

A STUDY OF ENVIRONMENTAL ETHICS AND CULTURE IN ISOLATED VILLAGES IN SRI LANKA

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Received 15.01.2024.

Revised 27.02.2024.

Accepted 09.03.2024.

Keywords:

Ecological, Rural, eco-friendly, Traditional Knowledge System, Environmental ethics.

Original research

ABSTRACT

Due to urbanization and globalization, many rural areas are becoming urban. But there are still many isolated rural villages in the Eastern world including Sri Lanka. Many features are still intact in those isolated areas. Therefore, it is timely and important to discuss such remote areas' ecological and social relationships and how people's lives are built on those characteristics. The main objective of this research is to study the environmental ethics and traditional knowledge system developed through environmental and social concepts in Galmudunagama village located in Hasalaka Divisional Secretariat Division of Kandy District, Sri Lanka. The study was mainly based on primary data and collected using structured questionnaires, interviews, and participant observation methods. In this study, qualitative data analysis has been done on all the data obtained through 35 questionnaires. According to the study, it is possible to understand the traditional and isolated environmental values of the Galamudunugama area and the process followed by the people who lived there in water consumption. It was revealed how the villagers have worked to build a self-sufficient economy and an environment-friendly agriculture, and that as a social corporation, there is a process associated with the natural environment from birth to death. In addition, it became clear how people socialize in a knowledge system specific to this isolated area and how to protect the natural environment through an oriental knowledge system. Finally, I suggest that this study recognizes the value of traditional knowledge systems in such rural areas of Sri Lanka and uses them to create future eco-friendly societies.



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1. INTRODUCTION

Sri Lanka is an island that is characterized by ecological diversifications with the most beautiful ecological features. There are differences in the different social contexts built within these diverse ecoregions. Today, many areas that are gradually approaching urbanization due to globalization and industrialization are moving away from these inherent characteristics. The opinions of some historians and archaeologists are also different. There are different opinions about the beginning of

settlement in Sri Lanka (Kulatilake, 2016). When looking at these ideologies, it can be identified that this settlement has taken place in several main eras. The impact of industrialization after the 1960s was gradually felt by the world as well as Sri Lanka. After the year 1978, the various political changes and economic changes that took place in the country directly led to changes in these social contexts as well as the environmental aspects that had built them. But even today one can see ancient traditional and isolated villages that are deeply attached to the environment and

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live in harmony with the environment, which is full of eco-friendly features. Looking at past sources, although settlements were created in the coastal region, these populations have gradually been concentrated in the country. This is exemplified by the emergence of river basin and lake villages as well as traditional villages being established more inland. Among them, a large number of isolated villages have become the modern evidence of the people who lived in conflict with the surrounding environment of the Dumbara Valley (Sakalasooriya, 2021).

The central highlands in the heart of Sri Lanka are seen as the origin of many river basins. The Knuckles range can be pointed out as a region that attracts everyone's attention in the central mountain range. The Knuckles Mountain range, which looks like a clenched hand, is located on the border of the Kandy and Matale districts. This was used by the British to introduce this area and the ancient Sri Lankans called it Dumbara Valley to make them feel that this area was covered by fog.

Dumbara valley is from east to west, Velangala mountain, Yahangala Kehel, Pokdoruvegala, Garadigala, Dumbanagala, and from west to north, Aluthgal mountain, Aliya Vetunu Ala, Knuckles mountain range, Rilagala mountain, Selvakanda, Yakungehela, Gombania and Kirigal Photta mountain from east to the north respectively Telambugala, Uhunugala, Lakegala, Wamarapugala, Ginikelia Act as well as Sudugala, Lahumanagala, Ratmatiya, Manigala etc. in a water catchment site located on the northern slope of the Central Province. In addition, the Garadigala waterfall chain, Bambaragat Oya waterfall chain, Hasalaka Oya waterfall chain, Dustu waterfall chain, and Huluganga waterfall chain an events with more than fifty waterfalls and streams.

Some places in the Knuckles Forest claim a history dating back to the time of King Ravana. Among them, Sita's cave, which is believed to have hidden Princess Sita by King Ravana, and Yahangala, which are related to Ravana's history, can be seen here. Also, in the past, sailing ships coming from the east to Sri Lanka used to visit Sri Lanka. 'IllakkaGala' or 'Lakegala', which is said to have shown the direction of Sri Lanka's location, is also a unique place in the Knuckles Forest. Also, according to legends, there are several places where "Weliwita Saranankara Nahimi" is hidden. Also, in the past, natural potassium nitrate or a shot cave is found here. Also, legend has it that this "Galamudunagama" area belonging to the Knuckles region is a village that did great service for the security of the kingdom during the Kandy era.

At present, Galamudunagama belongs to the Kandy district of the central province of Sri Lanka. This village is located in the region of 7.44 north latitude and 80.88 east longitude. Both the villages known as Panwatta and Galamudunagama are called by the name of Galamudunagama. This is a village with an area of 398909.27 square meters. It is a very small area of 0.39890927 sq km.

1.1 Research Objectives-

In addition to the main objective, several other objectives are found in this research. These objectives have been created through various angles to comprehensively study several unique characteristics existing in these traditional villages.

The main objective of this research is to study the traditional knowledge system developed through environmental and social concepts in the traditional villages of the East.

Another sub-objective of this is to study how their daily processes are connected with the environment.

As the third objective, it can be pointed out the changes in these isolated villages today compared to the past and the study of the environmental ethics that have survived in the society even today through their traditional knowledge system.

1.2 Research Questions-

The main research questions are as follows-

1. How do traditional knowledge systems in isolated villages like Galamudunagama contribute to sustainable environmental management and agricultural practices?
2. What are the social dynamics and cultural rituals in Galamudunagama that support and reinforce environmental ethics?
3. In what ways can the traditional environmental practices and knowledge of Galamudunagama be integrated into modern environmental policy-making and sustainable development initiatives?

2. LITERATURE REVIEW

Traditional knowledge systems (TKS) encompass the wisdom, innovations, and practices of indigenous and local communities that have developed over generations (Odora Hoppers, 2021). These systems are integral to the cultural fabric of many rural societies and play a crucial role in environmental management and sustainable development. (Berkes, 2000) argue that TKS is dynamic and continuously evolving, adapting to new environmental conditions and challenges. The integration of TKS in environmental management has been recognized as essential for biodiversity conservation and the sustainable use of natural resources (Nugroho et al., 2023). In Sri Lanka, traditional ecological knowledge has been fundamental in practices such as tank-village systems, which are ancient irrigation methods that support agriculture while conserving water and soil (Bandara, 1985).

Environmental ethics involves the moral relationship between humans and the natural environment. It emphasizes the intrinsic value of nature and the ethical duty of humans to protect and preserve the environment (Werner & Kielkiewicz-Werner, 2022). In isolated rural communities, environmental ethics are often deeply embedded in cultural and spiritual beliefs. For instance, (Singh, 2006) notes that many rural communities in

South Asia view nature as sacred and integrate this reverence into their daily practices. This intrinsic value placed on nature fosters a sustainable interaction with the environment, as seen in the practices of the villagers of Galmudunagama. The villagers' approach to water consumption and agriculture reflects a deep respect for natural resources, aligning with the principles of environmental ethics (Hettige, 1996).

Globalization and urbanization have significantly impacted traditional societies, often leading to the erosion of traditional knowledge and practices. According to (Shiva, 1993), globalization has led to the homogenization of cultures and the marginalization of indigenous knowledge systems. In Sri Lanka, urbanization has transformed many rural areas, yet some isolated villages like Galmudunagama have preserved their traditional ways of life. The resilience of such communities highlights the importance of protecting and revitalizing traditional knowledge as a means to counteract the negative effects of globalization (Gunasekara, 2016).

Several case studies have documented the importance of traditional knowledge and environmental ethics in Sri Lankan rural communities (Gunatilake, 1998) explored the role of traditional agricultural practices in sustainable development, noting that these practices are often more sustainable than modern methods. Similarly, (Perera & Wijesuriya, 2004) examined the tank-village system, emphasizing its efficiency in water management and its role in sustaining local ecosystems. The study of Galmudunagama village contributes to this body of literature by providing insights into the unique environmental and social practices of an isolated community, thereby underscoring the value of traditional knowledge systems in contemporary environmental management.

The integration of social and environmental systems is a hallmark of traditional rural communities. The concept of social-ecological systems, as described by (Berkes, 2000), underscores the interdependence of human and natural systems. In Galmudunagama, the villagers' practices reflect a holistic understanding of this interdependence, with environmental ethics guiding their interactions with the natural world. This integration is evident in their agricultural practices, water management, and social rituals, which collectively contribute to the sustainability and resilience of their community (Dissanayake, 1992).

3. METHODOLOGY

The traditional village of Galmudunagama, located on the border of Kandy district, can be pointed out as the study area of this study.

This study is mainly based on primary data and this primary data was collected through structured questions and interviews and participant observation methods. In this study, all the data collected across 35 families living in this village were analyzed using qualitative data analysis techniques. While presenting the questionnaires

and conducting the interviews, the data collection was done considering the small children living in the village as those between the ages of 10 and 18 years, the youth community between the ages of 20 and 45 years, and the elderly community between the ages of 45 and 85 years (Figure 1).



Figure 1. Age of people

Focusing on the data analysis technique, thematic data analysis techniques have been used. This data has been analyzed in several main themes organized according to the data obtained.

4. DISCUSSION AND ANALYSIS

In this study, it was possible to identify several specific characteristics built into their knowledge system based on environmental values. The results of this study are discussed in three main areas, namely economic, social, and cultural.

The area of Galmudunagama, which is located on the border of Kandy district, which has many historical facts of Sri Lanka, has also become a part of various legends. Several legends related to Yahangala, which is located in the region very close to this village, have been built in this village.

We can think that this Yahangala is a place where the legend of Ravana is connected and it is a strange mountain top with the same shape as Sigiriya. Yahangala is another mountain peak belonging to the Knuckles range and it is located on the south-eastern slope of the Knuckles. Yahangala Rock has an area of about 2 acres and there are no trees there. Fragments of rocks broken by lightning can be seen in places. It is no secret that the surrounding splendor that can be seen at the top is breathtaking. From here, you can see the Mahaweli River tributary, Rathkinda, and Ulhitiya reservoirs, as well as "Sorabora" Lake, which runs from Mahiyangana towards Dehiattakandiya. The hidden villages of "Udagal Debokka", Udatta, and Meemure can also be seen as villages. Galmudunagama village can be called another ancient village nearby. Yahangala is also a popular place because the body of King Ravana was buried in this rock. Also, there is a legend among the people of the area that the god Gale Bandara resided near this rock. Legend has it that a religious saint who worked as a meditator was also present here, and it is said that there is also a "Katarang Ketu Gallena".

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In the Kandy district, the geological and mineralogical conditions are generally as simple as in other parts of the country. This area is between 1700 and 1800 feet above sea level and has a gravelly soil condition. The small footpath leading to the village of Galamudunagama and the gravel area closest to the village is severely eroded during the rainy season.

Also, the fertile soil conditions around the farmlands cultivated by the Helmalu method have been further protected due to the use of inorganic fertilizers in this environment. The clay and clay soils near the small streams flowing down from the top of the mountains testify to the different soil conditions in this region.

In 1961, Moorman and Panabokke (Vitharana & Mapa, 2020) presented the soil classification of Sri Lanka for the first time and identified 14 major soil groups. Climate has been considered as one of the main factors in soil classification in Sri Lanka and soil types have been identified separately as dry zone soils and wet zone soils. According to this, in the region around Galamudunagama, red-brown Latasols soil with moderate water flow is common. This soil is reddish brown. The texture of this soil is also fine. There is a possibility of growing various crops.

4.1 Social

When looking at the isolated village of Galamudunagama, it is clear that the decline of this village has directly led to the determination of its social patterns. In this village, it is possible to identify many situations that are connected with the environment in the social context. Compared to the past, young people are found in developed urban ecosystems and it is clear that they are a social corporation living under the low facilities of this village. Many are reluctant to leave these areas. The main factor for this is that these people who are connected with these environmental elements make the environment the basis of all their activities.

Galamudunagama can be pointed out as an isolated village in the Knuckles reserve located on the border of Kandy district and Matale district. This village is located at a height of 525-560 meters above sea level. The annual temperature is between 25 – 29 degrees Celsius. The region receives rainfall during January, February, and March. Between July and September, there is little rain, so a dry weather condition is observed.

After traveling for about 8 kilometers through the Heen River, a branch of the Mahaweli River, we reach the village of Galamudunagama. Surrounded by mountains like Yahangala and Lakegala, this village is located on a mountaintop and is a very beautiful area. Passing streams, and small waterfalls and walking along a small footpath, one reaches this village.

Kolongada town can be pointed out as the closest small town to Galamudunagama. It is located at a distance of about 12 km from Galamudunagama. Apart from this, Hasalaka, Mahiangana, and Hettipola cities can be pointed out as major cities nearby. They have to travel a distance of approximately 30 km.

Two main routes to this village can be identified. Among these roads, the road through Puligune is the shortest route to this village.

It is a very special fact that the villagers travel to this area only from 6 in the morning to 3 in the evening. Due to the wild elephants that are mostly seen in the mountain region, no one travels down from this village or down towards the village in the evening.

It is a special thing that several poetic conceptions unique to that area have been passed down through oral generations, which describe the location of this village and the difficulties in that village.

There are 36 families in this area. 79 people from these families were entitled to universal suffrage. The number of school-age children is about 20. It is important that the villagers, who are accustomed to loving the village, the environment, and the four-legged animals, carry out their daily lives in a very simple manner. Being an isolated village and having no road to travel, it is exemplary that the villagers produce most of what they need in the village itself. Paddy cultivation done in the "Helmalu" system strengthens their economy and helps them with their main meals. Apart from this, "kurahan" paste is also a staple food of these villagers.

It should be mentioned that this village has evolved from the first two generations as one of the most important things that can be seen when looking at this traditional village. Even today only two surnames are found in this village. They are “Maraka Mudiansela” and “Randunu Mudiansela”. Sister-in-law marriage, which is seen in the whole village, is seen in the same way even now. In the early days, there were between 5 and 10 children in a household and today the number of children in a household has been limited to around three. At present, it is also seen that some children move away from the village after getting married from other villages.

Nowadays, young children between the ages of 20 and 30 are very limited in this village. The reason for this is that at present, children go from village to city for job needs, and children travel to the city for school and university educational activities. Avoiding the hardships of the village and focusing on the comfortable life in the cities is seen nowadays.

4.2 Rituals

Several different customs and beliefs are inherent in these villagers from birth to death. It can sometimes be said to be their cultural characteristics. Many of these customs have been created in their local knowledge system related to the environment. All the villagers follow Buddhism and use the Bodhi and the temple in the village for their religious activities. But no Lord is living there. But the villagers continue to give alms in the name of a forest-dwelling monk who is meditating close to the village.

Only a few pregnant mothers have recently entered the “Kolongoda” Regional Hospital to deliver their children. Before that, the midwife in the village had fulfilled her duty when giving birth to all the children in the village. Due to having to walk 15 kilometers from the village to a hospital and because they have the necessary knowledge, the children have been delivered in the village itself. They said that they cut the umbilicus with the help of their design's very pure white cotton thread. Villagers said that if the children's pecan rots, they will burn betel leaf and spread it with honey. Also, there is a belief in them that they drink chili gravy during pregnancy and that it is good for the fetus. Through their use of healthy food, the pregnancy is favorable. The production and use of red oil used in local Ayurveda by the villagers from the past reflects their knowledge of advanced local medicines.

There are instances in their social context that depict the belief in God and the belief in Shanthikarma among the villagers. In some cases, there have been cases of small children dying in the mother's womb. And in some cases, there have been families without children. In all these cases, they were blessed through Bali Tovil Shanti Karma. In this village, there is no ritual of reading letters to children. But for the good fortune of the children, to protect them from diseases, the villagers have resorted to giving a devil or offering sacrifices to Lord Vannibandara. In the evening, sacrifices are made

for Lord Vannibandara, and in the morning, these villagers perform hundreds of rituals for Lord Kataragama. The villagers think that such sacrifices are performed to reduce the damage caused by wild animals, especially during cultivation activities.

Villagers who spend most of their day in agro-industrial activities avoid certain work on “Kemmura” days. Since ancient times, paddy farming has been done natively without the use of machinery. It is a special fact that even today, the villagers use scythes to cut the stubble and get the buffaloes to trample them in the threshing floor of the village. Pujas are conducted with new rice according to the traditions from the past. They offer a special grain known as “adukkuwa”. Villagers claim that Ki Roti and Wade are used as offerings for this purpose. Here it is seen that milk and food offerings are made in the morning for the Kataragama God.

There is another custom used by the villagers in agriculture. That is, three young coconut nuts are put in three pits and when the paddy fields are about to be plowed again, those young coconut nuts are checked and the cultivation work is not carried out in the pits where the water has decreased. There is a strong belief in them that there will be less yield in the leaves that were put in the young coconut fruit with less water. They perform “Bharahara” while starting cultivation activities.

Traditional rural farmers strongly believed in many religious and spiritual rituals and practices. For example, the farmers believed that the person who started the chena cultivation should be free from impurity, known as “Kili” in Sinhala. It was also customary for hay growers to pray to their religious faith before planting. Due to their strong attachment to astrology, they also arrange to start cultivation on an auspicious day and time.

Villagers living in the village have started their married life from a very young age. Most are engaged at or before the age of 16. When discussing marriage in the village, most of the people have married their sister-in-law and they have become parents with five or six children.

The funeral ceremony can be considered another unique ritual occasion found in Galamudunagama as an isolated village. From the past until the most recent times, everyone in the village has had funerals together. Funeral arrangements are made in a small wooden box made by the villagers themselves and wrapped in white cloth to honor the person concerned. They are embalmed or something. But at present, about two deaths have been embalmed. All other deaths have been buried within a day as mentioned. Today, when the embalming is done, it is because of the various stories that the villagers of other villages continue to tell them. They plant a sapling at a place where a body is buried. They have a strong opinion that their dead bodies should be manure for the soil near them.

Embalming a death was not their concern until very recently. But it was clear in the interviews held with Mr. “Maraka Mudiansela's Thennakone” that the last 4 to 5

deaths in the village have been embalmed. In the past, before placing the body in the coffin prepared in the village, they sprinkled tea powder and placed the body on it.

Because they believe that they will be able to preserve the body. After the death, the villagers used to do various charitable works.

4.3 Health

In the Galamudunagama area, they have a lot of unique characteristics when paying attention to health. It is also seen that there is more interest in the use of Ayurvedic medicines found in the local knowledge system. Villagers refer to "seasonal diseases" as epidemics and there are several diseases that spread like epidemics. According to the opinion of the villagers, there is a way of identifying the periods of illness with the changes in the environment. When it rains ending the long dry season, several diseases spread throughout the village. Colds, fever that makes you sick all over, fiery diarrhea, blisters or rashes on the skin, and eye pain are some of them. Also, the villagers stated that diseases such as measles, mumps, smallpox, etc., which are considered to be the diseases of God, spread in Idora at certain times and CT. During Idora, difficulty in urinating is mainly seen and the villagers claim that "Neeramullia" is boiled and drunk for that.

When I asked if it was possible to control the spread of infectious diseases like this, the opinion of most of the people in the village was that "when something happens to one house, it will spread to everyone" to go.

The villagers have to go to the traditional medical center in Galamudunagama to get medicine for their ailments. According to Mr. "Maraka Mudiansela's Karunasena", the two traditional doctors living in the village are doing great service to everyone in the village. "Maraka Mudiansela's" Mrs. "Wimalawati" deals with full body and fruit medicine and her brother "Mr. Maraka Mudiansela's Abeyratne" deals with snake venom.

During the discussion with "Mrs. Vimalavati", it became clear that she went to the forest to find the Ayurvedic plants available in this area and produce medicines. "Most of the people in the village are getting cured because of this art learned from "Udattawa Maha Gurunnanse", she said constantly. Mrs. "Vimalavati" said that medicines like "Ankenda" and Katakala are used for treating fractures and another secret recipe is used.

Mr. Abeyratne said that in this area, bites from highly poisonous snakes such as cobras, cobras, cobras, plans, karavala, and habarala occur regularly. He said that he had a good knowledge of snake medicine and got the skill from Udattawa Gurunanse. He works hard to maintain good health conditions in the village by providing prompt treatment to his sister and everyone in the village.

M.M.Wickrama said that the villagers of Galamudunagama have never been hospitalized for childbirth. Going to many villages like Galamuduna, Udagaldebokka, Udattawa, Dungolla, Nugagolla,

Suligune, Heingaga, Panwatta, etc., the midwife has given birth to nearly 500 children. The young daughter of the midwife who lived at that time said, "Our mother has given birth to more than five or six hundred children in these seven or eight villages."

According to "Randunu Mudiansela's" Mr. "Karunasena", he has traveled far to "Kolongoda" on several occasions and brought English medicine for his son's stomach ailment. However, it is clear that they cured the disease after they burned the leaves and rubbed the pecans with honey. Red oil is used in the village itself for the red fruits that occur in the bodies of small children. They also bathe small children with the water of Ratmal, Amukaha, Nidhikumba, etc. The leaves, bark, and roots needed to make medicine are found in the village and the surrounding forest, and only to bring medicine like "perumkayam", do they go to a Sinhala medicine shop in Hasalaka or Hettipola.

4.4 Economy

There are two main economic activities in this village from the past to the present day. Agriculture and textile-related products are major among them. All paddy lands are cultivated in the high season and a limited amount in the low season with paddy fields arranged in the "helmalu" system. Due to the lack of rain during the Yala season, they cultivate paddy only in a few selected lands to manage water. It is clear how different grains, vegetables, etc. have been cultivated in the rest of the land. It is seen how the rice produced in the village is taken to Kolongoda and cashed. With that money, they bring the salt, dried fruit, etc. they need into the village. It is seen that they live in a self-sufficient economy, especially by producing most of the things needed for their daily life in the village itself.

The jackfruit tree spread all over the village is used for many of their meals. Also, vegetables such as date palm, aguna kola, kohila, gourd, mung bean, beans, etc. are found in every garden. It is also seen that these people consume a lot of curan-related foods. Kurahan talapa, Kurahan roti, etc. are staples in their diet.

Betel nut has been cultivated in the village for supply and tobacco, betel nut etc. has been cultivated in the village itself. Various handicrafts related to palm and coconut leaves are made by the villagers and they are taken to Kolongoda or Mahiyangana and converted into money. There is no great economy for these people who live on limited needs. However self-sufficient economic characteristics are shown in them.

Mainly rice farming and hay cultivation are done in the village. Vegetable cultivation is sufficient for every household for personal consumption.

The hen was farmed collectively. There was one freehold deed for the area and it was divided into individual lots among the villagers. The wisdom behind this collaboration is the desire to protect the surrounding forest. Thus, the village collectively selects one area for cultivation and shares the harvest.

Hay cultivation was traditional and the villagers have harmed the environment in the process. The techniques

used to grow Chena depend on a range of variables, including climate, soil type, and other ecological and topographical factors of the area. Here, hay farming was mainly done by men. However, the women and children of the village also help in various activities like protecting crops from birds and animals.

Cutting the edge of the Chena and separating it from the Chena was known as a "cemetery" cut. The farmers who go to the hay after swallowing a lump of heel rice or talapa or golly, work continuously until the sun goes down. Farmers who have had lunch will continue to work until it is time to go back to Gomman. The wife has to bring lunch to the hen in the field using a box with a lid made of bamboo skins. It is a common occurrence for the housewife to return home with a bundle of firewood equal to her weight when carrying food to the hens.

When the villagers cut the hen, they are not bound to a single slice. It is a matter of his displeasure that when the straw is cut into single slices, there are wild spikes that are as sharp as the blade of a knife. If the roots of that grass take root, the feet will be injured and the result will be to stay at home for months. According to the opinion of these people, they know that if the underplanting is not cut first, the hay cannot be cleared well. The people of Galamudunagama used to use the "Atham" system in these affairs. Unity, support, and mutual trust had become a light and strength for village life.

The hoe used in ground preparation is used for various tasks such as digging, preparing beds, laying sheets, cutting drains, etc. The handles needed for the home are prepared in the village itself. Wood types such as Buruta, Velang, Demata, etc are used by them for that.

It is the custom of the villagers to surrender to God as soon as the sowing is finished in farming activities. Sowing of crops is also done on "Kemamura" days and there is a strong belief in the influence of devils and ghosts that have an eye on crops. There is a belief among the villagers that if the grains are pressed to the heartbeat, they will be spoiled by various flies. When paying attention to the cultivation methods carried out by the villagers of Galamudunagama, it was seen that they are growing a lot of vegetables for daily consumption at home. Beans, maize, chilies, maize, brinjal, etc. crops are grown in the garden. Jackfruit is also a major food crop. Kosgas are spread all over the village.

Chili - Cultivated in the green season. Chili seed nurseries will be set up and plants required for cultivation will be provided.

It is possible to cut pods about 1 ½ months after planting. Also, ripe chilies. It is seen that village dry chilies are made using it.

The seed pods are prepared and the seeds are planted in the pits. The seeds are soaked in water for three to four days to grow thick. The seeds are then planted in prepared bed pits. Support plants are planted for these plants in about a week. The harvest can be obtained in 2-3 months.

When focusing on the agriculture of the Galamudunagama area, it is important to discuss the fertilizers used for their cultivation activities. For that, "Nahapatta" and "Kalavel" roots have been added to a mortar, crushed well, mixed with water and left for a few days, then sprayed on the trees. Using the oil spray tanks found in the village today, one liter of juice is collected and sprayed per tank. It is also claimed that margosa leaves are used for various diseases. Dalukkiriya is a medicine used for worms in the cultivation activities in the village. Castor seeds are crushed and mixed with a little water and then sprayed on weeds. Recently, it is seen that urea fertilizer has been used in the village. But it does not appear that the use of organic fertilizers made from leaf litter, which was used in the past, has been completely stopped.

4.5 Water consumption

Rainwater and spring water have become the main sources of water for crops. Due to some difficult situation in the supply of water, a little a smaller number of paddy fields are cultivated in the spring season compared to the main season. The villagers use the water from the springs flowing down from the mountains above the village for their daily needs.

Water for paddy fields is obtained by embankment through canals from which spring water flows. The villagers have made arrangements to get water from the springs right next to their homes. In recent times, water is taken mainly for toilets through these pipes. All the people of the village get the water required for daily tasks such as washing clothes, bathing, etc. using the pipe located at the upper end of the village.

Every year they confirm the opinion that there is not enough water for cultivation during the yala season. It is through the abandonment of paddy fields without the water required for cultivation. Cultivation activities are carried out during the high season and the required water is provided by rains.

The housewives who make clay and aluminum in every house bring drinking water to the house.

5. MAJOR FINDINGS AND OUTCOMES

The research on the environmental ethics and culture in the isolated village of Galamudunagama in Sri Lanka has yielded significant insights into the unique traditional knowledge systems and environmental practices of this community. The findings can be categorized into three main areas: economic, social, and cultural.

5.1 Economic Findings

The villagers of Galamudunagama have developed a self-sufficient economy that is heavily reliant on eco-friendly agricultural practices. The study revealed that traditional farming methods, such as the Helmalu system, are still in use. These methods not only sustain the local economy but also protect the fertility of the

soil. The villagers have successfully integrated sustainable water management practices into their daily lives, ensuring the conservation of water resources. This eco-friendly approach to agriculture demonstrates the community's deep understanding of and respect for their natural environment, which is crucial for their economic sustainability.

5.2 Social Findings

The social fabric of Galamudunagama is deeply intertwined with the natural environment. The study highlighted the villagers' strong sense of community and cooperation, which is essential for their survival in such an isolated setting. The social structure is characterized by a collective effort to maintain environmental ethics, which is evident in their practices related to water consumption and waste management. Furthermore, the younger generation, although fewer in number due to urban migration, continues to uphold these traditional values. The social dynamics of the village are also influenced by its geographical isolation, which has helped preserve its cultural heritage and traditional knowledge systems.

5.3 Cultural Findings

Culturally, Galamudunagama is rich with traditions and rituals that are closely connected to the natural environment. The study found that these cultural practices are not only a means of preserving the environment but also serve as a mechanism for social cohesion. For instance, the villagers' religious and spiritual beliefs often emphasize the sanctity of nature, reinforcing their commitment to environmental stewardship. Rituals related to agricultural cycles, water usage, and community gatherings reflect a holistic worldview where the well-being of the environment is considered integral to the well-being of the community.

5.4 Conservation and Sustainability

The research underscored the villagers' ability to adapt and innovate within their traditional knowledge system to address contemporary environmental challenges. Their practices highlight a sustainable interaction with their ecosystem, which could serve as a model for other rural communities facing similar challenges. The findings also suggest that the traditional knowledge systems of Galamudunagama have the potential to contribute significantly to broader conservation efforts and sustainable development initiatives.

The major findings of this research reveal a community that exemplifies sustainable living through its deep-rooted environmental ethics and traditional practices. The villagers of Galamudunagama have successfully maintained a harmonious relationship with their natural environment, which is reflected in their economic activities, social structures, and cultural practices. These findings highlight the potential benefits of leveraging traditional knowledge systems in contemporary environmental management and sustainable development efforts.

6. CONCLUSION

The village of Galamudunagama, which is isolated in a very beautiful environment of the Dumbara Valley, bears the current evidence of the traditional knowledge systems of the Eastern society. It is clear that many of the customs and social norms that have developed in these ecologically constructed rural areas have been created in an environment of environmental ethics.

The social contexts in this rural area have always created their own knowledge system with collective and security in mind. When paying attention to the above facts, it is clear that the social, cultural and economic characteristics of this Galamudunagama village also have the related environmental characteristics.

The environmental ethics and environmental values existing in such isolated and traditional villages should be used to create a good environment-friendly society by focusing on how they should be donated to the future world where sustainable development is expected.

7. RECOMMENDATIONS FOR FUTURE WORKS

For further improvement of conclusions as for the nature of environmental ethics and indigenous knowledge in the context of Sri Lanka, additional studies with the inhabitants of other isolated villages in different zones should be conducted. Analyzing numerous villages and their corresponding ecological and cultural practices can help specialists compare the results and find out how those practices appeared in two different conditions. This comparative analysis would give a wider view of how traditional knowledge systems respond to different environmental issues and the needs of the communities hence enhancing the body of knowledge on these practices.

It is recommended for future research to incorporate cross-sectional research to have a look at changes and trends over time. Longitudinal research would enable to see changes in TKS and EE as the villages transform into globalized ones. This paper has argued that by looking at these changes through time, one is better placed to explain why some cultures are preserved, modified or gradually dissociated by shedding light on the factors that go with the process. This approach offers enormous insight into the technological and adaptability patterns of the indigenous knowledge systems given external forces.

The potential of interdisciplinary frameworks should further enrich analyses in future research due to their positive impact on the scope and methodological sensitivity of the work that is done. Consultations with anthropologists, sociologists, ecologists and historians as well as other scholars in the social sciences may provide richer perspective in terms of correlation between environment philosophy, culture, and sustainability. For example, anthropologists might be valuable to tailor research findings concerning cultural

practices and their consequences on the environment or ecologists could give a picture of the environmental impact of traditional practices in farming. Such an interdisciplinary approach can enrich and expand the research approaches to understanding and incorporating traditional knowledge into sustainable environmental management.

Thus, another line of research comes from examining the employment of certain so-called advanced technologies alongside conventional practices. Looking at what changes to make when using renewable sources of power, sustainable methods of farming efficient water conservation procedures and incorporating indigenous knowledge of sustainability. For example, one could study the role and effectiveness of

incorporating solar water pumping system in traditional agriculture practices to know how productivity and sustainability of agriculture could be improved without largely affecting the traditionalism. This integration may also offer a good solution to the process of post-so physical revolution development of the rural territories and prevent the complete erasure of organic culture and ecosystems of such territories.

Future research in the context of the present study can contribute to an even more detailed and effective comprehension of the application of traditional knowledge systems in isolated rural areas with regard to environmental sustainability and cultural endurance.

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