their language is indeed structured this way. All vocabulary is uniformly applicable and is always related to the local environmental conditions. This is evident in the use of terms such as cliff, valley, badas (stone), rice field, and ataran (plain). The *batin* consistently employ this language, passing it on to subsequent generations. This condition is what Troike refers to as an important aspect in examining the ethnography of communication within a community (Saville-troike, 2003).

However, the level of knowledge of the *batin* who are 30 years old and younger is not particularly high. This is due to their experience of transitioning from a conventional model to a highly advanced and technology-based environment. Various external influences have begun to permeate their thinking patterns regarding nature. Nevertheless, adherence to the rhythms and rules of nature remains intact. Kaimin (30 years old) acknowledges this: "When I was a child, I was indeed introduced to or informed about how the seasonal calculations in Semende work, especially by my parents. However, as I gradually socialized and attended school in Muara Enim, I became less knowledgeable about it. But I am aware of it" (interview on September 17, 2023).

This generation was born in the 1990s and began entering adolescence in the 2000s. During this time, various changes began to enter Semende, subsequently altering their thought patterns. Field interviews indicate that changes in the use of *Mate Taon* began to occur in the 1990s. However, these changes were not rapid or comprehensive. The prevailing condition is characterized more by a lack of precise adherence, while still maintaining some consideration of environmental conditions.

Meanwhile, the *batin* group aged 40 and above generally possesses an understanding of how the rhythms of nature influence the activities of the community. Generations such as Darmudin, Sanusi, Arpan, and Kamarudin (informants in this study) are individuals who have experienced the initial processes of *Mate Taon*, which directly impacts their daily activities. This knowledge is also passed on to their children, providing them with a distinct understanding of how nature should be interpreted.

The third group consists of adolescents (unmarried individuals). In this group, their understanding is limited to merely hearing that there is indeed a seasonal calendar used by the *jeme tue* (elders) of the past. However, they do not understand how the calculations are made or the methods involved. In practice, they still follow the advice and guidance of the older generation. They are aged 15 to 20 years and are categorized as unmarried; once they marry, even at the age of 17, they transition into the *batin* group. This younger generation tends to emulate the practices of their parents.

The most significant changes, particularly in terms of attitudes and behaviors, occur within this group. They are categorized as the millennial generation, living amidst advanced information technology, which greatly influences their daily lives. They are accustomed to using gadgets and smartphones on a daily basis. A variety of information can be accessed anytime and anywhere. In various gatherings or social interactions among themselves, the use of smartphones with their advanced features has become exceedingly familiar. Social relationships are also significantly affected, as they no longer prioritize direct communication, becoming more engaged in virtual interactions without the necessity of physical presence.

This group predominantly resides outside the village, especially those who have continued their education to the level of senior high school, and even higher education. In Cahaya Alam Village, there is no senior high school, so those who pursue further education are assuredly located outside the village. In this context, the interactions of the adolescent group, including their sources of information, are largely derived from outside the region. Rahmad (18 years old) is one such individual. He reports attending school in Palembang and returning to Semende during holidays. His knowledge of local practices is not particularly deep, although he acknowledges having heard local agricultural terms, such as *Mate Taon*.

This situation has led to a decline in the knowledge and understanding of the younger generation regarding various agricultural activities in Semende. They are no longer accustomed to activities such as visiting coffee plantations, rice fields, and other mechanisms for utilizing land. This includes the use of the *Mate Taon* seasonal calendar. It can be confidently stated that they are no longer familiar with the intricacies of this seasonal calculation. Observations in the field, as well as interviews with several members of this group, indeed confirm this trend.

This group does not possess their own land; they merely assist their parents when they are in the village. They bear no specific responsibilities. Consequently, whatever happens in the village is merely something they are aware of. They are largely preoccupied with their own worlds. This contrasts with the *batin* group during their own adolescence. Although they also had no responsibilities, they were still involved and observed firsthand how the seasonal calendar was utilized. Even if they did not fully understand it, they still witnessed and even practiced it.

However, despite not knowing the specifics, the adolescents still observe and recognize the farming patterns applied by their parents. They continue to ask questions, so even if they do not know that it is *Mate Taon*, they understand that agricultural activities cannot be conducted at just any time; there are specific procedures that must be followed. Research observations indicate that Rahmad, for instance, actively participates in his parents' activities in the rice fields, helping with the harvest and planting. Rahmad also wakes up at dawn to prepare for the fields and is involved in preparing seeds according to the prevailing season. The researcher has observed this over time, noting that similar activities are undertaken by his peers, such as Yanto and Dedi, who are of the same age and also participate in their families' activities.

This is the manner in which these millennial generations experience agricultural practices. Beyond this, they do not inquire further; they simply follow along. This occurs because their role is one of assistance, and they do not bear any burdens. Their preoccupation with their own lives also influences their level of understanding.

In addition to these three groups (*jeme tue*, *batin*, and adolescents), there are also other groups, namely children and women. However, the activities of these groups in

determining their relationship with nature are not particularly strong. Children typically participate in their parents' activities without having any perspective on environmental conditions. Women also generally follow their husbands' work, rarely opposing or playing a significant role in other capacities. Although they are *tunggu tubang*, in the reality of daily activities, it is the men who play the most significant roles. The women usually function as supporters or preparers of various tasks.

Overall, the understanding of this community can be illustrated in the following diagram.

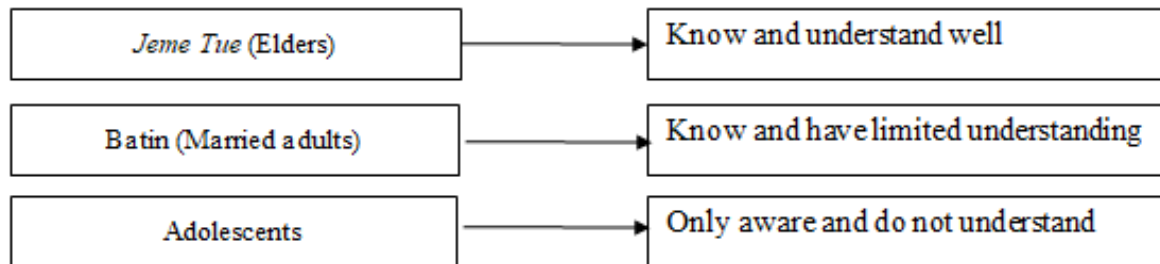


Figure 1. Knowledge and Understanding of *Mate Taon*

Source: Research Analysis, 2023

The variation in knowledge, as illustrated in Figure 1 above, according to Munhar, was not recognized during their adolescence. Prior to the 1990s, the community had a good understanding of this due to favorable environmental and weather conditions. Furthermore, the transmission of this knowledge from older generations to younger ones was effective. Consequently, the uniformity of crop types and planting seasons was very evident during that time.

The meanings understood by the community in the context of *Mate Taon* indeed follow the aspects of experience and the existing environmental conditions. This indicates that community communication regarding natural phenomena is highly dynamic, even within the context of traditional society. Social, economic, environmental, and cultural aspects play significant roles, leading to the emergence of variations in knowledge (Flor, 2004). All of this demonstrates that everything the community interprets about their environment becomes a form of local knowledge, a shared understanding, which, despite the dynamic nature of society, is difficult to eradicate (Jessen et al., 2022). Non-Indigenous "Western" scientific research and management have only recently considered IK. We use detailed and diverse examples to highlight how IK is increasingly incorporated in research programs, enhancing understanding of – and contributing novel insight into – ecology and evolution, as well as physiology and applied ecology (that is, management). Although the adolescent group does not fully comprehend the details of *Mate Taon*, it can be assured that they remain compliant with the existing environmental conditions. This further reinforces the primary assumption that the unity of society with the natural environment, in terms of ethnoecological communication, is adaptive yet responsive to existing changes (Yenrizal et al., 2015).

Knowledge of *Mate Taon* serves as a mechanism for environmental communication. This occurs because such knowledge originates from public participation in observing and interpreting natural phenomena. Traditionally, the actions taken by the community towards their environment represent a form of participation. They have engaged in managing and organizing nature both intentionally and unintentionally (Kumpu, 2022). Although the concept of participation is often associated with formal definitions, it can also

be understood that daily activities, customary practices, and gardening habits constitute forms of participation. This is further reinforced by the activity of transmitting this knowledge to subsequent generations. The community possesses patterns and methods that demonstrate their agency in the activities they undertake (Jessen et al., 2022). Cultural aspects that have been practiced for years shape the community's understanding of information related to the natural environment, and this becomes a customary means of communication with other residents.

To strengthen the concept of environmental communication in the Semende community, particularly in the context of *Mate Taon*, the pattern of value transmission and aspects of environmental unity to the future generations is crucial. The reality in Semende can endure because there is indeed a local system that has developed to pass on this knowledge. This research emphasizes that there is a linguistic structure (language structure) that adheres to local norms, specifically by using terms and vocabulary that align with environmental conditions. Additionally, the rules of communication are fluid, not imposing specific hierarchies, which fosters a more open and straightforward mode of communication. This is also true for cultural aspects that have been recognized for generations.

The findings of this study indicate that knowledge transmission occurs through several means. *First*, stories or direct instructions from parents to their children. *Second*, conversations among community members. *Third*, the use of *Andai-Andai* (folktales) from parents to children. *Fourth*, the use of traditional art forms such as traditional songs in the Batang Hari Sembilan repertoire. These methods are practiced in the daily lives of the community, allowing various forms of knowledge to be effectively conveyed. Explanations from research informants, particularly from the *Jeme Tue* group, acknowledge that they routinely received this knowledge during their youth. However, recent developments have made it increasingly difficult to fully implement these methods. The rapid advancement of information technology (the introduction of electricity to the village, television, and the internet) has shifted the community's focus. As a result, the *Mate Taon* tradition is not being entirely passed down.

The transmission of local knowledge values is fundamentally a communication system that occurs between generations in the Semende community. This phenomenon is often observed in traditional societies. The close communication patterns enable this knowledge to be passed on to the successors of the community (Mulyaningsih et al., 2021) lack of agricultural land, job mobility, marriage with other than Semende tribe, which impacts the rights fulfilling and obligations of *tunggu tubang*. However, this shift has been responded to by innovations so that this traditional wisdom persisted. This research is to describe innovations in maintaining the traditional wisdom. This research uses descriptive quantitative method with 40 randomly chosen respondents. Data were taken from interviews using a questionnaire, and interviews with key informants. The data were analyzed quantitatively with frequency tables, given the meaning with the structural functional approach of Talcott Parson, that traditional wisdom still functions when able to adapt, goal attainment, integration, latent maintenance. The results showed: 92.5% *tunggu tubang* to get rights to houses, gardens, fields and carrying out their obligations, but 7.5% without these rights (*tepang bangkang*). As evidence, in addition to what occurs in Semende, similar practices can be found among the Badui community in West Java. The management of space and land utilization can be conducted in such a way that it continues due to ongoing downward communication (Iskandar & Iskandar, 2017). Similarly, the Dayak Kanayatn community in Kalimantan continues to uphold the *Bauma Batahutn* tradition in their agricultural practices (Piter, 2023).

In the context of environmental communication, this emphasizes that nature and society are inseparable entities (Hadiprashada & Budiman, 2019). This unity creates a robust system that can only change when the natural conditions themselves undergo transformation (Cox, 2012; Flor, 2004). The principles of communication, which are circular, integrated, and highly symbolic, become evident in the daily activities of the community (Toledo et al., 2003). Therefore, what occurs in Semende, particularly in the area of Cahaya Alam Village, represents a highly dynamic environmental communication system, formed by the unity of the relationship with nature. The primary role remains with humans as the communicators; however, human behavior is significantly influenced by the local environmental conditions.

Community knowledge and understanding can indeed change and are highly dynamic; nevertheless, the natural conditions will remain a benchmark. Imposing human desires, even through a series of technological interventions (such as chemical fertilizers), cannot achieve optimal results and tends to neglect sustainability aspects. What occurs in Semende can emphasize this notion.

Conclusion

This study concludes that environmental communication within rural communities, particularly in Semende, is highly dynamic and can change according to the prevailing socio-cultural context and environmental conditions, although the community remains inextricably linked to the realities of their natural environment. The strength of environmental communication in the community lies in the alignment between natural phenomena and the teachings established by ancestors. Therefore, the social changes that occur only result in variations in the interpretation of nature, without altering the essence of the ongoing environmental communication. The seasonal calendar of *Mate Taon* that is observed in Semende represents a form of the community's interpretation (communication) of their natural environment. Knowledge of *Mate Taon* originates from the heritage of the *Puyang* (ancestors) and continues to be conveyed to the present day. The developments observed indicate variations in the knowledge and understanding of the Semende community, particularly in Cahaya Alam Village, regarding *Mate Taon*. The group categorized as *Jeme Tue* (elders) knows and understands the essence of this seasonal calendar more deeply. Meanwhile, the *Batin* (adult males) are also aware and have an understanding, although it cannot be described as very profound. The adolescent group tends to have only a superficial awareness and has heard of it, resulting in a lack of in-depth understanding. Nevertheless, regardless of the level of comprehension, the interpretations of the natural conditions are maintained and practiced in the daily lives of the community, whether among the *Jeme Tue*, *Batin*, or adolescents. This knowledge is communicated (transmitted) from one generation to the next through existing social institutions, including explanations and direct practices from parents, conversations, folktales, and traditional storytelling media known to the community.

This study highlights the need for more in-depth research and analysis of various rural communities that possess local knowledge heritage, focusing on the aspects of information flow between humans and the environment, as well as the communication processes that occur. This is essential to further understand the relevance of environmental communication as a field of study that prioritizes the existence of communities as primary entities, while also recognizing the natural environment as an inseparable component, even though technological interventions may be implemented.

REFERENCES

- Abdulai, M., Ibrahim, H., & Latif Anas, A. (2023). The role of indigenous communication systems for rural development in the tolon district of Ghana. *Research in Globalization*, 6(February), 100128. <https://doi.org/10.1016/j.resglo.2023.100128>
- Cox, R. (2012). Study and practice of environmental communication. *Environmental Communication and the Public Sphere*, 1, 11–38. http://www.sagepub.com/upm-data/47777_ch_1.pdf
- Filho, W. L., Barbir, J., Gwenzi, J., Ayal, D., Simpson, N. P., Adeleke, L., Tilahun, B., Chirisa, I., Gbedemah, S. F., Nzengya, D. M., Sharifi, A., Theodory, T., & Yaffa, S. (2022). The role of indigenous knowledge in climate change adaptation in Africa. *Environmental Science and Policy*, 136(May), 250–260. <https://doi.org/10.1016/j.envsci.2022.06.004>
- Flor, A. G. (2004). *Environmental communication: Principles, approaches and strategies of communication applied to environmental management by*. UP Open University. <https://doi.org/10.1080/15330150590934480>
- Hadiprashada, D., & Budiman, D. A. (2019). Komunikasi lingkungan dalam budaya masyarakat (Analisis model pesan two way asymmetrical pada lembaga adat). *Jurnal Komunikasi*, 11(2), 213. <https://doi.org/10.24912/jk.v11i2.5920>
- Haenn, N. (1999). The power of environmental knowledge: Ethnoecology and environmental conflicts in Mexican conservation. *Human Ecology*, 27(3), 477–491. <https://doi.org/10.1023/A:1018731708560>
- Hidayat, S. (2021). Implikasi dan konsekwensi nilai-nilai local wisdom (kearifan lokal) dalam kepemimpinan di era globalisasi. *Jurnal Inovasi Penelitian*, 1(10), 2113–2122.
- Ibuot, U. P., Majemu, S. A., & Nwantah, F. (2021). Participatory development communication: An audience-centered initiative. *The International Journal of Humanities & Social Studies*. <https://doi.org/10.24940/theijhss/2021/v9/i6/hs2106-030>
- Iskandar, J., & Iskandar, B. S. (2017). Local knowledge of the baduy community of south banten (Indonesia) on the traditional landscapes. *Biodiversitas*, 18(3), 928–938. <https://doi.org/10.13057/biodiv/d180309>
- Jessen, T. D., Ban, N. C., Claxton, N., & Darimont, C. T. (2022). Contributions of indigenous knowledge to ecological and evolutionary understanding. *Frontiers in Ecology and the Environment*, 20(2), 93–101. <https://doi.org/10.1002/fee.2435>
- Kumpu, V. (2022). What is public engagement and how does it help to address climate change? a review of climate communication research. *Environmental Communication*, 16(3), 304–316. <https://doi.org/10.1080/17524032.2022.2055601>
- Lee, S. H., & Chen, Y. J. (2021). Indigenous knowledge and endogenous actions for building tribal resilience after typhoon soudelor in northern taiwan. *Sustainability (Switzerland)*. <https://doi.org/10.3390/su13020506>
- Littlejohn, S. W., & Foss, K. A. (2008). *Theories of human communication* (Ninth Edit). Thomson, Wadsworth.
- Martin, E., Suharjito, D., Darusman, D., Sunito, S., & Winarno, B. (2016). Subsistence ethics of smallholder coffee grower: Understanding the dynamics of agroforestry development in the upland of South Sumatra. *Sodality: Jurnal Sosiologi Pedesaan*, 4(1). <https://doi.org/https://doi.org/10.22500/sodality.v4i1.14410>

- Mulyaningsih, H., Kartika, T., Hertanto, H., & Darmastuti, A. (2021). A shift in traditional wisdom of semende tribe in pulau pangung Tanggamus. *Sosiohumaniora*, 23(3), 346. <https://doi.org/10.24198/sosiohumaniora.v23i3.31806>
- Negi, V. S., Pathak, R., Thakur, S., Joshi, R. K., Bhatt, I. D., & Rawal, R. S. (2023). Scoping the need of mainstreaming indigenous knowledge for sustainable use of bioresources in the Indian Himalayan region. *Environmental Management*. <https://doi.org/10.1007/s00267-021-01510-w>
- Onyancha, O. B. (2024). Indigenous knowledge, traditional knowledge and local knowledge: what is the difference? An informetrics perspective. *Global Knowledge, Memory and Communication*. <https://doi.org/10.1108/GKMC-01-2022-0011>
- Pezullo, P. C., & Cox, R. (2021). Environmental communication and the public sphere (6th ed). In *Communicating for/about the Environment* (pp. 1–392).
- Piter, R. (2023). Makna kearifan lokal tradisi Bauma Batahutn suku Dayak Kanayatn di Kalimantan Barat. *Balale': Jurnal Antropologi*, 4(1), 1. <https://doi.org/10.26418/balale.v4i1.63117>
- Rambo, A. T., Gillogly, K., & Hutterer, K. L. (1988). Ethnic diversity and control of natural resources in Southeast Asia. In *University of Michigan Center for South and Southeast Asian Studies*. East West Center, Environment and Policy Institute.
- Sakketa, T. G. (2023). Urbanisation and rural development in sub-Saharan Africa: A review of pathways and impacts. *Research in Globalization*, 6(May), 100133. <https://doi.org/10.1016/j.resglo.2023.100133>
- Saville-troike, M. (2003). *The ethnography of communication* (Third Edit). Blackwell Publishing.
- Shahraki, A. S., Panagopoulos, T., Ashari, H. E., & Bazrafshan, O. (2023). Relationship between indigenous knowledge development in agriculture and the sustainability of water resources. *Sustainability (Switzerland)*. <https://doi.org/10.3390/su15075665>
- Suyatno, S. (2011). Local revitalization as a national identity in the midst of change socio-cultural values. *Metasastra*, 4(1), 82–89.
- Toledo, V. M., Ortiz-Espejel, B., Cortés, L., Moguel, P., & Ordoñez, M. de J. (2003). The multiple use of tropical forests by indigenous peoples in Mexico: A case of adaptive management. *Ecology and Society*, 7(3). <https://doi.org/10.5751/es-00524-070309>
- Yenrizal. (2017). Komunikasi lingkungan dalam antisipasi bencana di desa Tanah Pilih, Kabupaten Banyuasin, Sumatera Selatan. *Bunga Rampai Komunikasi Indonesia*, 293–308.
- Yenrizal, A. B., Iskandar, J., & Rahmat, A. (2015). The meaning and value attachment to natural symbols by farmers in a rural setting: An ethno-ecology communication study of rural farmers in Swarna Dwiye Village of Muara Enim Regency in South Sumatera. *International Journal of Applied Engineering Research*, 10(16), 36721–36726.
- Yenrizal, Rahmat, A., Iskandar, J., & Bajari, A. (2022). Manusia memandang alam dalam perspektif etnoekologi komunikasi. In *Etnoekologi Komunikasi, Orang Semende Memandang Alam* (Issue October). Penerbit Deepublish.
- Young, R. F. (2016). Modernity, postmodernity, and ecological wisdom: Toward a new framework for landscape and urban planning. *Landscape and Urban Planning*, 155, 91–99. <https://doi.org/10.1016/j.landurbplan.2016.04.012>

- Yuliana, A., Iwan, S. I., & Insan, N. T. (2020). Pola pergeseran nilai kearifan lokal sistem ladang berpindah pada masyarakat Arfak. *Mimbar Agribisnis Jurnal Pemikiran Masyarakat Ilmiah Berwawasan Agribisnis.*, 6(2), 812–832.
- Zvobgo, L., Johnston, P., Williams, P. A., Trisos, C. H., & Simpson, N. P. (2022). The role of indigenous knowledge and local knowledge in water sector adaptation to climate change in Africa: a structured assessment. In *Sustainability Science*. <https://doi.org/10.1007/s11625-022-01118-x>

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