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Indigenous Agricultural Knowledge in Sumi-Naga Folktales: A Reflexive Thematic Analysis of Kasho Papu and Litsapa

Papiya Dutta^{1*}, Lilika K Zhimomi¹

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ABSTRACT

This study examines how indigenous agricultural knowledge is represented in two published Sumi Naga folktales, Kasho Papu and Litsapa, with attention to farming practices, social values, ecological observation, and cultural continuity. Using an interpretive qualitative design, the study applies Braun and Clarke's Reflexive Thematic Analysis, with ATLAS.ti 2026 used to organise coding, memos, quotations, theme development, and visualisation. Supplementary code-frequency and sentiment displays were used descriptively and did not determine theme construction. Four themes were developed: indigenous knowledge as communal heritage, social inversion as moral order, supernatural mediation of agricultural knowledge, and marginalised individuals as chosen knowledge bearers. Kasho Papu foregrounds seasonal timing and land governance, whereas Litsapa foregrounds rice-variety classification, ritual regulation, and seed sharing. The study contributes a focused RTA-based interpretation of how ecological, moral, and cosmological meanings are connected within these two editorially mediated texts. Because the corpus is limited, the findings are not intended to represent Sumi agricultural knowledge as a whole.

INTRODUCTION

Oral traditions are among the most enduring and adaptive ways through which human communities preserve and transmit knowledge across generations. Among the indigenous communities of Northeast India, folktales serve not merely as entertainment or moral instruction but as repositories of ecological knowledge, social governance principles, and cultural identity that formal institutions have historically failed to preserve. The tribes of Nagaland, each possessing a distinct oral tradition, represent a particularly rich site for the investigation of indigenous knowledge systems, yet their folktales remain substantially underrepresented in qualitative academic scholarship (Jamir, K., *et al.*, 2022; Zingkhai, G., 2017). This gap is especially notable given the influence of folklore on agricultural practices, as highlighted by Zhimomi, L. K., & Dutta, P. (2019), who demonstrate how Sumi Naga oral narratives shape farm culture and sustain traditional agricultural knowledge in the Naga Hills. To address this gap, we closely analyze two Sumi Naga folktales, Kasho Papu and Litsapa, using reflexive thematic analysis (Braun & Clarke, 2006). Our approach reveals how these stories serve as living repositories of agricultural wisdom and social norms, rather than simply entertaining or instructive tales. In doing so, we argue that these folktales are not merely narrative artefacts, but function as active knowledge systems.

Although scholars have documented Sumi folklore, agricultural traditions, and indigenous ecological knowledge, existing research has not examined how agricultural knowledge is narratively organised across these two folktales through Reflexive Thematic Analysis. This study therefore asks: (1) What forms of indigenous

agricultural knowledge are represented in Kasho Papu and Litsapa? (2) How are ecological knowledge, moral order, cosmology, and social position related within the narratives? (3) What does an interpretive comparison of the two published folktales contribute to scholarship on Sumi oral traditions and indigenous knowledge systems? These questions guide an interpretive analysis of the two texts rather than a representative account of Sumi knowledge as a whole.

This study makes a focused methodological and interpretive contribution by applying Reflexive Thematic Analysis to a small corpus of two published Sumi Naga folktales as representations of agricultural knowledge. Its originality lies not in claiming comprehensive knowledge of Sumi tradition, but in showing how ecological observation, moral authority, cosmological mediation, and social vulnerability are narratively connected within these texts. The ATLAS.ti-supported coding and supplementary descriptive visualisations provide an audit trail for this interpretation; they do not constitute an independent computational validation of the themes.

Theoretical Framework

Indigenous Knowledge Systems as Analytical Lens

We draw inspiration from Indigenous Knowledge Systems scholarship, which recognises the depth and legitimacy of traditional, location-based wisdom (Nakashima, D., & Roué, M., 2002). This perspective guides our reading of Sumi folktales as vibrant sites of knowledge transmission. We use this framework to interpret how knowledge is embedded in Sumi folktales. IKS scholarship recognises that indigenous communities possess sophisticated,

¹ Department of Rural Development, University of Science and Technology Meghalaya, Techno City, 9th Mile, Baridua, Kiling road, Ri-Bhoi, Meghalaya, India

* Corresponding author's e-mail: papiyadt3@gmail.com

empirically grounded understandings of their ecological environments. We approach these insights not as static bodies of knowledge, but as lived practices transmitted through oral narratives. These practices encompass biodiversity, phenological cycles, soil management, and seasonal agriculture, and have been refined over centuries of observation and cultural practice. This perspective enables us to read folktales not simply as stories, but as continuing sites of knowledge transmission.

The concept of Traditional Ecological Knowledge (TEK), as elaborated by Berkes (1999), provides an additional lens for this study. We drew on this framework to examine how ecological knowledge is structured and transmitted within the two folktales. TEK refers to the cumulative body of knowledge, practices, and beliefs concerning the relationships between humans and their environment. In this study, we used this definition to identify how such relationships are represented narratively in the folktales. Both Kasho Papu and Litsapa can be read as encoding elements of TEK in narrative form. We interpreted these elements in relation to avian bioindicators, indigenous crop classifications, and ritual practices governing agricultural cycles.

This study also engages with literature that connects oral tradition with sustainable development. We situated the Sumi folktales within this broader conversation, particularly in relation to food security, land governance, and biodiversity conservation. This position aligns with the United Nations Educational, Scientific and Cultural Organization's (UNESCO, 2003) recognition of intangible cultural heritage, including oral traditions, as central to sustainable development. By situating the analysis within this framework, we argue that Sumi folktales function as active knowledge systems rather than passive cultural artefacts. The frameworks perform distinct but complementary analytical functions. Propp sensitises the reading to recurring narrative actions and transformations, while Lévi-Strauss draws attention to oppositions such as powerful/marginalised, scarcity/abundance, and disorder/restoration. Indigenous Knowledge Systems provides the overarching epistemological position from which the narratives are approached as culturally situated forms of knowledge, and TEK focuses the analysis on relationships among ecological observation, agricultural practice, belief, and intergenerational transmission. RTA is the interpretive method through which patterns of shared meaning are constructed across the texts. Structuralist concepts therefore operate as sensitising resources rather than fixed coding templates, so they do not predetermine the themes.

Braun and Clarke's Reflexive Thematic Analysis

The methodological approach of this study is grounded in Braun and Clarke's Reflexive Thematic Analysis (Braun & Clarke, 2022). We adopted this framework because it allows for an interpretive and reflexive engagement with qualitative data. Unlike earlier codebook-based or frequency-driven approaches to thematic analysis, RTA is

explicitly constructivist in its epistemological orientation, foregrounding the researcher's active, interpretive role in the construction of themes from the data. In this framework, themes were understood as being constructed through the researcher's reflexive engagement with the material. We actively interpreted and organised the data, treating themes as constructed rather than pre-existing categories.

This constructivist orientation makes RTA particularly well suited to the analysis of folkloric texts. It allowed us to engage with the layered and culturally embedded meanings within the narratives. Folktales do not yield their meaning through surface-level reading; rather, they require sustained interpretive engagement. In this study, we moved iteratively between the texts, codes, and themes in order to develop this interpretation. The six-phase process of RTA provides a flexible structure for this analysis. We used these phases as guiding principles rather than as rigid steps in order to remain responsive to the material (Braun & Clarke, 2022). In the present study, this process was operationalised through ATLAS.ti 2026, which provided a systematic digital environment for code management, theme construction, and visualization.

Background: Nagaland and the Sumi Naga tribe

Nagaland is a mountainous state in Northeast India, renowned for its rich cultural diversity, being inhabited



Figure 1: Map of Nagaland

Source: Adapted from NGISRSC Geospatial Base Map series (2025)



by 17 major tribes and numerous sub-tribes, each with distinct customs, languages, and traditional attire. Nagaland's landscape is marked by lush hills, dense forests, and vibrant festivals, with agriculture forming the backbone of its economy. Over 70% of the population is engaged in farming, and rice is the principal crop (People & Culture, 2026).

The Sumi Naga (also known as Sümi or Sema) are one of the major Naga tribes, predominantly residing in the central and southern regions of Nagaland, especially in Zünheboto district, with communities also found in Dimapur, Niuland, and parts of Kiphire, Mokokchung, and Wokha districts. The Sumi are recognised as a Scheduled Tribe and are known for their rich oral traditions, vibrant festivals, and distinctive cultural practices. Historically, the Sumi were renowned for their warrior traditions, but with the advent of Christianity in the early 20th century, the community underwent significant cultural transformation. Today, the Sumi Naga are predominantly Christian, and their society is structured around both traditional and modern institutions. Their oral literature, folk tales, and rituals play a crucial role in preserving indigenous knowledge, including agricultural practices and ecological wisdom (Jimomi, 2018; Zhimomi & Dutta, 2024).

MATERIALS AND METHODS

Research Design

This study adopts a qualitative, text-based research design, treating the two folktales as primary sources for analysis. The use of folkloric texts as qualitative data is well established in indigenous knowledge research, where oral narratives are recognised as legitimate and epistemologically significant sources of community knowledge.

In this study, we approach these narratives as sites of knowledge production rather than simply as cultural texts. The research design is interpretive and constructivist in orientation. It is consistent with the framework of Reflexive Thematic Analysis (Braun, & Clarke, 2019), and foregrounds our role in actively constructing analytical insights from the material rather than assuming a singular, objective meaning within the texts.

Data Sources and Analytical Procedure

Both texts were obtained from Jimomi's 2018 published ethnographic volume rather than collected directly from oral narrators. Accordingly, the immediate corpus consists of editorially mediated textual versions of Sumi oral traditions. We did not have access to the original performances, audio recordings, field notes, transcription conventions, or complete translation history, and we therefore cannot evaluate how performance context, language choice, transcription, translation, or editorial intervention may have shaped the published narratives. The analysis concerns these reproduced textual versions and does not claim to represent all variants of either folktale or Sumi oral tradition generally.

Kasho Papu narrates the origin of the Sumi agricultural calendar through the posthumous mediation of an ancestor whose spirit communicates through a seasonal bird. In contrast, Litsapa recounts the mythological bestowal of rice varieties upon two orphaned children by a spirit in human disguise. We analysed both folktales separately and comparatively using ATLAS.ti 2026. The full transcriptions of both folktales are provided in the appendices for reference.

Analytical Procedure

We engaged iteratively with both folktales through repeated reading, reflexive memo-writing, provisional coding, and theme development. ATLAS.ti was used to organise passages, codes, memos, and evolving thematic relationships, but analytical decisions remained interpretive and were made by the researchers. Word clouds, code counts, and sentiment labels were generated only as supplementary descriptive prompts that helped us revisit patterns and exceptions; they were not used to determine theme importance, establish objectivity, or validate themes statistically. Theme quality was assessed through coherence, distinctiveness, relevance to the research questions, and the strength of the interpretive account developed from the texts.

1.Phase 1 - Familiarization: In the first phase, we read and re-read both folktales multiple times. Initial observations, impressions, and analytical reflections were recorded as document memos within ATLAS.ti, forming the reflexive foundation of the analysis. We also generated a word cloud from the combined texts as an exploratory familiarization device (see Figure 2).

2.Phase 2 - Generating Initial Codes: Open coding was applied to both folktales, with codes assigned inductively to meaningful textual segments. Through this process, we generated a total of 34 thematic codes, reflecting both descriptive and interpretive engagement with the texts. In addition, we applied a secondary set of sentiment codes (Positive, Negative, Neutral) to capture the affective dimensions of coded passages, resulting in 43 sentiment code applications. Where applicable, codes were color-coded by theme group within ATLAS.ti to facilitate organization and accessibility during analysis: Theme 1 was assigned light green, Theme 2 light blue, Theme 3 light purple, and Theme 4 light orange.

3.Phase 3 - Constructing Themes: In the third phase, we grouped related codes into broader categories using ATLAS.ti's Code Manager. Network View diagrams were used to explore relationships between codes and emerging thematic patterns. Themes were constructed through iterative engagement with the texts, shaped by our interpretive framework and ongoing analytical reflection.

4.Phase 4 - Reviewing Themes: We reviewed all coded quotations using ATLAS.ti's Quotation Manager to assess whether the themes adequately represented the data. A Code Co-occurrence Table was also generated to examine relationships between codes and to identify instances of

overlapping coding, which were subsequently interpreted and theoretically justified.

5. Phase 5 - Defining and Naming Themes: Each theme was then defined and named in a way that captured its analytical focus. In doing so, we refined theme names to reflect interpretive depth rather than purely descriptive categorisation, consistent with the principles of RTA.

6.Phase 6 - Writing Up: Thematic findings were written up with direct textual evidence drawn from both folktales, supported by six analytical visualisations generated through ATLAS.ti 2026 and Microsoft Excel.

Reflexivity Statement

In keeping with RTA, we recognise that the themes were constructed through our situated engagement with the published narratives rather than discovered as objective properties of the texts. Our disciplinary commitments to indigenous knowledge systems and rural development directed attention toward agriculture, sustainability, community practice, and knowledge transmission. We documented interpretive choices through reflexive memos, revisited codes that appeared to reflect prior theoretical assumptions, and compared alternative theme boundaries before finalising the analysis. The resulting account is therefore one theoretically informed reading, not an exhaustive or culturally authoritative interpretation of the folktales. We do not claim that our analysis represents the only possible interpretation of Kasho Papu and Litsapa, but rather one analytically grounded reading of the knowledge embedded within them. The use of ATLAS.ti provides transparency and structure to the coding process without reducing the analysis to a purely mechanical or frequency-based exercise.

Ethical Considerations

As this study is based on published folkloric texts drawn

from Jimomi's (2018) ethnographic work, it does not involve direct engagement with human participants and therefore did not require formal ethical approval. However, we remain attentive to the cultural specificity of Sumi Naga oral traditions and approach the interpretation of these narratives with respect for their epistemological and cultural significance. Full attribution is given to the **original source throughout the study.**

RESULTS AND DISCUSSION

The analysis of these two published versions suggests a textual pattern in which agricultural knowledge is connected with communal memory, moral order, cosmology, and social position. Because the corpus is limited to two narratives reproduced in one published source, the findings should not be read as a comprehensive account of Sumi agricultural knowledge or as evidence that all Sumi knowledge holders interpret the stories in the same way. Rather, the themes identify interpretive possibilities within this bounded textual corpus that can be examined through future collaborative and ethnographic research.

A preliminary engagement with the textual corpus, visualised in Figure 2, highlights the prominence of **agricultural vocabulary** across both narratives. Terms such as harvest, sowing, seed, paddy, field, cultivation, and granary occupy a central semantic position, indicating that agricultural practices are not incidental but integral to the narrative structure of both folktales.

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Figure 2: Word Cloud of Key Terms Extracted From Kasho Papu and Litsapa

Note. Font size reflects relative term frequency across both folktales. Generated using ATLAS.ti 2026.

both folktales

Alongside these, terms such as demarcation, elders, spirit, father, bird, and village point to the close interrelationship between ecological

knowledge, social organization, and cosmological belief. We interpret this dual clustering as indicative of an integrated knowledge system in which agricultural practice is inseparable from social and spiritual life. Alongside these,

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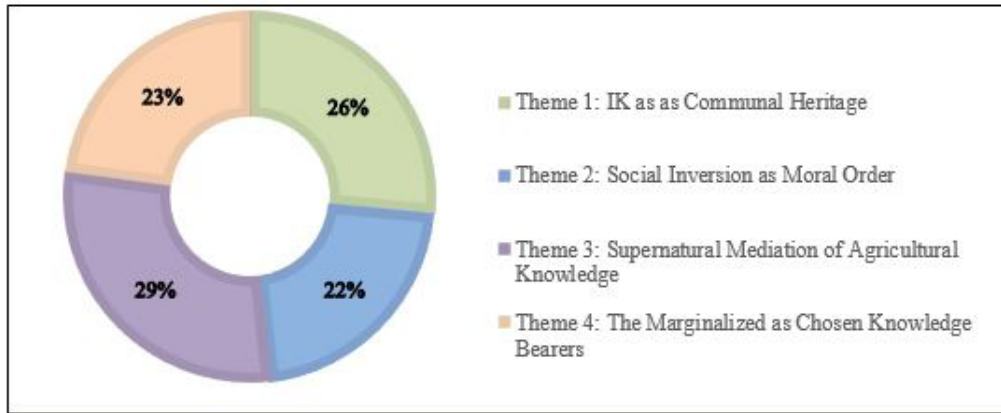


Figure 3: Distribution of Codes Across Four Thematic Groups

Note. Percentages reflect the proportion of codes assigned to each theme out of the total 34 codes. *Source:* ATLAS.ti 2026.

The distribution of codes across the four themes (Figure 3) shows a relatively balanced analytical spread: Theme 3 (Supernatural Mediation) accounts for 29%, followed by Theme 1 (Indigenous Knowledge as Communal Heritage) at 26%, Theme 4 (Marginalised as Chosen Bearers) at 23%, and Theme 2 (Social Inversion as Moral

Order) at 22%.

This relatively even distribution suggests that no single theme dominates the dataset. Instead, we interpret this balance as reflecting the multi-dimensional character of the knowledge system encoded within the folktales, where ecological, social, moral, and cosmological elements are

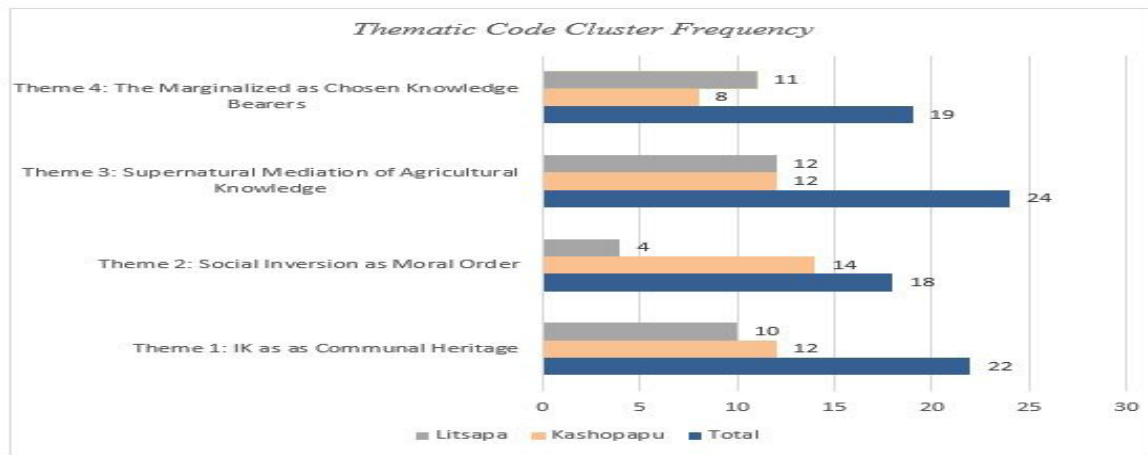


Figure 4: Thematic Code Cluster Frequency across the Folktales

Note. Values represent total code applications per theme per folktale. Orange bars = Kasho Papu; Grey bars = Litsapa; Blue bars = combined frequency. *Source:* ATLAS.ti 2026.

interdependent rather than hierarchically organised.

At the level of individual narratives, Figure 4 highlights a pattern of complementarity between the two folktales. Kasho Papu shows a stronger concentration in Theme 2 (Social Inversion), particularly in relation to land rights and communal justice, while Litsapa is more closely associated with Theme 4 (Marginalised as Chosen Knowledge Bearers).

Theme 3 (Supernatural Mediation) appears with equal frequency in both narratives, indicating that supernatural agency plays a central role across the two

texts. We interpret this symmetry as suggesting a shared cosmological framework within which agricultural knowledge is validated and transmitted.

Indigenous Knowledge as Communal Heritage

The theme Indigenous Knowledge as Communal Heritage emerges as a foundational dimension across both folktales. Rather than appearing only in dramatic narrative moments, it is embedded in everyday practices of cultivation, seasonal observation, and collective decision-making.



Based on nine codes across 22 applications (Kasho Papu = 12; Litsapa = 10), this theme captures multiple dimensions of knowledge transmission, including ancestral instruction, intergenerational continuity, communal adoption, and the consequences of knowledge loss.

The most frequent codes within this theme, Ancestral agricultural instruction, Collective memory and practice, and Ritual practice preserved across generations, appear with near-equal distribution across both folktales. We interpret this pattern as suggesting that agricultural knowledge is conceptualised not as individual expertise, but as a shared inheritance maintained through collective practice.

In Kasho Papu, this theme is introduced through Kivigho's dying instruction to his son:

'I shall send you a message through a seasonal bird... when you hear the bird calling out "Kasho Papu," start sowing seed in your field.'

This instruction, while framed in spiritual terms, can also be understood as a precise form of agricultural knowledge transmission, encoding a phenological indicator within a narrative context. As Kasho's practice was gradually taken up by the wider community, it shifted from being personal knowledge to a shared cultural practice. At the same time, the folktale also hints at how easily such knowledge can be lost. The code Communal knowledge loss, found only in Kasho Papu, relates to the episode where villagers forget where the knowledge came from and begin encroaching on Kasho's land. This moment can be read as a subtle warning about the consequences, both social and ecological, of disconnecting knowledge from its original source. In Litsapa, communal knowledge is expressed in a different way. The naming of rice varieties functions as an ethnobotanical system of remembering, helping people identify and maintain crop diversity over time. The code Seed sharing as communal act further suggests that knowledge is not simply passed down but actively exchanged, reinforcing its shared character. Taken together, the two folktales indicate that agricultural knowledge holds value not as something owned by individuals, but as something sustained through its circulation within the community.

Social Inversion as Moral Order

Among the four themes, Social Inversion as Moral Order stands out for its clear structure. The nine codes associated with this theme are distributed unevenly, with 14 instances found in Kasho Papu and only four in Litsapa. Across both stories, a consistent pattern emerges: those in positions of social power are often portrayed as failing, while individuals on the margins are ultimately recognised as the true holders of knowledge. This suggests a moral framework in which authority is earned through lived experience rather than social status. The sentiment analysis offers an additional layer of insight into this theme. The nearly equal presence of negative, neutral, and positive associations suggests that

the narratives give similar weight to moments of tension, endurance, and resolution. Rather than presenting a straightforward moral opposition, this balance points to a cyclical pattern within the folktales, where conflict and restoration are interwoven and recur throughout the stories.

The code Powerful majority as moral failure (Kasho Papu = 4; Litsapa = 1) appears repeatedly in Kasho Papu, particularly in episodes where villagers sow prematurely, shift boundary markers, or disregard the knowledge that previously sustained them. The land encroachment episode is especially significant in this regard:

'They started encroaching the land of Kasho, they shifted the demarcation stone and planted it far inside the field of Kasho.'

We interpret this moment not only as a narrative conflict, but also as a representation of contested land rights and communal memory. Kasho's response is marked by silence and restraint, as captured in the code Fear and silence of the marginalised:

'Kasho feared to speak his right for he was the only son of his father Kivigho but others were many.'

This silence, however, is not portrayed as passive acceptance; rather, it sets the stage for eventual resolution. The restoration of justice through the ancestral bird, as described in the code Justice restored through supernatural agency, suggests that moral order is re-established by forces beyond immediate social authority. The narrative thus emphasises not only the restoration of justice, but its collective and transformative nature.

Supernatural Mediation of Agricultural Knowledge

The theme Supernatural Mediation of Agricultural Knowledge highlights the central role of non-human agents in the transmission of agricultural knowledge within both folktales. Supernatural elements in these folktales are not simply narrative flourishes; they are central to how knowledge is validated and transmitted.

Across the two narratives, supernatural agency does more than transmit practical information: it authorises particular knowledge holders and establishes the conditions under which their knowledge becomes socially credible. In Kasho Papu, the bird's call links seasonal observation to ancestral authority, so the timing of sowing is legitimised simultaneously through ecological attentiveness and kinship memory. In Litsapa, the spirit's transformation of pumpkins into named rice varieties joins abundance, classification, and ritual obligation in a single episode. Read together, these passages suggest that the narratives do not separate empirical agricultural knowledge from cosmological relations; instead, they portray knowledge as trustworthy because it emerges through reciprocal relations among humans, ancestors, crops, animals, and spirits.

The shared code Cosmological legitimacy of agricultural knowledge indicates that, in both folktales, the authority of agricultural knowledge is rooted not only in human experience but also within a broader cosmological



context. Together, these patterns suggest that knowledge is both acquired and validated through relationships with the non-human world.

The Marginalised as Chosen Knowledge Bearers

The theme The Marginalised as Chosen Knowledge Bearers foregrounds the social position of those who receive and transmit knowledge within the two folktales. In both folktales, knowledge is consistently linked to characters who occupy positions of vulnerability rather than authority. This theme, represented by eight codes across nineteen instances (eight in Kasho Papu and eleven in Litsapa), carries the highest negative sentiment, reflecting the hardships that often precede the acquisition of knowledge. This pattern suggests that suffering is not incidental, but is fundamentally connected to the process of knowledge transmission within these narratives.

The code Orphan/bereaved status of protagonist is the most frequent marker of this marginality. In Kasho Papu, Kasho's bereavement creates the conditions for ancestral communication. His journey through the landscape, climbing hills, following streams, and listening for the bird's call, can be seen as a form of sustained attentiveness to the environment. This aligns with the code Patience as epistemic virtue, reflecting a way of knowing grounded in careful observation and persistence rather than immediate action.

In Litsapa, marginality is expressed through material scarcity, as reflected in the code Material poverty of

knowledge bearer:

'Our house is small and we do not have food or drink to offer you.'

Despite material scarcity, this condition becomes the foundation for generosity. The code Virtue of hospitality under scarcity highlights the significance of this moment, where the act of giving, rather than possession, defines moral worth. Similarly, Knowledge as compensation for social vulnerability suggests that the abundance which follows is not simply a reward, but part of a broader narrative pattern in which social deprivation is transformed into epistemic authority. Across both folktales, this inversion indicates that knowledge is linked to relational and moral positioning, rather than to status or power.

Sentiment Analysis: The Affective Architecture of Knowledge Transmission

The thematic analysis generated 34 distinct codes applied in 83 thematic coding instances. A separate descriptive sentiment layer was applied to 43 selected textual segments. Because a single segment could contain more than one thematic code, co-occurrence totals count relationships between sentiment and thematic code applications rather than unique segments; they therefore may exceed 43. These descriptive totals are reported to make the analytic record transparent, not to measure prevalence or determine the importance of themes.

Theme 1: Indigenous Knowledge		
Code	Kasho Papu	Litsapa
• Ancestral agricultural instruction	2	3
• Collective memory and practice	2	2
• Communal knowledge loss	2	0
• Community adoption of indigenous practice	1	0
• Ecological knowledge as competitive advantage	1	0
• Indigenous crop variety nomenclature	0	1
• Intergenerational knowledge transfer	2	1
• Ritual practice preserved across generations	2	2
• Seed sharing as communal act	0	1
Theme 2: Social Inversion as Moral Order		
Code	Kasho Papu	Litsapa
• Collective rejection of the stranger	0	1
• Communal elders as witnesses	2	0
• Community guilt and correction	1	0
• Isolation as virtue, not weakness	2	0
• Justice restored through supernatural agency	3	0
• Lone individual as knowledge keeper	1	0
• Powerful majority as moral failure	4	1
• The outcast rewarded	0	1
• Wealth redistribution from margin to center	1	1
Theme 3: Supernatural Mediation of Agricultural Knowledge		
Code	Kasho Papu	Litsapa
• Ancestral spirit as messenger	5	0
• Bird as bioindicator / phenological signal	5	0
• Cosmological legitimacy of agricultural knowledge	1	2
• Dream as channel of supernatural communication	1	0
• Miraculous provision of crop varieties	0	4
• Pumpkin-to-rice transformation	0	1
• Ritual instruction by supernatural agent	0	3
• Spirit in human disguise	0	2
Theme 4: The Marginalised as Chosen Knowledge Bearers		
Code	Kasho Papu	Litsapa
• Fear and silence of the marginalised	1	1
• From margin to authority	1	1
• Knowledge as compensation for social vulnerability	0	2
• Material poverty of knowledge bearer	0	3
• Orphan / bereaved status of protagonist	3	1
• Patience as epistemic virtue	2	0
• Supernatural selection of the humble	1	2
• Virtue of hospitality under scarcity	0	1

Figure 5 :Thematic Code Frequency Heat Map Across the Folktales

Note. Rows represent individual codes ($n = 34$); columns represent the two folktales. Colour intensity indicates frequency of code application; darker cells indicate higher frequency. Source: ATLAS.ti 2026.

Theme	Negative	Neutral	Positive
Theme 1: Indigenous Knowledge	6	8	16
Theme 2: Social Inversion as Moral Order	10	10	10
Theme 3: Supernatural Mediation of Agricultural Knowledge	3	14	17
Theme 4: The Marginalised as Chosen Knowledge Bearers	12	11	10

Figure 6 : Sentiment-Theme Co-occurrence Matrix

Note. Values represent total co-occurrence counts between sentiment codes (positive, neutral, negative) and thematic code groups across both folktales. Source: ATLAS.ti 2026.

The secondary sentiment analysis was applied to 43 selected textual segments as a supplementary descriptive exercise. Positive, neutral, and negative labels were used to prompt closer examination of how hardship, continuity, and restoration were represented across the narratives. Because one segment could overlap with several thematic codes, the co-occurrence totals represent code relationships rather than unique passages. These outputs did not determine theme construction or provide statistical validation; interpretation remained grounded in close reading of the texts. The sentiment-theme co-occurrence matrix in Figure 6 describes how sentiment labels overlapped with thematic code applications. Theme 3 has 17 positive, 14 neutral, and 3 negative co-occurrences; Theme 4 has 10 positive, 11 neutral, and 12 negative co-occurrences; Theme 1 has 16 positive, 8 neutral, and 6 negative co-occurrences; and Theme 2 has an even 10/10/10 distribution. These values are supplementary descriptive outputs rather than measures of thematic strength, emotional structure, or statistical association. Their value lies in directing attention back to passages requiring interpretive comparison.

Most notably, Theme 2 (Social Inversion as Moral Order) shows a balanced distribution across negative, neutral, and positive sentiment (10/10/10). We interpret this symmetry as reflecting a narrative logic in which disruption, endurance, and resolution are interdependent stages within a broader moral process, rather than isolated or opposing conditions.

DISCUSSION

Our analysis reveals the subtle ways in which Sumi Naga folktales preserve and transmit agricultural wisdom. The interplay of communal memory, moral inversion, supernatural guidance, and the empowerment of marginalised voices enriches our appreciation of these oral traditions.

Read together, Kasho Papu and Litsapa suggest that these published folktales organise ecological, social, and cosmological knowledge in structured and meaningful ways. This interpretation is consistent with Zhimomi and Dutta (2019), who argue that folklore contributes to the sustainability and transmission of indigenous agricultural practices among the Sumi. Their research reinforces the

analytical value of folktales as sources of agricultural knowledge while allowing the present study's claims to remain bounded to the two published texts examined.

Indigenous Knowledge as Communal Heritage

One of the key insights of this study is that Sumi Naga folktales function not only as repositories of cultural memory, but as active modes of knowledge transmission. These narratives encode agricultural practices; including seasonal indicators, crop classification, and land demarcation, in forms that remain accessible and meaningful within the community. In this sense, the findings extend Nakashima and Roué's (2002) argument that indigenous knowledge constitutes a distinct epistemological system, by demonstrating how such knowledge is embedded within oral narrative in the specific context of Northeast India.

The presence of Communal knowledge loss in Kasho Papu further highlights the risks associated with the erosion of such traditions. Rather than presenting knowledge as static, the folktale suggests that it must be continually remembered, practiced, and socially maintained.

Social Inversion as Moral Order

The theme of Social Inversion highlights a recurring narrative pattern in which socially marginalised figures emerge as legitimate knowledge holders. This can be understood as a moral framework in which authority is not determined by social position, but by experience, endurance, and relational ethics.

The balanced distribution of sentiment within this theme (10/10/10) suggests a narrative structure in which disruption, suffering, and resolution are closely interlinked. Rather than reflecting a simple opposition between right and wrong, this pattern points to a cyclical understanding of moral order. This finding resonates with structural approaches to myth, particularly the idea that narratives move between states of imbalance and restoration (Lévi-Strauss, 1963; Propp, V. 1968). However, in the Sumi context, this process also appears to be closely tied to questions of land, memory, and social responsibility.



Supernatural Mediation of Agricultural Knowledge

The analysis of Supernatural Mediation suggests that agricultural knowledge in these folktales is not understood as purely empirical. Rather, it is validated through relationships with non-human agents, including ancestral spirits and cosmological forces. In Kasho Papu, the bird operates both as a seasonal indicator and as a vehicle of ancestral authority, linking ecological observation with cosmological meaning. In Litsapa, supernatural intervention takes a more direct form, with knowledge being actively bestowed through interaction with a spirit figure.

This convergence of ecological and spiritual knowledge reflects what Berkes (1999) describes as the interdependence of cosmological belief and environmental practice within traditional ecological knowledge systems.

The Marginalised as Chosen Knowledge Bearers

The consistent association of knowledge with marginalised figures points to a distinctive epistemological pattern within the narratives. Rather than portraying vulnerability as a weakness, both folktales suggest that marginality creates the conditions for attentiveness, patience, and moral action. In Kasho Papu, this is evident in Kasho's ongoing engagement with his environment, while in Litsapa, it is reflected in the orphans' capacity for hospitality despite material scarcity.

This pattern is consistent with broader perspectives in indigenous knowledge scholarship, which argue that knowledge is often tied to relational and experiential contexts rather than formal authority (Nakashima, D., & Rou'e, M. 2002). In the Sumi context, however, this relationship is especially explicit and central to the narrative structure.

Complementarity of the Two Folktales

The two folktales can be read as complementary within this bounded corpus. Kasho Papu emphasises temporal cycles and land-based practices, whereas Litsapa foregrounds botanical knowledge and ritual regulation. The similar prominence of supernatural mediation in both narratives suggests that they connect agricultural knowledge with cosmological authority in comparable ways. This interpretation concerns the two published versions analysed here and should not be taken to establish a single, interconnected knowledge system across Sumi oral traditions generally.

CONCLUSION

This study examined how indigenous agricultural knowledge is represented in the published versions of Kasho Papu and Litsapa through Reflexive Thematic Analysis. Within this bounded corpus, the narratives connect ecological observation, social norms, cosmological belief, and the moral authority of socially vulnerable knowledge bearers. Kasho Papu foregrounds seasonal timing and contested land boundaries,

whereas Litsapa foregrounds rice-variety classification, ritual regulation, and seed sharing. These findings are interpretive claims about two editorially mediated texts, not generalisations about the Sumi community as a whole. Future research should be conducted collaboratively with Sumi knowledge holders to examine alternative versions and interpretations, compare a larger range of narratives, document performance and translation contexts, and assess through ethnographic inquiry how the agricultural knowledge identified in the texts relates to contemporary practice.

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Declaration of interest statement

The authors report there are no competing interests to declare

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Data Availability Statement

The data supporting the findings of this study are available from the corresponding author upon reasonable request.

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Appendix A: Folktale 1

Kasho Papu - Full Folktale Transcription

Note. Reproduced from Jimomi, I. (2018). Sumi Naga: The origin and migration of the Nagas. Heritage Publishing House.

In the early days when Sumis had not properly determined the right time of the season to sow different kinds of crops, there lived an old man called Kivigho. He is said to have lived at a place called Wokhakusa, an old Village near Kitami (a Sumi village). In his death bed, he called his only son Kasho beside him and said,

'I shall pass away soon, but do not worry, for I shall send you a message through a seasonal bird that will come proclaiming my name as Kasho Papu (Kasho's father), so when you hear the bird calling out "Kasho Papu" start sowing seed in your field.'

After the death of his father Kasho cleared the jungle for cultivation and waited eagerly for his father to give him the signal. Others have already started the process of cultivation but he waited. He climbed the hills, followed the streams, moved about the forest to hear and see the bird that would give him the message. Finally, one fine day, as he moved about in his field he heard a bird that chirped, 'Kasho Papu, Kasho Papu'. On hearing the bird, he understood that his father had sent the Kasho Papu bird to convey him the message, that it was time to start sowing. So, he sowed the paddy seed on his field. It was time for harvest and his villagers had a very poor harvest that year for they sowed the seed too early, but Kasho had a very rich harvest and his barns were filled with grains. Kasho went on to have a rich harvest year after year, but

the villagers fared poorly in cultivation, so the villagers decided to wait upon Kasho's time of sowing seed, and when they did sow as Kasho did, they too had rich harvest. The villagers then asked Kasho how he knew the right time of sowing and Kasho related the secret of how his dead father used to send the message of sowing the seed through the bird called Kasho Papu. The Sumis till today wait for Kasho Papu to arrive in their country to announce the time of sowing paddy.

As years rolled by, the villagers forgot the valuable knowledge that Kasho had brought to them. They started encroaching the land of Kasho, they shifted the demarcation stone and planted it far inside the field of Kasho and so his field grew smaller and smaller but Kasho feared to speak his right for he was the only son of his father Kivigho but others were many. He spent many a torturous day and sleepless night. One fateful night, in his dream, his father told him,

'After all the jungle is cleared for cultivation, call the elders of the village and come to the field that has been grabbed from you and put a demarcation stone on every spot that I perch on for that is the real and true Aghbuthu'

So one day Kasho prepared food for the village elders and took them to the disputed field. As they gathered around, the Kasho bird appeared, it dropped upon every displaced demarcation spot when the village elders searched the spot on which the bird perched, to their surprise they saw the old demarcation stone or the removal spot. They were dumbfounded but soon became aware and replaced the original demarcation stone on every boundary. The bird Kasho Papu then flew away and till today it returns every spring to announce the time of sowing.

Appendix B: Folktale 2

Litsapa, Full Folktale Transcription

Note. Reproduced from Jimomi, I. (2018). Sumi Naga: The origin and migration of the Nagas. Heritage Publishing House.

Long ago a spirit took the form of an abominable ugly man who came begging for alms, some say at Kutsapo village. He went about knocking at every house in the village for food and shelter for the night but nobody took him in for he was horrible to look at. After being harshly driven off by many, he finally came to a small thatch house where two orphaned children lived a boy and his sister. He knocked at their door and said 'I am Litsapa, a homeless traveller, have mercy on me and please give me shelter', the orphaned children said, 'our house is small and we do not have food or drink to offer you'. To which Litsapa said, 'All food and meet are with me, do not worry, just give me shelter'. So they allowed him into their humble home. Soon Litsapa knocked against the knob of his knee with his fist and there appeared both rice and meat. They cooked the rice and ate heartily.

Early the next morning Litsapa asked them if they were cultivating any field to which they replied, 'we have but just a small field of pumpkins'. So Litsapa instructed them to construct a granary and to put all the pumpkins plucked from their field into the granary. As they unloaded the



basket of pumpkins into the granary, each pumpkin burst out open saying, 'this is mathape', 'this is khuloghi', 'this is katighi' (these are the varieties of rice popular among the Sumis) and so on till the granary after granary were filled with paddy of all kinds and grains. Litsapa then advised them,

'After you have gathered enough of the grains dust the roof of your hearth and the overflowing harvest shall come to an end'.

And so after they had gathered enough grain they dusted the roof of the hearth and truly the overflowing harvest

stopped. The orphans grew to become the richest in the village, and thus the villagers started begging them to give them seeds to sow in their field. And so they did give out to them.

It is said; Sumis received the species of rice from Litsapa through the orphaned children. The Sumis thus started the practice of giving an offering to Litsapa. They also never clean the roof of the hearth before harvest for they believe that the spirit of good harvest will flee in fear.