JOMSIGN: Journal of Multicultural Studies in Guidance and Counseling

Journal homepage: http://ejournal.upi.edu/index.php/jomsign
ISSN 2549-7065 (print) || ISSN 2549-7073 (online)

ECOLOGICAL WISDOM OF KAMPUNG NAGA AS LEARNING RESOURCE FOR ELEMENTARY SOCIAL STUDIES

Syifa Fauziah , Mubiar Agustin , Lalu Muhammad Alditia ,& Syifa Salsabila Sugiri
Universitas Pendidikan Indonesia, Indonesia
*Correspondence: E-mail: syifafauziah@upi.edu

ABSTRACT

Kampung Naga is a community that still holds fast to the noble values of its ancestors. The main study conducted by the researcher is to identify the values of local wisdom, ecology, and local culture of the Kampung Naga community which can be a reference in social studies learning in elementary school. This study uses a qualitative method with an ethnographic approach that studies cultural values in Kampung Naga, through interview techniques with several informants, tour guides, elementary school teachers, and geographers, observations, and documentation studies. The results of the study show that the people of Kampung Naga have local ecological wisdom values, both in terms of regional spatial planning, disaster mitigation, environmental conservation, daily consumption patterns, spring protection, prohibited forest protection, agricultural activities, and fisheries conservation. This can be used as a real example for students to learn ecology through various ways, through the place-based learning approach, environmental projects, and others.

ARTICLE INFO

Article History:
Submitted/Received 2025-01-17
First Revised 2025-02-04
Accepted 2025-02-24
First Available Online 2025-03-01
Publication Date 2025-03-01

Keyword:
Ecological Wisdom, Local Culture, Kampung Naga, Elementary Social Studies.

1. INTRODUCTION

Indonesia has various cultural characteristics. In this case, each local cultural value in various regions has a distinctive advantage and is consistently preserved (Ardiansyah et al., 2024, p. 536). Local wisdom is a certain principle and way that is imitated, understood, and implemented by the community in interacting in their environment (Nur et al., 2022, p. 226). Local wisdom is an integral part of cultural heritage that reflects the values, norms, and practices that have been practiced by the local community over the years and passed down from generation to generation with good values. So the content contained in this local wisdom is norms that can be a guideline for people to behave.

Many regions in Indonesia still maintain local wisdom, one of them is Kampung Naga which has become a cultural heritage that can be visited by tourists. Kampung Naga is located in Neglasari village, Salawu District, Tasikmalaya Regency. Kampung Naga resident still maintain the customs of their ancestors in life, starting from carrying out traditional ceremonies to maintaining the natural appearance there. Looked at the physical appearance, it can be clearly seen that the spatial system in the dragon village is very orderly so that there is a balance between humans and nature. Kampung Nahga resident believe that humans and nature influence each other, human life depends on nature and natural conditions are influenced by human behavior. Man and nature are two inseparable elements, both of which affect each other. Man gets the necessary elements in his life from the environment, because man is a being endowed with common sense (Hutahaean et al., 2023, p. 47).

Natural resource management in Kampung Naga prioritizes noble values that have been going on for generations, so that it can be clearly seen that the appearance of nature is still maintained. The community is still very protective of nature because Kampung Naga resident live with a subsistence economic system or live dependent on nature. In the past, the subsistence economic system was attached to agriculture, where people moved agricultural land to meet their own needs (Arkanudin, 2024, p. 400). The existence of local wisdom in terms of ecology can be a real example that can be learned in the world of education.

Environmental education arises when there is environmental distortion due to human efforts to control natural products through the exploitation process Enviromental education can develop human beings who have environmental ethics, knowledge about the environment, environmental awareness, and behaviors and habits towards the environment. So, it is important to introduce enviromental education since early kids (Djoehaeni et al., 2018; Sukma et al., 2020). Environmental education is not new, but has been indirectly applied in daily life, especially in indigenous peoples who still maintain environmental sustainability and become part of local wisdom. One way that can be used to learn about environmental education is by place based learning.

Place based learning is a learning approach that connects schools with local communities (Cincera et al., 2019). In the process, place-based learning can be carried out in several ways, students identify problems that occur in terms of the surrounding environment and then find solutions that are in accordance with the characteristics of the local community. In this case, place based learning can also be referred to as real-world problem solving. Place based learning can increase students' understanding of the potential of their own area and increase their confidence to develop everything that correlates with the potential of a place (Smith, 2015). A place that can be used as an example of ecological education in elementary school is a place that still maintains local wisdom.

The introduction of local wisdom to students is important from an early age, especially in elementary school which is the golden age. Students with a reflection of the value of local wisdom in themselves allow them to be more selective and awake from the influence of outside culture that is less compatible with our culture (Fa'idah et al., 2024, p. 80). The integration of local wisdom into learning in elementary school can provide several benefits, such as learning

DOI: https://doi.org/10.17509/jomsign.v9i1.79991
p- ISSN 2549-7065 e- ISSN 2549-7073

being meaningful for students, increasing a sense of brotherhood even though they are different ethnicities and religions, improving cooperation skills, increasing a sense of tolerance between others, and avoiding the influence of poor outside culture (Sumarni et al., 2024, p. 2997; Fa'idah et al., 2024, p. 80).

Many advantages of integrating local wisdom with learning activities are contrary to reality, where subject matter, such as social studies, is still not widely integrated with local wisdom (Nabila et al., 2021, p. 3929). Therefore, this study aims to study in depth the local ecological wisdom in Kampung Naga which can be used as a social studies learning resource in elementary school.

2. METHODS

This research uses a qualitative approach, which is aimed at exploring and exploring various religions so that in-depth interpretation can be produced in relation to the object of research (Merriam, Tisdell, 2016). The research design used is ethnography, karnea is able to direct the research to in-depth findings related to cultural practices or local wisdom of a cultural community entity, through observation of a variety of daily practices, values and mindsets of the community (Creswell, 2013). The focus of this research is to investigate various ecological concepts owned and developed by the indigenous people of Kampung Naga which have relevance and are suitable for use as social studies learning materials in elementary schools, as an effort to preserve wisdom or traditional knowledge, as well as to optimize the quality of learning carried out.

The informants selected in the study are based on the criteria that have been determined (Provocative sampling) (Campbell et al., 2020). Where the selected informant is a traditional figure or actor who in the research is a guide assigned to accompany and receive tourist visits, as well as an academic and Sundanese cultural expert who has a good knowledge of Sundanese cultural practices, especially the indigenous people of Kampung Naga through several research experiences. And to maintain the confidentiality of the informant's identity and meet the code of ethics for the research of eating informants in this study, it is submitted in the form of codes, namely PA (Traditional Guides) and AB (Cultural Academies). The data collection process was carried out using three main techniques, namely semi-structured interviews, observation and documentation (Banha, 2022). The data collection stage will be carried out in the October 2024 period. The findings through interviews with informants and the results of the observation during the next observation were completed and strengthened by conducting documentation studies using several literatures in the form of previous research as well as various cultural literature.

Data analysis uses an inductive approach by combining the results of interviews, coding and theme preparation. The coding stages include open coding, axial coding and selective coding (Matthew & Huberman, 2014). Data validation is carried out by source triggregation techniques, where the results or findings are also juxtaposed with findings from field records as well as from various objectives or other supporting literature, then trial audits (Carcary & College, 2020), was also selected as a validation step to improve the quality of data interpretation.

4. DISCUSSION

a. Implementation of Ecological Wisdom Values

The people of Kampung Naga have ecological wisdom that supports *sustainable development.* This is reflected in the daily lifestyle of people who preserve nature. The people of Kampung Naga still hold the belief in pamali, where the existence of pamali can indirectly

DOI: https://doi.org/10.17509/jomsign.v9i1.79991
p- ISSN 2549-7065 e- ISSN 2549-7073

preserve nature (Indrianeu et al., 2022, p. 22). For example, there is the term leuweung rawateun and other ruwateun. The meaning of the taboo is that the forest is to be protected, not to be destroyed. The people of Kampung Naga manage the space in an orderly manner, where the residents' settlement is limited by a fence called a guard cage (Fairuzahira et al., 2020, p. 35). The guard cage limits neutral and dirty areas. The dirty area is outside the fence, where in the area there are fish ponds, lisung huts, and livestock cages. So the spatial arrangement in the Kampung Naga is based on the principle of protecting nature with ecological wisdom. The relationship between Kampung Naga resident and its natural environment can be seen from the pamali belief, agricultural system, livestock, river conservation, and leuweung prohibition.

b. *Pamali* Belief System and Customary Rules

The command to protect and preserve the environment is contained in the customary system to the belief system of the Kampung Naga resident, one of which is the existence of a trust called *pamali* (Mulyanie et al., 2023) *Pamali* is a belief where if someone does something that is not customarily allowed, that person brings bad luck or other negative things (Sugara & Perdana, 2021). Pamali is used as one of the ways for society to limit and prevent efforts to carry out acts of excessive exploitation of the environment or to take actions that can damage the order of community life. Various pamali that develop, for example, are not allowed to enter the prohibited forest area, let alone take and damage the plants in it.

Pamali beliefs that are still believed to be useful for maintaining and killing the balance between the order of life and environmental sustainability, the residents of Kampung Naga also have laws or customary rules that do not allow the construction of houses and the opening of new agricultural land. The following is an excerpt from an interview with one of the informants:

"For the houses here, the number is fixed, nothing is built anymore, so if you get married, you will live in your parents' inheritance house" (IPA 1)

"For agriculture so that the land is not constantly made into rice fields, there is a rule that new land must not be opened. So just take advantage of what already exists" (IPA 2)

From the presence of the belief in pamali and the customary rules prohibiting land clearing for new residences and agricultural activities, which are still valid and obeyed by the community, Kampung Naga are very concerned about the balance between the needs of human life and the maintenance of the environment. The clearing of new land for agriculture or the need for housing can trigger damage to the environment. Excessive exploitation of the environment such as forest clearing, felling of large trees will have a negative impact on people's lives such as water supply and clean air which will be reduced (Pajerih, 2023)

c. Division of Village Areas Based on Their Functions

Figure 1. Kampung Naga view

DOI: https://doi.org/10.17509/jomsign.v9i1.79991
p- ISSN 2549-7065 e- ISSN 2549-7073

Kampung Naga area is divided into certain areas based on their function. The village area is divided into 3 main areas, namely clean or neutral areas, dirty areas and sacred areas (Nurkamilah, 2018, p. 141). Here is some information about areas in Kampung Naga:

"So for our village is divided into 3 areas, which are outside where there are ponds, cattle cages, stalls where rice is pounded and toilets are called dirty areas, then the area inside the fence there's houses, mosque, and some building. The last is sacred area, there are ancestral graves and forbidden forest" (PA 1)

"The division of village areas into certain areas based on their functions, this shows how the people of Kampung Naga already have knowledge about natural balance, where if daily activities are concentrated in one area such as in dirty food areas, waste management or community waste becomes easier to manage, centralized community residences allow cleanliness to be more maintained" (IA1).

Based on the results of interviews with informants, it is known that the division of village areas has an important purpose in order to regulate the life of the community, as well as an effort to balance the needs of the community with environmental sustainability. The existence of a dirty area in which there are rice fields, livestock cages, fish ponds, huts for mashing rice toilets, makes this area produce a lot of waste or garbage as a result of residents' activities, so that with the centralization of all activities in one area, the processing and handling process becomes more centralized and easy to do. The existence of a clean area that is dedicated as a place for people's daily activities, to rest or carry out various traditional activities and ceremonies, allows the community to have a clean and healthy living environment. Furthermore, sacred areas that do not provide access to the community to exploit the materials entering them provide a guarantee for the preservation of nature, and the life of the flora and fauna in its environment (Mulyanie et al., 2023).

d. Ecological Practices in Kampung Naga Agricultural Activities

Farming is the main activity of Kampung Naga resident, the agricultural area is entirely in a dirty area with some of the land ownership being private and some of the other being village ownership. The agricultural system carried out by the community still follows the habits and traditions passed down by their ancestors. The sloping contour of the soil makes the conventional agricultural model ineffective to be carried out, so the community gets around this condition by applying the terraced farming method, which is an agricultural method by forming land such as a series of steps or terraces (Rutebuka et al., 2021). Rice is the only agricultural commodity grown by the community, with planting twice a year. The following is an excerpt from the interview with the informant.

"To plant our own 2 times a year, namely in January and July" (IPA1)

"Hoeing the empty land. After that tidying up the sides of the rice fields for the rice plant, *mopok galengan, ngabaladah, nyebarkeun binih, babut, macul, nyongkog, diahankeun, dirik, disurung, digarit, tandur, diadonan, ngarambet, mupuk (penggemukan), mipit /made, dan Nu/ tu / Ngagiling Pahit*" (IPA2)

"In agricultural practice, people prefer to use traditional methods using hoes, then for fertilizer they still use natural fertilizers from livestock manure" (IA1)

Based on the interview above, can be concluded that the agricultural practices carried out by the Kampung Naga community are still traditional, starting from the seeding system to

DOI: https://doi.org/10.17509/jomsign.v9i1.79991
p- ISSN 2549-7065 e- ISSN 2549-7073

planting using traditional techniques or methods that have indeed proven effective (Apiati et al., 2019). Traditional agricultural models like this are not only effective, but also have various other positive impacts on the environment and maintain soil fertility and quality. Furthermore, the practice of using manure has been proven to be effective in helping plant growth because of the various micro and macronutrient contents in it, in addition to the use of natural fertilizers is able to maintain soil fertility and quality so that the soil will remain effectively used for agricultural activities until the next generations (Goldan et al., 2019), which is much different from the use of chemical fertilizers that can damage the natural soil content and trigger the occurrence of degradation of agricultural land (Hossain et al., 2022).

e. Kampung Naga Farm System

Kampung Naga has a farm consisting of sheep and chicken. For livestock in the dirty area of the Kampung Naga which is outside the guard cage. There is a special pen placed in the middle of the rice field. Farms outside residential areas function so that manure produced by livestock does not become pollutants that can pollute the environment. The separation of livestock cages aims to avoid air pollution due to odors from livestock manure. The existence of livestock waste, in addition to polluting the environment, can also cause zoonotic diseases transmitted by animals or humans through microorganisms (Wati, et al, 2024, p. 617).

Livestock in rice fields can also be useful for organic fertilizers derived from animal manure. Animal manure can be used as fertilizer for agriculture using fermentation techniques, where manure is left for a few days until it loses its smell and gas (Ismi et al., 2024, p. 111). So all the resources in the Kampung Naga are used in such a way that they can maintain the balance of nature.

f. Ecological Practices in Maintaining River Ecosystems

The river is an important part that supports the lives of the people of Kampung Naga, namely to provide clean water for daily needs, so it is important to always maintain water quality and river ecosystems. However, because the dirty area is a place for residents to carry out activities such as pounding rice, washing, raising livestock, defecating, and so on, it has the potential to produce waste that will pollute river water. So, to outsmart this, the community made reservoirs that also function as ponds to raise fish. The following is an excerpt of an interview conducted with an informant.

“Yes, the ponds in the dirty area are not only for keeping fish, but also to accommodate dirty water before it is later dumped into the river.” (IPA 2)

The working system of these sedimentation ponds is simple by utilizing the concept of sedimentation. Waste or dirty water from community activities will not be channeled directly into the river, but will be flowed gradually in the pond for some time before finally flowing automatically to the river. Because it is not directly channeled into the river and has undergone several stages of storage, there is enough time for the feces in the water to settle in each pond. The existence of microorganisms and plants in the pond also helps decompose and remove impurities in the water, so that the water flowing to the river is in a cleaner state and is able to suppress the potential for pollution and damage to the river ecosystem (Lusk & Chapman, 2021).

DOI: https://doi.org/10.17509/jomsign.v9i1.79991
p- ISSN 2549-7065 e- ISSN 2549-7073

The reservoir system is not only intended to prevent pollution of river water, but is also used by the community to provide clean water to support daily needs. The Ciwulan River is the main source of water used by the community, but the river water is not directly used by the community because of its not always clean conditions, such as in certain seasons when rainfall is high, usually the water is in a poor condition to be used. The working principle is still the same, namely water is flowed to a reservoir located outside the river and flowed back to several ponds. There are at least three reservoirs that will then be flowed into the dirty area for community use, both for bathing, washing, and various other daily activities.

g. Leuweung (Forest) Prohibition Guard Pattern

The Kampung Naga has sacred places, one of which is leuweung larangan which is located to the West of the village. The forbidden forest area and the Kampung Naga settlement are separated by the Ciwulan river. In protecting the forbidden forest, Kampung Naga resident have their own philosophy, namely leuweung rawateun lain ruwateun which means the forest to be guarded, not to be destroyed. The community has faith in pamali, where when the rules of entering the forest are violated, there will be a catastrophe. The people of Kampung Naga believe that with the existence of pamali, the balance is maintained, including the existence of a forbidden forest (Nurkamilah, 2018, p. 143). This prohibited forest is prohibited from entering by anyone, let alone taking natural products in it, including taking bamboo or materials for making houses. People can buy their own materials, rather than having to take them from the forbidden forest. Although the community has high confidence in protecting the forbidden forest, the traditional leader still supervises the forbidden forest so that people do not enter without permission.

Prohibited forests have a function to maintain the balance of natural ecosystems. In the forbidden forest, various kinds of plants are grown dominated by bamboo. Then there are also animals that live there, such as birds. According to *tourguide* (Risman, October 5, 2024) Prohibited forests are home to birds so that they remain sustainable. The existence of prohibited forests provides various benefits, including providing clean air, preventing various disasters, and as a reserve for clean water.

h. Consumption Patterns and Community Activities

Kampung Naga has a subsistence economic system, where all the needs of the community rely on natural resources. Kampung Naga resident rely on everything that is planted and raised. For their staple foodstuffs, they eat rice produced from their own farms. Then for vegetables, the community has plantation land near their homes. Kampung Naga resident also rarely throw away food, usually they manage rice that is not finished anymore by drying it in the sun to be heated again or used as crackers. This has become one example of *Recycle*, that is, reprocessing materials that are almost waste.

In daily consumption, the people of Kampung Naga rarely use disposable and difficult to decompose ingredients. The people of Kampung Naga make various traditional crafts derived from natural materials, such as skewer brooms, bamboo plates, bamboo fans, and others that are easy to decompose (Mandasari et al., 2024, p. 189). This shows that the people of Kampung Naga hold the principle of *Reduse*, which means minimizing the use of materials that are not environmentally friendly. In addition, the people of Kampung Naga also apply the concept of

DOI: https://doi.org/10.17509/jomsign.v9i1.79991
p- ISSN 2549-7065 e- ISSN 2549-7073

Reuse by rarely using single-use items, such as plastic for packaging. Therefore, Kampung Naga resident have implemented the concept of 3R waste management (*Reuse,Reduse, Recycled*). As for waste management so that it is not scattered anywhere, the Kampung Naga already has many bamboo trash cans available in every corner of the house. Kampung Naga also does not use electricity for daily needs. Based on interviews with informants, it was stated that:

"We are here completely without electricity, because we are afraid that if the electricity comes in later, it will easily cause a fire." (IPA 1)

“Apart from the security factor, the people of Kampung Naga reject the entry of electricity also to maintain the authenticity of their life patterns and teachings. In addition, social factors such as jealousy between communities are also the reason for this rejection.” (IPA 2)

The condition of traditional houses, which are indeed made entirely of natural materials, has a great potential to burn if it is powered by electricity, which of course will endanger the safety of the community. Moreover, the pattern of housing or the construction of traditional houses of the community that are lined up and adjacent makes the fire in one house can spread quickly and burn the entire house of the residents. In addition, the principles and customary values of togetherness and equality are the main factors why the community refuses to enter electricity. They are worried that the entry of electricity will be followed by changes in patterns and lifestyles that can create gaps between communities, which can ultimately trigger damage to social relationships or bonds of the community.

i. Disaster Mitigation in Kampung Naga

Kampung Naga is located in an area prone to disasters, such as landslides or floods because the area is in a valley and next to a river. The existence of this can certainly be a threat that can occur at any time. Kampung Naga resident are already aware of this threat, so that development and daily life behavior have implemented an environmentally friendly attitude. Kampung Naga resident have their own schedule in carrying out various activities like hunting and farming, the schedule is called *tata wayah*.

One of the unique things in the Kampung Naga in disaster mitigation is the structure and shape of the building. The shape of the house building is designed as an earthquake-proof house. The house in Kampung Naga is in the form of a stilt house with woven bamboo walls. Kampung Naga stilt house is rectangular in shape with a foundation made of stone pillars. Many stone pillars that support the house make the house resistant to shocks (Anggita et al., 2022, p. 119). The house on stilts is the most adaptable to natural conditions. “The pattern of community housing that is gathered in a row and there is an empty area in the middle of the village such as a gathering point or evacuation point.” (IA 1)

Agricultural activities in areas with sloping soil contours are very prone to triggering landslides or erosion. Therefore, the terrace method is used to prevent various possible disasters from occurring (Haryadi et al., 2018). The terraced agricultural model has been proven to be effective in reducing the potential for erosion and landslides in areas with sloping soil contours (Krisdiyanto & Dewi, 2023). In addition to the agricultural system, the multi-storey pattern is also used in the construction of housing or community houses. So, the slope of the soil is cut by forming terraced areas, with a foundation using a stone foundation. The selection of foundation materials using stone is not only due to the strong nature of the stone, but also aimed

DOI: https://doi.org/10.17509/jomsign.v9i1.79991
p- ISSN 2549-7065 e- ISSN 2549-7073

at ensuring that water flow can continue to flow through the cracks of the stones, thus preventing excessive waterlogging that can cause landslides in the area where the community lives.

The model of stilt houses used by Kampung Naga resident is famous for having good resistance to disasters. The existence of house foundation pillars in addition to preventing direct contact with the soil to avoid moisture, can also effectively reduce the potential for houses to be submerged during floods or when there is a flow of rainwater flowing from the hilly area (Angkasa, 2018). In addition, building models whose frames are not nailed or rigidly joined make it possible that during an earthquake, the energy or vibration received is not focused on a single point, but is distributed in all directions, resulting in lower damage potential (Hastuti & Sadeli, 2024). The pattern of community settlements that are lined up and in groups and the existence of open areas in the middle of settlements can function as a gathering point or community evacuation during disasters. The group building pattern also facilitates mobilization between communities, so that it can minimize casualties during disasters.

j. Implementation of Ecological Local Wisdom of Kampung Naga as a Social Studies Learning Resource in Elementary School

Materials about ecology in social studies learning are available in all classes. The description of ecological material in elementary school is as follows:

Table 1. Ecology Material in Elementary School

Number	Class	Material
1.	Grade 3	Getting to know the animals around the house Getting to know the ecosystem Getting to know the environment around the house (natural and man-made appearance) Getting to know the landscape of Indonesia
2.	Grade 4	Getting to know plants around the house Getting to know the area in the home environment (natural wealth and its people)
3.	Grade 5	Ecosystem Indonesia's natural resources
4.	Grade 6	Natural disasters

In the books, many theories about environmental education are discussed, but it is still a general picture, not yet connected with local wisdom. Likewise, other learning that has not been integrated with local wisdom, even though there are already themes, it is not comprehensive (Nabila et al., 2021, p. 3929). Local wisdom is important to integrate because with the content of local wisdom, students learn more contextually.

In the ecosystem material in elementary school, students are taught to be able to coexist with nature. Students are introduced to human interaction in nature, both good and bad. Ecological wisdom in Kampung Naga has been proven to be able to preserve nature and in return nature can provide the needs of the Kampung Nagar resident. This can certainly be used as an example of a learning resource that can be used in schools, for example in agricultural land management. Residents of Kampung Naga do not cut down trees in the upper area or

DOI: https://doi.org/10.17509/jomsign.v9i1.79991
p- ISSN 2549-7065 e- ISSN 2549-7073

leweung karamat because it can cause landslides and floods (Nurkamilah, 2018, p. 143). Therefore, agricultural land is limited to the *baladahan* trees around residential areas. The agricultural system does not use chemicals that can damage the environment, as well as to cultivate rice paddy land, it still uses traditional methods that prioritize mutual cooperation between residents. So, in addition to being used as a source of environmental management materials, local wisdom in Kampung Naga can also be used as a source of learning good values, such as the value of togetherness and social solidarity.

The steps to integrate the local wisdom values of the Kampung Naga community related to the ecological material described above will effectively improve students' understanding because students will directly see the real practice of ecological behavior in daily life. There are also several things that must be considered related to the integration of local wisdom practices in learning, such as ensuring that the learning content is conveyed properly and does not lose its direction. This was conveyed by several informants who are teachers in elementary schools:

"The integration of local wisdom or cultural values is indeed very good and important, but one thing is certain, and that is also our difficulty, is to ensure that the content or essence of learning remains in. Because of the fear of learning, the focus will be on the local wisdom and the material will not be touched." (IP 1)

"Learning based on local wisdom such as visiting and seeing traditional practices is very good, but teachers must really make sure that students understand what they are observing, then relate to the material being studied, and how to apply it." (IP 2)

Based on the interview excerpt, it is known that the integration of local wisdom in learning is very important. However, things such as relevance to the material, the division of teaching portions, methods, and appropriate learning steps must be considered so that the learning carried out can meet the goals that have been set, namely forming students' knowledge and increasing love and cultural awareness.

Furthermore, the integration of local wisdom of the Kampung Naga community, especially in terms of ecological practices with social studies learning in elementary schools, is felt to be very appropriate. Because, at the elementary school level, learning requires actual proof or seeing firsthand how a concept is applied. This can be greatly facilitated through social studies learning practices that integrate the local wisdom of the Kampung Naga community. Here are some excerpts from the interview:

"Yes, that's right, the various forms of local wisdom explained earlier, such as prohibited forests, environmentally friendly agriculture, and so on, are very relevant, and I think it is important for students to know. Because if theoretically, for example about protecting nature and so on, it will be difficult for students to understand. But if you are shown examples and practices, students will certainly find it easier to understand." (IP 1)

The implementation of the value of local ecological wisdom of Kampung Naga as a source of learning in social studies subjects in elementary schools can be done in several ways. Concrete things that can be done to learn environmental education that is integrated with local wisdom is to approach *place based learning*, where students directly visit Kampung Naga to learn local wisdom, by observing and interviewing local residents directly (Cincera et al., 2019).

DOI: https://doi.org/10.17509/jomsign.v9i1.79991
p- ISSN 2549-7065 e- ISSN 2549-7073

"One way that can be done to integrate local wisdom with ecological learning is to ask students to conduct interviews, both to teachers and the community around the school. Students get examples of community habits, for example by mutual cooperation activities to maintain environmental cleanliness. Then to be more realistic, students can be invited to do a field trip to the Kampung Naga directly." (IP 3)

Field trips to Kampung Naga are one of the effective ways to learn about ecology, especially in grades 4 and 5 which discuss ecosystems. Learning is even more meaningful if it is done directly, therefore in order to understand how the Kampung Naga community preserves nature through the implementation of local wisdom that is still maintained. Students can conduct observations and interviews with local residents to find out firsthand how the pattern of ecological protection is there. Through these activities, students can construct their own knowledge. Students can make connections between what they research and what they have previously had or what is happening in their own community (Rachmadanti, 2021, p. 1448)

Concrete steps that can be taken to integrate the ecological wisdom of Kampung Naga in social studies learning is to carry out environment-based projects, for example, grade 6 students who are learning about natural disasters carry out activities to make mockups of Kampung Naga which contain miniature forbidden forests, house shapes, irrigation systems, and others. By doing projects like this, students not only learn about the environment but students can also practice collaboration, creativity, and communication. There has been a lot of research on project-based learning and the results state that project-based learning can be effective in improving learning outcomes and student activity. Project-based learning is student-centered learning, so the role of teachers is only as a facilitator who helps the student learning process. (Parwoto et al., 2024, p. 2)

"At my school, a project was held in collaboration with the school that was inspired by the traditional concept as well, which is to make hydroponic farming using buckets, where fish are planted in the bucket and kale is planted on top." (IP 2) Based on theory and interviews, it can be concluded that the implementation of the project can be an alternative to the integration of local wisdom in ecological learning in social studies elementary school materials.

Teachers can also help students to construct knowledge through fun learning media, such as using videos, pop up books, and various media that contain local ecological wisdom of Kampung Naga. In the research Nabila et al., 2021,(p. 3938) It can be seen that pop up book media based on local wisdom is practical and effective in learning. Then the use of learning media in learning activities can also help students to stimulate their knowledge. In addition, in order to make learning more directed, teachers can guide students to learn using student worksheets and make class enviroment to be ecoliteracy environment. Teacher makes wall information about local wisdom and ecology, so student can learn from that (Hilmawan et al., 2020)

The integration of the content of local wisdom of the Kampung Naga community, especially ecological practices, in increasing students' knowledge and ecological awareness, especially in the context of social studies learning, will certainly present better and more attractive learning conditions for students (Handayani & Abdulkarim, 2024). Students can see the actualization or direct application of the concepts they learn, then they can imitate or apply them in their daily lives. The cultural approach in education has been proven to be able to foster and increase students' motivation and enthusiasm for learning (Susilaningtiyas & Falaq, 2021),

DOI: https://doi.org/10.17509/jomsign.v9i1.79991
p- ISSN 2549-7065 e- ISSN 2549-7073

as well as encourage the improvement of competencies and other learning abilities (Sugara, 2022; Subrata & Rai, 2023).

5. CONCLUSION

Kampung Naga has local wisdom values that support environmental conservation, such as a system of mapping areas based on function (sacred, neutral, and gross), sustainable consumption patterns, and the application of the 3R (Reuse, Reduce, Recycle) principle. In addition, Kampung Naga resident also implement disaster mitigation traditionally by using stilt house structures and terraced agricultural systems. These ecological values have been proven to be able to maintain a balance between humans and nature, so they are worthy of being used as an example in learning.

To support the integration of local wisdom of Kampung Naga ecology in social studies learning in elementary school, the author suggests that teachers develop and apply a place-based learning approach of local wisdom around students, teachers can develop interactive learning media, make learning environment and implement environment-based projects. To facilitate learning activities, schools can collaborate with local communities and train educators to have insight into local wisdom.

6. AUTHORS' NOTE

The authors declare that there is no conflict of interest regarding the publication of this article. Authors confirmed that the paper was free of plagiarism.

7. REFERENCES

Anggita, S., Amanda, Y. A., Isnaini, K., Anggraeni, R. D., Zubaidah, Z., Nabil, J. N., & Mutafiin, R. Al. (2022). Model rumah panggung masyarakat kampung naga sebagai bentuk kearifan lokal dalam mengurangi resiko bencana gempa bumi. Majalah Pembelajaran Geografi, 5(2), 119. https://doi.org/10.19184/pgeo.v5i2.35700

Apiati, V., Heryani, Y., & Muslim, S. R. (2019). Etnomatematik dalam Bercocok Tanam Padi dan Kerajinan Anyaman Masyarakat Kampung Naga. Mosharafa: Jurnal Pendidikan Matematika, 8(1), 107-118.

Ardiansyah, S., Komalasari, K., Maryani, E., & Wiyanarti, E. (2024). Transformation of Bima local wisdom values through social studies e-book media. Journal of Education and Learning, 18(2), 535–543. https://doi.org/10.11591/edulearn.v18i2.21004

Arkanudin. (2024). Dari petani subsisten ke ekonomi pasar studi kasus petani kelapa sawit di Kecamatan Parindu Sanggau Kalimantan Barat. 7, 198–208.

Banha, F. (2022). Quantitizing Qualitative Data from Semi-Structured Interviews : A Methodological Contribution in the Context of Public Policy.

Campbell, S., Greenwood, M., Prior, S., Walkem, K., Young, S., & Bywaters, D. (2020). Purposive sampling : complex or simple ? Research case examples. https://doi.org/10.1177/1744987120927206

Carcary, M., & College, M. I. (2020). The research audit trail : methodological guidance for application in practice. 18(2), 166–177. https://doi.org/10.34190/JBRM.18.2.008

Cincera, J., Valesova, B., Krepelkova, S., Simonova, P., & Kroufek, R. (2019). Place-based education from three perspectives. Environmental Education Research, 25(10), 1510–1523. https://doi.org/10.1080/13504622.2019.1651826

Creswell, J. W. (2013). Educational research : planning, conducting, and evaluating quantitative and qualitative research / John W. Creswell. — 4th ed. In University of Nebraska–Lincoln.

DOI: https://doi.org/10.17509/jomsign.v9i1.79991
p- ISSN 2549-7065 e- ISSN 2549-7073

Djoehaeni, H., Agustin, M., & Gustina, A. D. (2018). Environmental education in Kindergarten. 1(229), 173–177. https://doi.org/10.5220/0007037801730177

Fa'idah, M. L., Febriyanti, S. C., Masruroh, N. L., Pradana, A. A., & Hafni, N. D. (2024). Integrasi nilai kearifan lokal dalam membentuk karakter siswa di tingkat sekolah dasar. TA'DIBAN: Journal of Islamic Education, 4(2), 79–87. https://doi.org/10.61456/tjie.v4i2.168

Fairuzahira, S., Rukmi, W., & Sari, K. (2020). Elemen pembentuk permukiman tradisional Kampung Naga. Tata Kota Dan Daerah, 12(1), 29–38. https://doi.org/10.21776/ub.takoda.2020.012.3

Goldan, E., Nedeff, V., Barsan, N., Culea, M., Panainte-Lehadus, M., Mosnegutu, E., ... & Irimia, O. (2023). Assessment of manure compost used as soil amendment—A review. Processes, 11(4), 1167.

Hilmawan, H., Musthafa, B., & Agustin, M. (2020). Literacy environment: What must teachers do? ACM International Conference Proceeding Series. https://doi.org/10.1145/3452144.3452195

Hutahaean, J. T., Asbari, M., & Nurwanto, F. (2023). Urgensi sadar lingkungan di era teknologi. Journal of Information Systems and Management (JISMA), 2(6), 47–49. https://jisma.org/index.php/jisma/article/view/730

Indrianeu, T., Marlyono, S. G., Singkawijaya, E. B., Putri, A. E., Asya, B. B., & Hadiansyah, A. (2022). Kearifan lokal masyarakat kampung naga dalam pemanfaatan bambu untuk upaya pelestarian lingkungan hidup. Geoedusains: Jurnal Pendidikan Geografi, 3(1), 13–24. https://doi.org/10.30872/geoedusains.v3i1.1274

Ismi, M., Deviani, E., Haque, I., Mutolib, A., & Djuliansah, D. (2024). Info Artikel. Edaj, 2(3), 110–114. http://journal.unnes.ac.id/sju/index.php/edaj

Krisdiyanto, A., & Dewi, K. (2023). Penanggulangan longsor akibat banjir pada lereng di kecamatan banjar rejo kendal. Jurnal Locus Penelitian dan Pengabdian, 2(4), 305-31

Lusk, M. G. and Chapman, K. (2021). Chemical fractionation of sediment phosphorus in residential urban stormwater ponds in florida, usa. Urban Science, 5(4), 81.

Mandasari, M., Jannah, Z. N., Nabila, R. R., Alfarisy, M. A., Alfauzan, F., & Astuti, Y. S. (2024). Sistem adaptasi dan etika lingkungan masyarakat adat terhadap kegiatan pariwisata di Kampung Naga. Dewantara: Jurnal Pendidikan Sosial Humaniora, 3(2), 181–194.

Matthew B. Miles, A. Michael Huberman, J. S. (2014). Qualitative data analysis: a methods sourcebook. SAGE Publications Inc.

Mulyanie, E., Hilman Hakim, E., Indrianeu, T., Al Husaini, H., & Rismawati, R. (2023). Analysis of the value of local wisdom of kampung naga based on environmental preservation as a community's efforts in managing the environment. JURNAL GEOGRAFI Geografi Dan Pengajarannya, 21(2), 119–128. https://doi.org/10.26740/jggp.v21n2.p119-128

Nabila, S., Adha, I., & Febriandi, R. (2021). Pengembangan media pembelajaran pop up book berbasis kearifan lokal pada pembelajaran tematik di Sekolah Dasar. Jurnal Basicedu, 5(5), 3928–3939. https://doi.org/10.31004/basicedu.v5i5.1475

Nur, S. F., Kanzunnudin, M., & Nugraheni, L. (2022). Nilai kearifan lokal dalam cerita rakyat Yuyu Gotho & Ulo Lempe. Edukasiana: Jurnal Inovasi Pendidikan, 1(4), 225–235. https://doi.org/10.56916/ejip.v1i4.193

Nurkamilah, C. (2018). Etika lingkungan dan implementasinya dalam pemeliharaan lingkungan alam pada masyarakat Kampung Naga. Religious: Jurnal Studi Agama-Agama Dan Lintas Budaya, 2(2), 136–148. https://doi.org/10.15575/rjsalb.v2i2.3102

Pajerih, I. S. (2023). Dampak perubahan iklim pada ekosistem hutan tropis di Kalimantan Timur: analisis krisis lingkungan. Jurnal Thengkyang, 8(2), 80-87.

DOI: https://doi.org/10.17509/jomsign.v9i1.79991
p- ISSN 2549-7065 e- ISSN 2549-7073

Parwoto, P., Ilyas, S. N., Bachtiar, M. Y., & Marzuki, K. (2024). Fostering creativity in kindergarten: The impact of collaborative project-based learning. South African Journal of Childhood Education, 14(1), 1–8. https://doi.org/10.4102/sajce.v14i1.1462

Rachmadyanti, P. (2021). Studi Litearatur : Kearifan lokal masyarakat using sebagai sumber belajar IPS di Sekolah Dasar. 1447–1453.

Smith, G. A. (2015). Place-based education learning to be where we are.

Sugara, H., & Perdana, T. I. (2021). Nilai moral dan sosial tradisi pamali di Kampung Adat Kuta sebagai pendidikan karakter. Edukasi: Jurnal Pendidikan, 19(1), 1-15.

Sukma, E., Ramadhan, S., & Indriyani, V. (2020). Integration of environmental education in elementary schools. Journal of Physics: Conference Series, 1481(1). https://doi.org/10.1088/1742-6596/1481/1/012136

Sumarni, M. L., Jewarut, S., Silvester, S., Melati, F. V., & Kusnanto, K. (2024). Integrasi Nilai Budaya Lokal Pada Pembelajaran di Sekolah Dasar. Journal of Education Research, 5(3), 2993–2998. https://doi.org/10.37985/jer.v5i3.1330

Tisdell, S. B. M. E. J. (2016). QUALITATIVE RESEARCH A Guide to Design and Implementation Fourth Edition.

Wati, M. A., Nurwahyuni, E., Fajarwati, K. S., & Yulianah, I. (2024). Pemanfaatan limbah peternakan dan pertanian sebagai bahan baku pupuk organik di Kecamatan Kepung , Kabupaten Kediri. 6(1), 616–625.

DOI: https://doi.org/10.17509/jomsign.v9i1.79991
p- ISSN 2549-7065 e- ISSN 2549-7073