

Karo ethnic local wisdom in the preservation of the hot springs ecosystem as a carrying capacity for Lau Sidebuk-Debuk nature tourism, Karo Regency

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Abstract. This study is a qualitative research with an ethnographic approach that aims to explore the cultural practices of the Karo ethnicity that affect the preservation of the hot spring ecosystem in Lau Sidebuk-Debuk Karo Regency. The hot springs in this location are one of the carrying capacities of nature tourism in Karo Regency. Through data collection through participatory observation (life in), unstructured ethnographic interviews, and the processing of data analyzed by Spradley's ethnographic analysis technique, this study then reveals the existence of cultural practices still maintained by the Karo ethnic in that location. One of them is the form of offerings (Pajuh-pajuhen) which are placed at several locations close to the flow of hot springs. This action makes the area believed to have sacred value and is very limited for humans to enter. So, the physical structure of the flow of hot springs is still maintain

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1. Introduction

Karonese is an ethnic group that has occupied the area of the Karo Regency for a long time. In this area, there is Mount Sinabung which is one of the active volcanic mountains. The majority of the Karo people choose to live around the slopes of the mountain and make a living in gardening because they are supported by fertile soil conditions. The way of life of the Karo ethnicity who has been very dependent on nature from the past until now creates a relationship order that must be deterministic to maintain the balance of life between humans and nature. The existence of this active volcanic mountain on the one hand has an impact on fears of natural disasters, but on the other hand, it also has a positive impact with the presence of hot springs around the slopes of the mountain. This condition provides benefits for the economy of the community around the mountain slopes, especially in the *Sidebuk-debuk* Village area. The hot water that comes from the hot springs, even though it has a very strong sulfur smell, is still safe to use for bathing.

This situation then underlies the emergence of so many natural hot spring baths managed by local communities or managed by the government. Sulfur water is considered to have various benefits for the health of the body, and can cure various skin diseases such as acne, allergies, tinea versicolor, ringworm, and other skin diseases. So that *Sidebuk-debuk* Village is one of the most famous areas for hot spring natural bathing tourist destinations in North Sumatra. The

development of natural bathing tourism seems to be increasing every year. New bathing pools in this village are increasing and the arrangement of tourist areas is also getting better. Indeed, this condition cannot be separated from the support ecosystem around the location of the hot springs which can be maintained properly. This providing very beneficial results for the local community. The existence of natural hot spring baths cannot be separated from various forms of customs and traditions that are still maintained from generation to generation by all local communities. So that it becomes a pearl of local wisdom for the sustainability of hot springs and the surrounding ecosystem. Substantial local wisdom is a norm that applies in a society that is believed to be true and becomes a reference in acting and behaving daily [1]. Therefore, local wisdom is an entity that greatly determines human dignity in the community [2].

2. Method

The type of this research is ethnographic research with an Environmental Anthropology approach. This is because the state of the physical environment is inseparable from the cultural contacts of the local community as a part of the ecology, both deterministic and possibilism [3]. The method used is an ethnographic method which aims to see social phenomena and local culture in detail by being part (life in) of the local community so that they can find a cultural pattern that affects environmental conditions [4]

The data collection process is carried out by (1) observation directly (participant observer) through the way of life in with local communities. This step of data collection is typical in ethnographic research. Living together (life in) will help researchers in reflecting on the true local cultural patterns. What is observed in this study is the pattern of local culture that becomes knowledge in preserving the existence of hot springs in Lau *Sidebuk-Debuk*. (2) in-depth interviews (deep interviews) are not structured in a direct form. Interviews were conducted in an unstructured and interactive dialogical manner. The researcher explores the hidden meaning of the subject and the researcher verifies each understanding before researcher provides further analysis and provides criticism. This process is referred to as sharing shared experiences by Anderson and Weitz [5]

Informants in this study were divided into two, first, the key informants consisted of owners of hot springs and people who have lived around hot springs for a long time. Other key informants are traditional leaders or elders in the local community. Second, namely ordinary informants who are immigrants who are not native to the location but live in the Lau Sidebuk-debuk area.

The data analysis in this study is divided into several stages of Spradley's ethnographic analysis (2017), namely: (1) Domain analysis is carried out to obtain an overview and holistic about the life of the Karo people in Sidebuk-Debuk Village. Furthermore, (2) taxonomic analysis is carried out after the first step is carried out. This analysis was carried out by collecting the results of observation of participation in activities and unstructured interviews, as well as documentation related to the domains studied. Then (3) the component analysis carried out is to look for differences or contrasts and decide which domains should be studied in depth related to the research. Then (4) The theme analysis becomes the final part which is the relationship between various domains (results of interviews and observations). Theme analysis is a step to holistically understanding the "phenomenon" being studied and its interpretation in it.

3. Results and Discussion

Customary Practices in influencing the preservation of hot springs

The location of Semangat gunung Village is located at the foot of Mount Sinabung. The state of the status of the mountain that is still active provides benefits for the local community with the emergence of hot springs around the slopes of the mountain. This is then responded to by the community by making hot water baths that can be used by the public. This hot spring does have a characteristic smell of bats, but it doesn't keep people coming and soaking in this hot spring because it is considered very nutritious for health.

There are 7 springs in the Semangat Gunung Village area. Several hot springs appear in the community's agricultural land area. So the ownership of the springs is then determined by the ownership of the land. Mr. Bangun (49) one of the owners of the hot springs said that the hot springs appeared on their own in the location of his plantation land. This also happens to other communities around. The informant said that there was no drilling process at all to get to the source point. Then the 7 hot springs are managed by the community with self-help funds to be used as public bathing tours. Not only private property, but there are also hot springs managed by the local government, but community-owned springs and public baths are better preserved than government property.

The condition of the community's hot springs that are still maintained cannot be separated from the local cultural pattern which is still maintained today through customs. Customs are the embodiment of the essence of life for the Karo ethnic, which is related to the hope (*sura-sura pusu peraten*) which is to be realized in the form of 3 main things, namely *Tuah, sangap, and mejuah-juah*. *Tuah* has the meaning of receiving blessings from God, having offspring, having many friends, being intelligent, and persistent, and conserving natural resources and the environment for the next generation. *Sangap* means to get fortune, and prosperity. While *mejuah juah* means healthy, prosperous, peaceful, balanced, and harmonious between humans and the environment and between humans and God.

Life in harmony with the environment is implied by customs. This is also contained in the advice or *pedah-pedah* that is always conveyed by parents to their family members, namely *Mela melket Adi Kita Kalak radat, mari si pesikap ras sijaga kutata ras lingkungenta* which means Shame of dirty if we are civilized people, let's fix it and take care of the place our life and environment. The feeling of shame when having a dirty environment is a personality that is instilled in the culture of the Karo family.

Traditions related to environmental preservation are also manifested in the traditions that are still carried out by the Karo ethnic group. strength of the Karo ethnic customs is also reflected in the implementation of *kerja tahun* which becomes a routine agenda every year. *Kerja tahun* is also a Karo ethnic tradition passed down from generation to generation by their ancestors. *Kerja tahun* is carried out every year and is a form of cooperation. tradition *kerja tahun* carried out to give thanks to God Almighty for abundant harvests, ask for blessings so that plants grow fertile, and as a form of appreciation for nature. Before the implementation of *the kerja tahun*, the community often carried out cooperation in cleaning the village (*kuta*), *motong*, cooking, and preparing for the peak of the *kerja tahun*.

Mr. Ginting (52) said that annual work has become a routine in the Karo culture which is still being preserved. Not only as an expression of gratitude, but this tradition also has an impact on strengthening community harmony and togetherness in each village. In addition, this togetherness also influences environmental preservation. Everyone put aside their usual work activities and then turned to cooperation in cleaning the village area and even repairing the hot springs for bathing. A well-maintained environment together can provide good benefits in the life of

Traditions that are still inherited have noble meanings and values that are still believed to be today, one of which is *pajuh-pajuhen*. ritual *Pajuh-pajuhen* which is found at the foot of Mount Sibayak is still believed to be by some people in Sidebuk-debuk as a form of approach to the spirit *tendi* / *begu simate sada wari*. Traditions or rituals of *pajuh-pajuhen* are carried out in areas that have springs. Traditions or rituals carried out by the local community have values and benefits that affect people's lives, besides that these traditions also have a good impact on environmental conservation which can unknowingly protect natural ecosystems from various damages.

The form of local knowledge of the Karo ethnicity that affects the preservation of the hot springs Lau Sidebuk-Debuk Karo Regency

Local knowledge of the local Karo ethnicity that can affect the preservation of the ecosystem of the hot springs is the *Pajuh-pajuhen* ritual. This ritual itself is one of the traditions that are still carried out, intending to ask for blessings, salvation, and the fulfillment of hopes/wants. *Pajuh-pajuhen* there is carried out personally (family) or as a whole in the village. The personal implementation of the *pajuh-pajuhen* ritual must be attended by the family concerned, while the family who must attend is *rakut sitelu*. *Rakut sitelu* is a kinship structure in the Karo people while the implementation is generally attended by *Simantek Kuta* in the Karo

Pajuh-pajuhen ethnicity is a form of appreciation for nature, the rituals carried out have a good impact on nature, especially on the spring ecosystem in Sidebuk-debuk without the community realizing it alone. When water. polluted the impact we will feel is that the water which is the source of our needs is no longer suitable for consumption and can be toxic to the emergence of various diseases. *Pajuh-pajuhen* is believed to have a relationship and attachment between humans and nature (mutualism). *Pajuh-pajuhen* in the form of offerings (offerings/worshipping) is carried out by people who are in misfortune and perform rituals near the springs which are expected to the whole community and visitors to maintain security and peace in the area of the springs.

The Karo ethnic believe that the spirit or *tendi* of a person is still alive even though in a different world. For this reason, it is necessary to build a house as a place for the spirit to live, known as *Lape-Lape Simate Sada Wari*. One of the most important things in the *pajuh-pajuhen* ritual in Sidebuk- debuk is the spring. For this ritual process to run smoothly this ritual must be attended by *rakut sitelu* or the Karo ethnic kinship structure consisting of *kalimbubu*, *anak beru*, and *sembuyak* or *sangkep nggeluh*.

In this ritual, the family must prepare a series of tools and materials from nature in the form of *anjap-anjap*, *bulung simalem-malem* (*galuh sitabar*, *noon*, *tabartabar*, *until sempilet*, *kalinjuang*, *belo*, *rimo mukur*). The *simalem-malem* feathers will be planted around the *anjap-*

anjap which is believed to be useful as medicine by taking seven leaves of each plant that has been planted, after that, it is sliced, prayed to God or *jinujung*, then bathed. Tradition from the ritual *pajuh-pajuhen* has a good impact on the nature of Sibayak, precisely in the Sidebuk-debuk spring. Public trust in offerings (*Encibal*) which is placed near the hot springs area, influences the infrequent people who will visit this location. So without realizing that this makes the spring ecosystem is protected from damage caused by humans.

Local knowledge in the preservation of hot springs can also be seen in the timing of the cleaning process of springs. The inspection and cleaning are usually carried out in the afternoon and are prohibited in the morning. No one knows when this provision existed, but almost all owners of hot springs follow this time of habit. However, when the team checked, it turned out that the afternoon is the time that has a concentration of the smell of sulfur. Of course, the situation becomes an indicator that the state of sulfur is not safe to use.

Hot springs that have been managed by the owner are usually not accompanied by the excavation or drilling process to find other hot springs. Karo people always put forward an attitude that is *Ula Rangap* (not greedy). The absence of drilling points around hot springs maintains the soil structure without realizing it. The chance of damage to the soil will certainly be higher if a lot of drilling is done. All hot springs appear naturally without any drilling construction process. A lifestyle that trains oneself not to be greedy without realizing it becomes local wisdom for the existence of hot springs that are not managed exploitatively. In the scientific discipline of Anthropology, local wisdom is known as *local genius*. Local genius is a term that was first introduced by Quaritch Wales. Local genius is also called cultural *identity*, namely the identity / cultural personality of the nation which refers to the collectivity of certain groups. Local wisdom also includes local cultural personalities, namely (1) cultural identity, (2) national identity, (3) indigenous culture, (4) traditional culture, and (5) personality [6]

4. Conclusion

As for the conclusions from the results of research related to the Exploration of Karo Ethnic Local Wisdom in Preserving the Hot Springs Ecosystem as a Supporting Capacity for Lau Sidebuk-Debu Nature Tourism, Karo Regency, among others, (1) Preservation of the ecosystem of hot springs is the actualization of the summarized customs. In the hope (*sura-sura pusu peraten*) of the Karo ethnic life, one of which is *mejuah juah* which means healthy, prosperous, peaceful, as well as balance and harmony between humans and the environment and between humans and God. A life that is in harmony with the environment is one that is implied by customs in the advice or *pedah-pedah* that are always conveyed by parents to their family members, (2) The existence of customs that are actualized in annual work activities becomes a forum for Karo ethnic togetherness in environmental care. The preservation of the hot springs ecosystem is also inseparable from the existence of local knowledge that is unwittingly manifested in the *Pajuh-pajuhen ritual*. In addition, the actual cleaning time is right with the condition of the springs being very concentrated with sulfur.

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