

# The Isnag *Lapat* System: Cultural Narratives And Indigenous Practices For Environmental Preservation

<sup>1</sup>Reyma Grace E. Batara., <sup>2</sup>Dian Antonette N. Reantillo

<sup>1</sup>Teacher VI, Mataguisi Comprehensive National High School, Pudtol, Apayao

<sup>2</sup>Assistant Professor III, Mariano Marcos State University

DOI: <https://doi.org/10.47772/IJRISS.2026.100300452>

Received: 24 March 2026; Accepted: 30 March 2026; Published: 12 April 2026

## ABSTRACT

Indigenous knowledge systems and practices (IKSP) remain an influential factor to how communities take care of their environment and maintain their culture. The *Lapat* System is one of the traditional practices of the Isnag people of Pudtol, Apayao, which governs the use of natural resources together with reinforcing the values of the community. Nevertheless, with modernization and social developments, passing such indigenous practices to the younger generations has become an issue of concern. This research investigates the Isnag *Lapat* System in Pudtol, Apayao, and discovers that it is a culturally appropriate, TEK-based system for managing natural resources that use culturally ingrained beliefs and restrictions to suggest the process of nature's regeneration and social cohesion. The findings underscore the importance for conservation of indigenous knowledge systems as a basis for sustainable environmental management and continuity of Indigenous cultures and traditions. The qualitative narrative method was taken and data were collected by semi structured interviews with the chosen community leaders and elders as well as culture bearers having knowledge about *Lapat* tradition. The stories gathered were analyzed through thematic analysis in order to find out the common notions and meanings that were common among the participants. It was found that the *Lapat* System is highly related to the ethical system termed *Supdina* which is informed by the concept of *Annaw*, *Aliyaw* and *Ngilin*. These values define the relationships between people, the society, and nature. It was also revealed that *Lapat* assists in the preservation of natural resources since it provides a temporary limitation of forests, rivers, and other spaces to enable the regeneration of the ecology. Besides that, the practice enhances social cohesion through the strengthening of values like respect, responsibility, cooperation, and harmony in the community. The paper provides a spotlight on the importance of recording and safeguarding indigenous knowledge systems as valuable pillars towards sustainable environmental management as well as in cultural heritage protection.

**Keywords:** Apayao; environmental preservation; indigenous knowledge; Isnag culture; *Lapat* System

## INTRODUCTION

The indigenous knowledge systems and practices (IKSP) have traditionally been important in maintaining the ecological balance and in advising communities on the proper utilization of the natural resources. In most regions of the world, the indigenous people still have traditional environmental management systems based on cultural beliefs, spiritual principles and traditional laws governing the way the humans relate to nature. These forms of knowledge, commonly called traditional ecological knowledge (TEK), are several generations of observations and experience that allows communities to comprehend the patterns in the ecosystem and utilize the resources in a sustainable manner. The recent research stresses the importance of indigenous ecological knowledge in preserving biodiversity and managing resources in a more sustainable way, especially within the communities directly reliant on the natural environment as a means of livelihood and culture (Macusi, 2023; Paing et al., 2025). With the increasing levels of environmental problems like the loss of biodiversity and ecological degradation, scholars have come to appreciate the importance of the indigenous knowledge systems as viable source of environmental sustainable practices.

An indigenous peoples are generally recognized as an important custodian of biodiversity in the Philippines. Most of the remaining forests, watersheds, and ecologically valuable sceneries in the country are found in ancestrally governed areas by the indigenous populations (UNDP, 2024). These communities have a rich history of traditions which govern how they use natural resources and bring about the ecological balance by customary governing system. Indigenous cultural practices that are exemplified by such practices are able to help in protecting the environment besides preserving the community identity and social cohesion. Cordillera Administrative Region in Northern Philippines, the local people in the area still maintain cultural practices that define the relationship they have with the natural environment. The province of Apayao is one of these regions and has a large forest cover and a significant watershed that provides ecological and human populations (UNESCO, 2024). The conservation of these landscapes would be directly connected to the cultural life and environmental values of indigenous inhabitants of the territory.

The Isnag people is also one of the indigenous communities living in Apayao whose cultural heritage is characterized by a high level of environmental awareness and communal management. Some of their excellent traditions include the *Lapat* System, which is a traditional system that manages the utilization of natural resources by imposing restrictions and banning in the use of the natural resources by the community (Sadao, 2010). *Lapat* is usually a statement which provisional blocks access to some forest land, river, or agricultural land to enable the regeneration of ecosystems and environmental balance (ARJASS, 2025). By doing this, community members jointly preserve natural resources by restricting human activity within a given area over a certain time. These types of restrictions enable the recovery of ecosystems and the support of the communal values associated with the responsibility, respect, and cooperation. There have been reports that the indigenous conservation systems like *Lapat* System help in preserving forest ecosystems in Apayao which are still among the most forested provinces in the Philippines (Philippine News Agency, 2024).

In addition to its use in environmental regulation, the *Lapat* System is also a cultural institution that is ingrained in the beliefs, tales, and values of the Isnag people. The practice represents a worldview where it is possible to see that nature, spirituality, and social order are closely linked. The ancestral and spiritual roots of the practice are described through cultural stories and oral traditions and community teachings and support the collective identity and accountability to the environment. Such cultural processes determine the way in which community members perceive their relationship to the land and the resources on which they survive. According to previous research, indigenous conservation systems are usually run on cultural norms and belief systems that promote responsible environmental conduct as opposed to formal rule frameworks (Camacho et al., 2015; Torres, 2020). Through it, environmental stewardship is not just a policy issue or even a regulation issue but a manifestation of strong cultural values and community governance practices.

Although there is a growing appreciation of indigenous knowledge system in the conservation of the environment, the available traditional practices in the area of academic studies are limited. The literature usually highlights the ecological consequences of native conservation methods but has not ventured much in detail on the cultural stories, beliefs, and values that support the conservation traditions in communities. Specifically, more studies are required that consider the conceptualization of environmental stewardship by the indigenous people based on their cultural practices and oral traditions. The need to comprehend these cultural dimensions would be critical in understanding how the indigenous knowledge systems are still used to inform sustainable resource management and environmental protection.

Traditional Ecological Knowledge (TEK) Theory is based on the idea that indigenous communities have accumulated knowledge, practice and belief of living beings in relation to their environment gained over generations through the interaction with the ecosystem (Berkes, 2012). In the case of the *Lapat* System, the TEK practised in this research functions as a good example of how the participation of cultural practices in regulating the use of natural resources leads to practices that ensure ecological balance and sustainability.

To fill this gap, the paper examines the Isnag *Lapat* System in Pudtol, Apayao, as a way of examining the culture beliefs, stories, and practices of the community that support this indigenous system of environmental conservation. The study aims at giving a better insight into the role of traditional beliefs and cultural values on the environmental custodianship of the Isnag people by recording the views of community leaders, elders and

bearers of culture. The results of the present study are added to the existing literature on the topic of indigenous knowledge systems and emphasize the necessity to preserve cultural traditions as they help to provide sustainable environmental management and maintain cultural heritage.

## METHODOLOGY

### Research Design

The research design used in this study is qualitative research design based on the narrative approach to address the cultural beliefs, narratives and practices enshrined in the Isnag *Lapat* System. Qualitative research can be used to pursue the issues of cultural meanings, lived experiences, and social practices through lenses of participants directly related to the phenomenon under investigation (Creswell and Poth, 2018). By so doing, it is through this that the study aimed at capturing and absorbing the information and experiences of those who have strength of knowledge regarding the traditional *Lapat* System and its contribution towards environmental conservation. The narrative method also enabled the participants to give their stories and their cultural interpretations on what the practice is about and in this way, it gave more insights on how *Lapat* System is perceived and maintained within the community.

### Participants and Sampling Technique

To increase the level of the methodological transparency, the method of the study identified the composition of the subjects explicitly. Six respondents have been chosen through purposive selection, and it includes community elders, cultural authorities, and knowledge holders in Pudtol, Apayao. These players were selected due to their first-hand experience and wide understanding of the *Lapat* System. Elders and cultural leaders in most indigenous communities are custodians of traditional knowledge and they are significant in preservation and continuation of cultural practices between generations.

Purposive sampling method was used to determine the people who have a pertinent body of knowledge regarding the *Lapat* System. In purposive sampling, the researcher can choose the respondents at will (intentionally) and is likely to obtain valuable and informative content concerning the research topic (Palinkas et al., 2015). By doing so, the study was able to establish that the participants used were well informed and experienced in cultural aspects to give elaborate accounts of the beliefs, traditions, and practices that were related to the *Lapat* System in the community.

The demographic information involved the age range, gender distribution, and the community roles, guaranteeing the varied manifestation of the perspectives concerning the cultural context. Nevertheless, it is accepted that the research work mostly involved older knowledge carriers; therefore, next generations must be encompassed in the study to obtain intergenerational approaches to the transmission of indigenous knowledge.

### Research Instrument

The main research tool employed in the study was a semi-structured interview guide which was developed to be able to collect details information concerning the knowledge and experiences of the participants regarding *Lapat* System. Semi-structured interviews enable the subject to describe his or her experiences and cultural stories in details and the researcher to facilitate the discussion through closed-ended questions (Kallio et al., 2016).

The interview guide had open ended questions which were based on the primary areas of the study such as the cultural beliefs which underpin the *Lapat* System, the traditional instructions which go along with the system, the values which are to be promoted through the system and how the beliefs are passed to the younger generations. The open-ended questions enabled the participants to give their views at will and elaborate on the cultural meanings and practices that came along with the *Lapat* tradition.

### Data Gathering Procedure

Semi-structured interviews with the chosen participants in the community were also used in gathering data. The research was conducted in line with the local cultural practices by seeking the consent of relevant authorities in

the community to ensure that the interviews were carried out. The participants were made aware of the objective of the study and were requested to communicate their knowledge and experiences in respect of the *Lapat* System.

The interview guide contained important questions, which explored the following issues in the study: (1) the central beliefs that underline the Isnag *Lapat* System; (2) the impact of the same beliefs on the implementation and practice of the *Lapat* System in the community; (3) the traditional stories or teachings that underlie the beliefs underlying the practice; (4) the relationship between the *Lapat* System and ancestors, spirituality, and natural environment; (5) the values propagated by the *Lapat* System and the practice of the same in the community; and (6) how the beliefs and traditions that underlie the The open format of the interviews enabled the participants to give stories and experiences that can explain the cultural and environmental importance of the *Lapat* practice.

Besides the semi-structured interviews, the research study proposes that in future research, focus group discussion (FGD) of younger community members is also worthwhile addition. This would help fill the established gap in the youth representation and offer a more holistic view of the aspect of modernization and social media on the existence of the *Lapat* System.

### Data Analysis Procedure

The study was performed using the method of thematic analysis in the framework of Braun and Clarke, (2006). To enhance qualitative rigor, the study involved: Systematic systems of coding (open, axial and thematic coding); Peer debriefing as well as validation of themes; and Extraction of representative participant excerpts.

In this manner, the stories that the participants shared were thoroughly analyzed in order to find common themes concerning the cultural beliefs, values and practices that pertained to the *Lapat* System. These themes were subsequently interpreted to give information on how the community perceives the cultural meaning of the *Lapat* System and how the practice helps in the environmental conservation and governance of the community.

Nevertheless, these efforts cannot be taken as the only factors considered when dealing with a study on the topic of validity due to the vulnerability of using qualitative perceptions as the sole measure. A mixed-methods approach can be used in future research, i.e. ecological or environmental data (e.g. biodiversity index, forest cover measures, etc.) can be used to refine the results.

### Ethical Considerations

Ethical issues were given serious attention during the research. The relevant community authorities were consulted before they accepted the study to proceed. The interviews were carried out after the participants were informed about the purpose of the study and their voluntary participation. They also agreed that the information that they gave would be utilized with academic purposes only.

During the research, confidentiality and appreciation of cultural knowledge were observed. The respondents were not asked to reveal any personal information, which would invade their privacy, and cultural traditions, which were discussed in the interviews, were handled with a lot of dignity and respect. These were the steps that made sure that the integrity and rights of the research participants were respected whilst the cultural heritage of the Isnag community was respected.

## RESULTS AND DISCUSSION

### Foundational Beliefs of the Isnag *Lapat* System

As can be seen, the Isnag *Lapat* System is imbued in *Supdina* which is the conventional moral code that informs the social behavior and ecological conscience of the Isnag people. According to the participants, the system of *Supdina* is based on three central pillars, i.e., *Annaw*, *Aliyaw*, and *Ngilin*, which in turn control human, nature, and spiritual world relationships. *Annaw* is the connection between individuals and the laws of nature, *Aliyaw* is a connection between individuals of the community, and *Ngilin* is the sacred vows or promises that are supposed to be followed by the individuals. Customary sanctions called *Awat* are administered when these principles are broken to bring sanity in society.

According to participant A, the *Lapat* System is based on *Supdina*, which are the ethical values of the Isnag. It is under the leadership of three pillars, *Annaw*, *Aliyaw*, and *Ngilin*. The relationships to natural laws are called *Annaw*, to other people *Aliyaw*, and vows of sacredness are called *Ngilin*. Any violation of these attracts sanctions known as *Awat*.

The participants also noted that these beliefs are strongly related to spirituality and traditions of ancestors. The *Lapat* System can be seen as an indication of a worldview that is shaped by the spiritual beliefs of the indigenous people whose view of nature is sacred and given to the community by the ancestral spirits. On this view, forests, rivers, and wildlife are not perceived as resources but as something alive which should be respected and taken care of.

Nature is sacred as explained by Participant B: Nature is sacred and given by the Creator and the ancestors. Forests, rivers, wildlife are not resources, but living gifts, which need to be respected.

Lamentation practices in society are also linked with the *Lapat* declaration. It is usually proclaimed after the death of a family member especially one who has a major position in the society. In this practice, the family and community show respect to the dead and also enhance community discipline and cultural accountability.

These conclusions are to suggest that the *Lapat* System is not merely a regulatory mechanism but rather a cultural institution based on indigenous ethics, spirituality and social responsibility. The rules of *Supdina* take care of the fact that human activities do not deviate away in reverence to communal values and ecological harmony.

### **Cultural Narratives and Traditional Teachings Explaining the Lapat System**

The participants have provided some cultural accounts and traditional teachings that give explanations on the beliefs that lead to *Lapat* System. These stories are passed on to them via mourning rituals and practices of the ancestors which is a part of the cultural heritage of the Isnag people. The participants have detailed a series of rituals, which come before the proclamation of *Lapat*, which include *Magbalu*, *Maglangdu*, *Manggabi*, and *Magtaptappa*.

*Magbalu* is one of the first rituals, and it obliges the widow to remain beside the deceased while both are covered with a white cloth called *kalu'bung*. This ceremony represents the everlasting relationship of partners and offers spiritual shelter to the deceased partner.

Participant A says: In case of the death of one of the spouses, they use the same white cloth used during the marriage rituals as a *kalu'bung*. This demonstrates grieving and shields the living against the soul of the dead.

The other mourning rituals include *Maglangdu*, in which the widow refrains from bathing during the funeral, and *Manggabi*, where rice is not eaten and substituted with *Gagabbiyan* (boiled root crops or banana) provided by the mother-in-law. These activities are associated with sorrow and honoring the dead and strengthening social consciousness of the loss and cultural responsibilities.

After the burial, families carry out *Magtaptappa*, a ritual lamentation that is done in the sites where the deceased earlier worked or resided. It is said that this rite helps in directing the spirit of the dead and not becoming *Masidaw* (evil spirit). When these rituals are over, the family officially proclaims the *Lapat* and claims certain zones as closed zones, e.g. forests, rivers, fields, or a part of their house especially the room of the deceased.

Traditional markers called *Tahematun* are used to indicate the areas that are under *Lapat*. Such signs incorporate symbolic items like jars (*gusi*), shields (*alatag*), spears (*say-ang*) and flowers (*subray*). These symbols are known to the members of the community as indications that the space is restricted and should not be tampered with.

The role of *Durarait*, spiritual medium that connects with the spirits of ancestors and directs the ritual practices was also noted among the participants. Critical cultural values concerning discipline, respect and the conservation of the environment are passed down through these accounts and rituals.

These results demonstrate the way of how oral traditions and ritual activities should be considered significant processes to maintain the local knowledge and support the cultural values within society.

### **Spiritual and Ancestral Relations of the Lapat System**

The study also indicated that *Lapat* System is the form of connection between the living community and the spiritual world of ancestors. The participants provided an explanation that breaking *Lapat* restrictions can lead to not only social sanctions but also to spiritual ones.

Participant C said: Even when no one is there to see you break the *Lapat*, the spirits know. The *Anitus* will bring punishment to those who disrespect it.

This notion relates to the notion of *Barut* that means spiritual punishment that is inflicted on those who break *Lapat* restrictions secretly by the spirit of unseen spirits. This kind of punishment can be seen in the shape of disease, misfortune or other suffering forms.

The relationship between the living and the spiritual world is really conspicuous in the ritual process called *Ukas* that symbolizes the lifting of *Lapat*. There are the ceremonial activities that accompany this event and some of them include *Hubobat* which is a form of *Say-am* that represents the thanksgiving and re-establishing of harmony between the living community and the ancestral spirits.

They gave explanations that it is through the *Durarait* that they can communicate with the spirits of the ancestors during these rituals as they happen to be the mediators between the humans and the spiritual world. By doing so, the community aims at obtaining spiritual direction, protection, and equilibrium.

Those results prove that the *Lapat* System is not only a system of social control but a spiritual practice which supports the ancestral reverence and beliefs about the universe to the community.

### **Environmental Stewardship and Resource Conservation**

The other significant conclusion of the research is that the *Lapat* System has a heavy association with environmental protection. According to the participants, the temporary closure of areas that are put under *Lapat* enables ecosystems to reclaim themselves.

Participant A explained: Ecologically, the surrounding is gradually restored back to its original state at the time of *Lapat*. The forest snuff breaths once more and the vegetation and animals procreate.

Due to the limited access to the certain areas during the mourning time, forests, rivers, as well as agricultural lands are not disturbed. This has allowed give time to regeneration of wildlife populations and plant species. Even though the main aim of *Lapat* lies in the cultural and religious beliefs, the activity is also a good way of managing the environment in an indigenous manner.

Interviews also revealed that the provincial government of Apayao has appreciated the merits of the *Lapat* System and has included the same concepts in local environmental projects. As an example, conservation efforts like breeding ponds and ecological protection schemes in Pudtol are also based on traditional ecological knowledge.

According to the findings, *Lapat* System plays a role in ecological restoration by limited access to natural resources (temporarily). Respondents had witnessed positive changes observed in the recovery of forests, wildlife, and balance of the ecosystems during *Lapat* periods.

But these results are mostly premised on perceptions of participants and storytelling. Although these insights can be useful in the context of Traditional Ecological Knowledge (TEK) there is no quantitative ecological data available to empirically substantiate these claims about the environment.

Future studies should adopt quantifiable environmental indicators such as to enhance this argument:

- Forest cover analysis
- Biodiversity assessments
- River productivity or water quality measures.

This form of integration would allow more robust statements of empirical studies and reconcile the indigenous systems of knowledge with scientific environmental assessment.

### **Community Values Embedded in the Lapat System**

The results also show that *Lapat* System encourages multiple significant community values among them is respect, cooperation, responsibility, justice, discipline, and harmony. Respect is shown by the strict compliance with *Lapat* restrictions and understanding of the grievance ceremonies of the affected families.

Participant C added: Respect is demonstrated not interfering with *Lapat*. The spirits can still punish you even though no one will see you.

The system also promotes a sense of shared accountability in that the entire society of the community, irrespective of tribal group is to view and honor *Lapat* prohibitions. The offenses of *Lapat* are social and spiritual.

Justice is observed by traditional punishment. The breaches of *Lapat* are punished by taking them to *Pangmanaman*, or the Council of Elders, where they are fined or paid ritual compensation. Such processes provide accountability besides social order in the community.

The *Lapat* System can reinforce social cohesion and the sense of shared responsibility between the community members through these practices.

### **Transmission of Indigenous Knowledge to Younger Generations**

Although the *Lapat* System has remained significant, respondents were worried about the waning popularity of traditional practices among the young generations. The older generation noted that the younger generation is more subject to modern technology and social media.

Participant B added: "Nowadays, most young people are more concerned with social media and online world, and thus, they are no longer interested in such traditions as *Lapat*."

Community leaders and elders, to overcome this challenge, stressed the need to educate and document the culture and involve the youth. Programs like education among indigenous people (IPED), the celebration of Indigenous Peoples Months, and forums on community cultures came out as significant means of passing indigenous knowledge.

Another common point raised by the participants was the need to document traditional practices when there are still elderly people who have a lot of cultural knowledge in them. As Participant D pointed out: We would like to have such traditions written down so that they will be shared by the new generations and will not be lost.

These results note the significance of the intergenerational transfer of knowledge in the maintenance of indigenous cultural heritage.

The paper has revealed that there is a serious problem that young generations are becoming less engaged with modernization and digital pressures. Nevertheless, the lack of the young generation opinions poses a weakness in the comprehension of this generation gap.

The future research floor on this issue should focus on youth-based data collection procedures which include:

- Focus group discussions
-

- Participatory workshops

Nominal cultural immersion studies in schools.

A more balanced analysis of the processes of the knowledge transmission would be achieved by capturing the youth voices.

### **Lapat as a Mechanism for Community Peace and Unity**

Lastly, the *Lapat* System is critical in ensuring peace and cohesion among the people. The system encourages discipline in society and conflict resolution through laid down rules and consequences.

Conflicts involving *Lapat* violations are solved using *Umoman*, which is a dialogue that is supported by the Council of Elders. In this process, the members of the community openly clarify areas of conflict and pursue solutions that are agreeable by both sides.

Respondents stressed that respect and understanding between the community members are provided through obedience to *Lapat*. The fact that transgression can be punishable both in social and spiritual terms makes people follow the rules of the community.

According to Participant C: Once people respect the *Lapat*, they respect the community and tradition. This assists in the sustaining peace and unity.

These results reveal that the *Lapat* System is an indigenous tool of governance that incorporates the cultural beliefs, environmental management and community justice.

## **CONCLUSION**

This study demonstrates that the Isnag *Lapat* System in Pudtol, Apayao is not merely a traditional restriction, but a culturally grounded framework that integrates environmental stewardship, social governance, and spiritual beliefs. Rooted in the ethical system of *Supdina* and guided by its pillars, *Annaw*, *Aliyaw*, and *Ngilin*, it promotes responsibility, discipline, and respect for both nature and community.

The findings reveal a holistic worldview where the environment, the living, and the ancestors are interconnected. Through rituals and temporary restrictions on natural resources, the *Lapat* System supports ecological regeneration while reinforcing social cohesion and shared accountability. Its continued relevance is evident in its alignment with contemporary approaches to sustainable resource management and local governance.

However, the study is limited by its reliance on qualitative narratives and the absence of detailed participant demographics, youth perspectives, and quantitative ecological data. Future research may adopt a mixed-methods approach to better capture both cultural depth and environmental impact, while also exploring how indigenous knowledge evolves across generations.

Overall, the Isnag *Lapat* System provides a meaningful model for integrating indigenous knowledge into sustainable environmental practices, community development, and culturally responsive policy-making.

## **REFERENCES**

1. Berkes, F. (2017). Sacred ecology. Routledge. <https://doi.org/10.4324/9780203123843>
2. Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), 77–101. <https://doi.org/10.1191/1478088706qp063oa>
3. Camacho, L. D., Combalicer, E. A., Carandang, A. P., Camacho, S. C., Combalicer, M. S., de Luna, C. C., Rebugio, L. L., & Pulhin, J. M. (2015). Traditional forest conservation knowledge and practices of indigenous peoples in the Philippines. *Forest Policy and Economics*, 54, 1–9. <https://doi.org/10.1016/j.forpol.2015.01.002>

4. Creswell, J. W., & Poth, C. N. (2018). *Qualitative inquiry and research design: Choosing among five approaches (4th ed.)*. Sage Publications.
5. Gadgil, M., Berkes, F., & Folke, C. (2021). Indigenous knowledge for biodiversity conservation. *Ambio*, 50(1), 3–15. <https://doi.org/10.1007/s13280-020-01306-5>
6. Hill, R., Walsh, F., & Davies, J. (2020). Indigenous knowledge and environmental Management. *Global Environmental Change*, 63, 102123. <https://doi.org/10.1016/j.gloenvcha.2020.102123>
7. Macusi, E. D. (2023). Indigenous ecological knowledge and environmental stewardship. *Environmental Development*, 46, 100825. <https://doi.org/10.1016/j.envdev.2023.100825>
8. Paing, M. T., Galino, A. B., & Anongos, K. G. (2025). Indigenous knowledge systems and biodiversity conservation in Southeast Asia. *Asian Journal of Social Science and Humanities*, 14(1), 45–59.
9. Palinkas, L. A., Horwitz, S. M., Green, C. A., Wisdom, J. P., Duan, N., & Hoagwood, K. (2015). Purposeful sampling for qualitative research. *Administration and Policy in Mental Health*, 42(5), 533–544. <https://doi.org/10.1007/s10488-013-0528-y>
10. Philippine News Agency. (2024). Apayao remains one of the most forest-covered provinces in the Philippines. <https://www.pna.gov.ph>
11. Reed, M. G., & Abernethy, P. (2023). Indigenous stewardship and community-based conservation. *Conservation Science and Practice*, 5(4), e1271. <https://doi.org/10.1111/csp2.1271>
12. Sadao, M. N. (2010). *The Lapat system: Indigenous forest conservation practices in Apayao*. Department of Environment and Natural Resources.
13. Torres, M. A. (2020). Indigenous peoples and environmental stewardship in the Philippines. *Journal of Southeast Asian Studies*, 51(2), 245–262. <https://doi.org/10.1017/S0022463420000185>
14. United Nations Development Programme. (2024). Indigenous peoples and biodiversity conservation in the Philippines. <https://www.undp.org>
15. UNESCO. (2024). Indigenous knowledge and sustainable environmental management. <https://www.unesco.org>
16. Whyte, K. (2021). Indigenous science and environmental justice. *Environment and Society*, 12(1), 89–110. <https://doi.org/10.3167/ares.2021.120106>