



## The Value of Local Wisdom Managing Natural Resources in Lake Toba as a Source of Learning Geography

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**Abstract.** The purposes of this study are: 1) to know the value of local wisdom and knowledge of the community in preserving natural resources in the Lake Toba area; and 2) making local wisdom of Batak community in the Lake Toba area as a learning source of geography. The method used in this study is descriptive qualitative. The source of data is obtained by observing and interviewing in Batak Toba indigenous peoples. The local wisdom values of Toba tribe in preserving the Lake Toba area are religious or spiritual, environmental care, mutual cooperation, creative, responsible and consistent. The inheritance of local wisdom occurs through an enculturation process in informal education and government socialization in managing Lake Toba. The results of this study recommend that local wisdom can be used as a learning source of geography, namely the material for sustainable natural resource management.

**Keywords:** Local Wisdom, Natural resources, Learning Resources

**INTRODUCTION** ~ In the 21st century, there is a very rapid development, namely technological development. Education, if it is not accompanied by good value education, will lead to inequality where a person is very advanced and intelligent but does not have manners and good characters. The efforts that can be done to reduce the negative impact of technological advances are to use the value present in local wisdom. Every tradition and local wisdom has the wise values to be instilled and developed in education (Supardi, 2018).

Behave wisely of individuals or groups of people towards the environment is very important. It need to be developed to maintain environmental sustainability and balance. Behave wisely is very rare nowadays in society as the result of modernization era which oppresses good moral character strongly. Morality, basically, should be the identity of a

nation. However, wisdom is still carried out in a few places only by a group of people for certain interests.

The context of indigenous peoples and regions in Indonesia has a system of values, culture and habits. This value is reflected in the attitudes and behavior of the society that come from the local values of the community. These values are integrated into the local community daily life and become a guideline in behaving and interacting with nature. These values provide a strong foundation for environmental management, making the relationship between humans and nature more harmonious and harmonious (Siswadi & et al., 2011).

The Toba is one of the Batak tribes in Indonesia. Local Batak culture and traditions are very close to nature. The cultural basic of the Toba people is respecting all living things (Gultom, 2013 in



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Marbun, 2018). Folk stories say local Batak culture and traditions are very close to nature (Butar-Butar, 2017). Respect is not only physical but sometimes also spiritual. The socio-cultural conditions of the people in the Lake Toba region live in a variety of clans and traditions that have remained firmly up to now.

Toba people live around Lake Toba. In the west of Lake Toba lies Mount Pusuk Buhit. It is a sacred mountain for the Batak because according to a myth, *Sirajabatak*, the first Batak man founded his forest (settlement place) or often defined as a village at the foot of the hill, which is called as Sianjur mulamula which believed as the origin of all Batak's village.

The pattern of relationship between humans and creators, man to man and man with their environment has been formed in Batak culture. This is related to the belief in the message of Siboru Deak Parujar to her descendants to preserve the earth and every living things on it. The message means to utilize the earth with all on it wisely (Naipospos, 2013 in Marbun, 2018).

Batak adapt to their environment. It can be seen from the shape of their house, village patterns and also agricultural patterns. Other forms seen in clothing, customs and even arts developed according to their geographical conditions. There are cultural values which used to solve environmental problems in Batak. The inheritance of cultural

values and norms as local wisdom Batak tribes have been inculcated by ancestors since long time ago.

Batak who live on Samosir Island still adhere to ancestral beliefs. Various rituals are still carried out until now which used to accomplish by ancestors in the past. For the local Batak, Lake Toba is a place for seven Batak tribal goddesses or commonly called *Namboru*. Every time they want to do activities around the lake, they usually pray and ask permission first. It aims to get blessings and the event can run smoothly. The wisdom value in the Lake Toba area is quite effective in managing natural resources and preserving the ecosystem from destructive and destructive activities (Achmad and Muda, 2017).

People who live around Lake Toba have a higher dependence on forests and lakes. This encourages higher public awareness of forests and lakes and must be limited with customary norms or rules. Forest resource management is strongly influenced by local wisdom that is owned by the local community. It aims to prevent various adverse effects on the forest and the quality of water in the lake.

Local wisdom, as exemplified by this community, should be maintained. Over time and the rapid flow of globalization, the life of the Batak also changes in accordance with the dynamics that occur. The ease influenced by globalization caused the changing of Batak people life order. It can be seen that



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only a small number of people who still adhere to the rules and values passed down by their predecessors.

## METHOD

The method used in this study is descriptive qualitative. Qualitative approach is determined as the more suitable one to used in investigating and uncovering the cultures of Batak society, so that researchers can provide a more detailed description of the situation that occurs in the research process. Data collection techniques used in this study were observation, in-depth interviews, field notes of observation, literature studies and documentation. Respondents were interviewed in depth ranging from the local government, fishing communities, local village heads, traders, traditional or religious leaders, and the Batak people who live near to Lake Toba.

## RESULTS AND DISCUSSION

The results of the study were in the form of information and the findings compiled based on the focus of the study. Each finding is analyzed to get meaning, then reduced and verified to other informants in order to validate the data. Based on the research that has been carried out, it found the forms of local wisdom of the people around Lake Toba are obtained.

### 1. Maintaining Good Attitudes and Polite Speech

The community who live around Lake Toba has rules to protect the Lake Toba area,

especially in the religious field. The protection can be the prohibition of polluting the Lake Toba area, speaking politely, do not defecating carelessly (don't excuse firstly, and speak foul language say, etc). The community still believe that Lake Toba's guards must be respected. Thus, if they are violated, they believe to be unfortunate because they do not respect the guardians of Lake Toba.

### 2. Preservation of forests around the Lake Toba

The sustainability of a forest is very dependent on the people who live around the forest. The level of dependence around the forest community is very high for their lives both in terms of economic and ecological. This will clearly encourage the village community to keep the forest from generation to generation. Based on the local knowledge of the community in Simanindo Subdistrict, which lives around the forest in the Lake Toba area, it states that there is a prohibition to cut down trees that have been issued by the forestry service. There is a customary forest prohibition that makes the community look after the forest well. The ban on *Homang* and *Sigulambak* who are still trusted is the guardian of the trees in the forest. People in the Lake Toba area realize that cutting down trees will damage the environment.

### 3. Prohibition of Polluting the Lake

This ban arises from the awareness and mutual agreement of the society who live



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around Lake Toba. The societies realize the importance of maintaining that the Lake Toba ecosystem is not polluted by garbage originating from fishing activities and household garbage from community settlements around Lake Toba.

Environmental preservation efforts of the society show the ecological intelligence attitude by making a ban not to pollute Lake Toba because the community realizes that they are the protector of the environment. As expressed by Gardner (2013, p. 34) ecological intelligence is the ability of humans to understand natural conditions, show concern for the environment and show human sensitivity to nature.

### **4. Prohibition of taking or killing protected animals in the Lake Toba Region**

The Lake Toba area is a place of various living creatures and a reproduce spot for several species, namely gibbons, mouse deer, jungle cats, leopards, wild pigs, monitor lizards, tapirs (*Tapirus indicus*), Forest Goats, Deer, and Sumatran Tigers. There are also protected species of birds, namely hornbills, eagles, kuau, owls, parrots, finches, cages, turtles, and lathes. This applies both to local communities and immigrant communities to maintain the potential of animals. Animals found in the Lake Toba region contribute to the survival of the ecosystem.

### **5. Local Wisdom of Fishing**

The local wisdom of fishing around the Lake Toba area is intended to preserve the

kinds of fish in the area. The ancestors of the Bataknese realized the limitations of Lake Toba as a place to live fish. Some of the rules for fishing local wisdom that apply in the Lake Toba area are: a) Fishing limitation: there is an agreement that fishermen can not catch too many fish. The community is only allowed to catch enough fish for their own consumption, b) No Fishing Area: several locations in Lake Toba are declared as No Fishing areas. Violations of these rules will be punished by the king of the region or magical sanctions such as *the Sitapigagan* and *Gudalap* legends, c) the size of fish that can be caught: fishermen and the community must return small-sized catch fish to Lake Toba.

### **6. Using of Traditional Fishing Tools**

The environmentally friendly fishing used by the people in the Lake Toba area are fishing rods, nets, traps and spears. It aims to keep the sustainability of fish potential and the waters ecosystem of Lake Toba. Based on the results of the research, the community still adheres all those fishing tools.

#### **a. Use Local Wisdom as a Learning Resource of Geography**

One way to introduce local culture in the learning process is through learning resources. The use of learning resources derived from local wisdom values is one solution in reshaping the character of students.



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Local wisdom in education environment has not been much revealed. Customs in the form of local wisdom about nature cannot be extinct. Preservation of these noble values needs to be instilled and socialized to the next generation. Therefore, special excavation of original knowledge in a community is becoming increasingly important to investigate. The study of environmental preservation in the Lake Toba area can be used as a transfer of value to shape the character of students to understand the importance of natural resource management.

Students knowledge is generally limited to learning resources from teachers. The implementation of education like this does not encourage students to explore and to develop their knowledge and their potential. Reintroducing the values of local wisdom in schools is proven able to strengthen local culture so that it is not lost and abandoned by the next generation.

The consideration of incorporating the value of local wisdom as a learning source in school basically aims to fortify students for external cultural influences that are not necessarily in accordance with the order and norms in society. Furthermore, the inclusion of local wisdom content into learning resources aims to realize character education, especially the environmentally caring character.

Learning based on local wisdom introduces students to the learning environment and certainly will enrich the repertoire of geography teaching

materials from the surrounding environment. Geography learning is essentially biased from various dynamics and environmental conditions. The environment in geography learning is an easy-to-find aspect of learning resources, as the explanation of the environment as a learning resource can be divided into natural environment, social environment, cultural environment and psychological environment (Darsono, 1995 p.21).

Based on observations and interviews, in the Lake Tobaregion has become a tourist study place by several schools, most of them are schools from the North Sumatra region. Other learning objectives besides study tours are visiting as a process of visualizing knowledge that has been obtained by students in the class.

### **b. Local Wisdom Values of Batak Communities in the Lake Toba Region that Are Relevant As Geography Learning Resources.**

Geography learning process which is related to environmental material is expected able to enrich students' knowledge and awareness in protecting the environment. The development of geography teaching materials by raising actual issues that occur in the community through educational institutions is very strategic especially to publish local values and open a pattern of thinking about the real world around it. The values of the local wisdom of the Bataknese in managing natural resources in the Lake Toba can be



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utilized in the character education of senior high schools in Samosir Regency.

The inheritance of environmental wisdom will be effective in fostering students' understanding about the importance of the environment for themselves and the community. Communities, especially students, are expected to be strong in global competition by not forgetting their identity, not destroying the environment and staying in life harmony. The local wisdom of the Tobanese has values that can be used as learning resources, namely:

- 1) Religious, the Tobanese community in the Lake Toba region upholds religious values in every behavior. The religious value in the ecosystem of Lake Toba is the people still uphold the value of religion in each activity. Belief that maintaining the lake Toba ecosystem will be rewarded is still the orientation of people in managing Lake Toba ecosystem in Samosir. Belief that if we damage Lake Toba ecosystem will get sin into consideration of people in managing Lake Toba ecosystem. People still believe in the presence of spirits or guards of the Lake Toba area. This was realized when carrying out certain ceremonies to ask permission from the authorities who were trusted by the guardians of the Lake Toba area.
- 2) Environment Care, the love of the Batak community for the environment can be seen from the provisions of managing natural resources in the Lake Toba region.

- 3) Collaboration (*Gotong royong*), the Toba Batak community always prioritizes mutual cooperation among citizens if there are activities to be done, such as cleaning the environment around the area of residence. The managing of Lake Toba ecosystem is carried out jointly by the community. The activities of Lake Toba ecosystem are sustainable because the Community considers that the ecosystem of Lake Toba is inherited wealth.

- 4) Creative, the Batak tribe in the Lake Toba region are very creative. The form of creativity is the manufacture of *ulos* cloth and souvenirs that are produced both for personal needs and for sale. In addition there are creativities in 15 degree slope land management with terracing systems.

- 5) Responsibility, as an indigenous citizen, tobanese must obey all customary rules and being responsible as citizens in complying with various regulations from the government.

- 6) Consistent, Batak people are consistent if they start something and try to solve it thoroughly, including being consistent in preserving the environment of the Lake Toba region.

## CONCLUSIONS AND RECOMMENDATIONS

### Conclusions

Batak Toba people around the area of Lake Toba is one of the people who have local wisdom in the activities and



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traditions. The local wisdom can be seen from the patterns of settlements, patterns of agriculture and art. The values found in the local wisdom of the Batak Toba people in the management of the Lake Toba area are. These values match the KI and KD in the class X, XI, and XII. Batak Toba Local wisdom can be a source of learning for high school students in geography subjects. and XII. The local wisdom of the Toba Batak can be a learning resource for high school students of Geography subjects.

## Recommendations

The application of local wisdom of managing natural resources in the Lake Toba area needs to be done by teachers as a geographic learning resource in Samosir Regency. The creativity of teachers in teaching is great if it includes the values of local wisdom found in Batak Toba tribe in the preservation of sustainable natural resources. Application of local wisdom values of Batak tribe in the management of Lake Toba ecosystem in geography learning in high school is expected to preserve traditional culture will be maintained.

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