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Adaptation of the Toba Batak community in conservation of the Lake Toba environment

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ABSTRACT

This study aims to examine the adaptation of the Toba Batak community in the preservation and maintenance of the Lake Toba environment in Samosir Regency. The occurrence of environmental damage to Lake Toba is due to the behavior of the Toba Batak community influenced by its socio-cultural values towards the Lake Toba environment. The method used in this research is a qualitative research method. With qualitative methods, researchers conducted in-depth interviews with informants, namely the Toba Batak community in Samosir Regency. The informants interviewed in this study were 13 people representing community leaders, religious leaders, government, NGOs, and environmental activists living in Samosir Regency. After conducting interviews, researchers carried out data analysis, starting from data collection to drawing conclusions. In addition to conducting in-depth interviews, researchers also carried out participatory observation and literature study. The results show that the occurrence of environmental damage to Lake Toba is due to the behavior of the Toba Batak people who are influenced by maladaptive socio-cultural values to the Lake Toba environment.



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Introduction

Environmental damage in North Sumatra occurs because of the imbalance in development that prioritizes economic growth without paying attention to balance with social, cultural and environmental development. Natural resources and the environment are exploited massively without considering the social and physical impacts. As a result, environmental damage tends to show an increase (Abdoellah, 2016). The same problem was also found in development in Samosir district because pursuing economic growth various companies, industries, livestock, floating net cage businesses and exploitation of natural resources were established. This causes environmental damage to Lake Toba which has a negative impact on environmental sustainability (Situmorang, 2013).

Samosir Regency consists of a land area with an area of 144,425 hectares (68.80%) and a water area of Lake Toba covering an area of 62,480 hectares (30.20%) with a population of 124,543 people (BPS, 2021). The worst environmental damage is around the waters of Lake Toba. Pollution of Lake Toba comes from domestic activities (industry, livestock, agriculture, fisheries, forest management and uncontrolled household waste resulting in the volume of Lake Toba being increasingly polluted (Kim et al., 2013).

The results of Simatupang's research (2016) found that Lake Toba is undeniably damaged. The environmental degradation of Lake Toba occurs because of human activities and economic activities that are

allowed by the government. Lake Toba water is increasingly polluted and damaged by the presence of PT. Aqua Farm Nusantara through the cultivation of floating net cages destroys the environment of Lake Toba, because every day it uses 200 tons of fish feed. Another threat is logging activities carried out by PT. Toba Pulp Lestari. This company is indicated as the main cause of Lake Toba's water shortage, due to carrying out logging of pine forests in the catchment area of Lake Toba and obtaining industrial forest tenure rights from the Ministry of Forestry by planting eucalyptus trees in the hinterland area of Lake Toba (Keraf, 2010).

The results of research by Sarjono and Simanjuntak (2013), in the Lake Toba area and its surroundings there is environmental damage due to environmental problems of Lake Toba and Samosir district getting worse due to logging, no conservation, environmental conservation, hill fires, illegal logging, water pollution of Lake Toba. Toba, an unorganized environment, garbage disposal, fish farming, local community activities and the issuance of industrial permits. The results of the research by Siahaan, Manurung and Hasibuan (1987) found that the presence of industry around Lake Toba brought economic losses with a double negative impact on the community around Lake Toba, including: ecosystem disturbances, loss of community livelihoods, spatial shifts, damage to facilities. and infrastructure, forest destruction, disturbance to the customs and morals of the community, social conflicts, human rights violations, environmental pollution and other negative impacts.

The challenge in managing Lake Toba's water resources is how to preserve the environment and provide clean water to meet the needs of the community in a sustainable manner. The problem of water availability in Lake Toba is threatened due to the presence of PT. Inalum which requires a lot of water. The decrease in water level is caused by the degradation of the Lake Toba catchment area, environmental conditions that have been damaged, changes in land use and forest conservation. Forest damage around Lake Toba is getting worse because the remaining forest area is only 15.8% of the catchment area of Lake Toba (Sihotang, Purwanto, Widiatmaka, & Basuni, 2012).

Based on research findings from Silaen (2006), Hasibuan (2020), Situmorang (2013), that the existence of this company causes environmental damage to Lake Toba, namely: Since 1976 PT. Inalum. The presence of this company resulted in a decrease in the water discharge of Lake Toba + 2 m. Since 1983 PT. Inti Indo Rayon Utama which changed its name in 2003 to PT. Toba Pulp Lestari. This company carries out logging in the Lake Toba catchment area. Since 1995 PT. Allegrindo Nusantara is engaged in pig farming, located in Purba District, Simalungun Regency, disposing of waste (dung) 1,200 tons/day to Lake Toba via the Silali river. And Since 2006 PT. Aqua Farm Nusantara, operating in Lake Toba, Huta Ginjang Village, Simanindo District, Samosir Regency, is engaged in fish farming (floating nets). This fishery business disposes of the rest of the fish feed & 100 tons every day into Lake Toba.

The existence of these companies causes damage to the environment of Lake Toba due to increasing environmental pollution and barren land due to exploitation of natural resources that does not pay attention to ecosystems and environmental sustainability. In line with the above, the results of the study by Causey (2006), found that the current environment of Lake Toba is damaged due to human activities and some Batak Toba cultural values which are not environmentally friendly and ignore the existence of Lake Toba in their lives (Basmar et al., 2021; Causey, 2006; Husnul Isa Harahap, 2019).

The Lake Toba environment is a place where the Toba Batak people live and work and utilize natural resources to support life. The Toba Batak people cannot live their lives if the Lake Toba environment is not properly maintained. The relationship between the activities of the Toba Batak people and the Lake Toba environment is bridged by their cultural values. This means that through Batak Toba cultural values, they will adapt to the environment by utilizing available natural resources with environmental ethics in order to carry out their lives. Understanding the relationship between socio-cultural values, adaptation, and the harmony of human relations with the environment can be seen based on the results of Ariyadi's research (2012): (a) that the cultural background of the community is one of the important factors for the process of cultural adaptation, and (b) adaptation Community culture is influenced by the presence of early adapters, conformity to community needs and local wisdom values that are adhered to.

For the preservation of the Lake Toba environment, innovation and a review of cultural values and the interaction of the Toba Batak community with their environment are needed. The importance of reinterpreting cultural values and changing behavior of the Toba Batak community is due to indications of a weakening of understanding of socio-cultural values among the Toba Batak community about the importance of the environment Causey (2006). The conservation of the Lake Toba environment when analyzed from a cultural perspective is strongly influenced by the level of understanding and meaning of the negative and positive Batak Toba cultural values on the environment. Such understanding greatly affects the adaptation of the Toba Batak people to the Lake Toba environment. Adaptation can be interpreted as a coping strategy carried out by

humans in their lives to respond to various changes in ecosystems, biophysics and socio-cultural systems in general. Humans have extraordinary flexibility in adapting themselves to various environmental conditions (Yarmoshuk, 1994). This view implies that the Toba Batak community who live around Lake Toba if they want to survive, absolutely adapt, change their behavior towards changes in the Lake Toba environment. To make adjustments to the Lake Toba environment, the Toba Batak community took various adaptation strategies. Optimizing the adaptation of the Toba Batak community to the Lake Toba environment, it is necessary to utilize all existing potential, including local wisdom, because local wisdom has a strategic role in environmental development and preservation.

Method

To analyze the socio-cultural phenomena of the Toba Batak community related to the adaptation and maintenance of the Lake Toba environment, qualitative research methods were used. Through the use of qualitative research methods, researchers conducted in-depth interviews with informants who were determined based on purposive sampling technique. Researchers selected informants who were considered to have in-depth knowledge and specific knowledge about the adaptation of the Toba Batak community in environmental conservation. Through the sampling technique, interviews were carried out with 13 informants representing all members of the community who were considered to know the process of adaptation and maladaptation to the preservation of the Lake Toba environment. Before the research was carried out, the researchers first compiled research instruments in the form of guidelines and interviews and observations. After conducting interviews, researchers carried out data analysis, starting from data collection to drawing conclusions. Data analysis in the study was carried out by data collection activities, data reduction, data presentation, conclusion drawing (data verification) (Miles and Huberman, 1992). This data analysis technique was chosen because it is considered appropriate to present and describe research data related to the adaptation of the Toba Batak community in maintaining and preserving the Lake Toba environment.

Results and Discussions

Overview of the research site

Samosir Regency was formed in 2004 based on Law No. 36 of 2003, Inaugurated as an autonomous region. Samosir Regency consists of 8 sub-districts with the largest population in Pangururan sub-district as many as 34209 people and Simanindo sub-district as many as 22766 people. The least populated sub-district is Sitio-tio sub-district with 8172 people, followed by Harian sub-district with 9397 people. The population of Samosir district is 136441 people (BPS, 2021).

Based on ethnicity, the majority of the population of Samosir district comes from the Toba Batak tribe, followed by Simalungun and other ethnic groups. Based on data from the BPS in 2021, 99% of Samosir's residents are Batak Toba, 0.5% are Simalungun, and 0.5% are other ethnic groups. To find out the population based on ethnicity in Samosir Regency, it can be seen in the contents of the following table:

Table 1. Ethnicity of the Residents of Samosir Kabupaten Regency

No	Suku Bangsa	Jumlah	Persentase (%)
1	Batak Toba	1350767 Jiwa	99%
2	Simalungun	682,205 Jiwa	0,5%
3	Suku Bangsa Lain	682,205 Jiwa	0,5%
	Jumlah	136441 jiwa	100%

Source: BPS, 2021

If analyzed from the perspective of the dominant culture in Samosir Regency is the Toba Batak culture. Dominant culture is a culture of a certain ethnic group, the rules of which are mostly used as guidelines for living in a wider environment or society consisting of one or more ethnic groups, with the criteria, (1) demographic criteria, the population of members of the ethnic group is at most many in the community, (2) the culture is a local culture whose rules are standardized as a guide for relating and interacting in public places and, (3) is a place of power, meaning that people from these ethnic groups have priority to occupy the most important positions in society (Brunner, 1974). Referring to this view, the benchmark of behavior that is used as a reference in everyday life is the cultural value of the Toba Batak. This means that all ethnic groups living in Samosir use Batak Toba cultural values, including immigrant ethnic groups. This behavior will affect the adaptation of all ethnic groups living in Samosir to the Lake Toba environment (Napitu et al., 2021).

Cultural and Environmental Adaptation

Adaptation is discussing the adjustment between organisms (living things) with the environment as a whole. Nature as a whole has an ecosystem in which there are elements / parts that are related, interdependent and there is a reciprocal relationship between the parts and the whole. Adaptation can be interpreted as an effort to unite with the environment and adapt to one's environment bringing cultural values and norms that control behavior and the role it plays (Daeng, 2000).

The adaptation process is a behavioral system that is formed as a result of the process of human adjustment to the surrounding environment (Alland, 1975). Adaptation as a process, where organisms or groups of organisms face changes that are responsive to the formulation, structure and composition that regulate "homeostasis", both short-term environmental changes, and long-term environmental changes (Bennet, 1976).

Rappaport (1967) distinguishes between adaptation and maintenance systems. Adaptation is understood as a pattern of behavior that is a response to environmental changes. While the maintenance system is a behavior that exists in the system that is stimulated to be able to make adjustments to conditions that arise, such as maintaining a constant state or in a state of "homeostasis".

Human adaptation to the environment in the form of repeated actions as a process of adjustment to the environment. Adaptation is not only a question of how to get food from a particular area, but also includes the problem of transforming local resources by following the standard model of common human consumption (Bennett & Milner, 1969). Ahimsa Putra (2003) states that adaptation is a general concept referring to the process of adjustment to changing circumstances. The adaptation process is the changes introduced in a relatively long time through a series of repeated actions.

In preserving and maintaining the natural environment, the general public chooses the relationship between humans and nature because human prosperity depends on the natural environment. Therefore it is necessary to protect the natural environment, meaning the same as protecting yourself. But if on the contrary, destroying the natural environment means that we damage ourselves and have an impact on the quality of life, comfort and health of all. Humans are part of the whole natural system, so human activities will cause significant damage to nature. Therefore, humans must live in harmony with nature in order to live together. Otherwise, the natural environment will react adversely to humans who do not appreciate it. A damaged environment will bring about a crisis in agricultural production and agricultural production relies heavily on well-maintained natural resources (Choenkwan, Fox, & Rambo, 2014).

A similar opinion was expressed by (Little, 1995; Schutkowski, 2001) stating that adaptation is the ability of an organism to adapt to a changing environment such as the ability to survive and continue offspring. Adaptation is always oriented towards the environment or occurs in an environment related to nature and socio-culture. To deal with social, cultural and environmental problems, an adaptation approach to social behavior is used (Bennet, 1996).

Toba Batak Socio-Cultural Values

Community is a naturally formed social group that occupies an environment together and interacts with each other (Geertz & Supomo, 1983). The Toba Batak community is one of the ethnic Batak ethnic groups who mostly live in Toba Samosir Regency following a patrilineal lineage, the dalihaan na tolu kinship system and the clan. The Toba Batak community adheres to the dalihaan na tolu (three furnace) kinship system, namely: manat mardoman tubu (be careful with the clan), somba marhula-hula (both to the giver of the wife) and elek marboru (persuading or ingratiating the recipient). wife). This means that the Toba Batak people must be approached with caution, respect and persuasion or ingratiation. These three attitudes are needed in social interaction, especially if they want to involve their participation in various activities. With caution, mistakes can be reduced, with respect for others, and with persuasion, we do not impose our will on others (Sibarani, 1999).

The philosophy of hamoraon, hagabeon and hasangapon are life goals and cultural values that are upheld by the Toba Batak community. This philosophy is the spirit in carrying out all daily activities wherever they are. This philosophy of life on the one hand becomes a force in development, while on the other hand it can be used for certain purposes and does not support development. Thus the cultural value of Batak Toba in today's life is like a double-edged sword (Aditjondro, 2006). Understanding Toba Batak culture in a broad sense cannot be separated from understanding the values contained in the culture. Cultural values are a series of abstract conceptions that live in the mind about what is considered important and valuable and what is not considered valuable. This cultural value system serves as the highest guideline for human behavior and is guided by the cultural value itself (Koentjaraningrat, 1990). Conservation of the Lake Toba environment is an important and inseparable part of the socio-cultural values and behavior of the Toba Batak life. Therefore, it is very important to use a socio-cultural and behavioral approach to optimize environmental conservation.

Behaviors and attitudes related to environmental preservation of Lake Toba, for example; planting trees, maintaining flora and fauna, a clean living culture, disposing of garbage in its place and discipline in behavior will be very valuable values in environmental conservation. Awareness of the importance of environmental conservation will not occur if there are no environmental values found in him that can raise awareness together for environmental conservation (Iskandar, 2013). The application of cultural values in the life of the Toba Batak community in environmental preservation requires the courage to carry out renewal of cultural values against old habits which are carried out through honest, rational and objective changes in attitudes towards what has been and will be implemented through self-reflection. This means that the Toba Batak community must evaluate cultural values that are progressing and regressing. Old cultural values that were used in everyday life but were counterproductive for environmental preservation should be abandoned and cultural values that progress are optimized for use so that environmental conservation is well maintained.

Toba Batak cultural values that have regressed towards environmental conservation today are: *dalihan na tolu*, *huta* (marsipare forestabe), *horja*, *marsilapari*, *marsiurupan*, *pago-pago* customs, *habungan*, *parmahana*, *harangan*, *toba na sae* and *poda na lima* (Silaen, 2006; Situmorang, 1982; Lubis, 1996; Siahaan, 1987; Simanjuntak, 2015). The philosophy of *poda na lima* (teachings, advice and teachings that are 5 (five)) related to environmental preservation is absolutely necessary to be developed and implemented at this time, consisting of: (1) *Paias roham* means to clean your soul, your mind, your feelings, your heart, the value of taste and character. (2) *Paias pamatangmu* means clean your body, and maintain your physical fitness. (3) *Paias parabitanmu* means cleaning clothes and tidying up your makeup. (4) *Paias bagasmu*, clean your house and your home environment. This advice asks the Batak people to always be environmentally friendly. (5) *Paias pamatangmu*, clean your environment in a physical sense, humans are taught to always carry out a harmonious, harmonious, balanced life with the environment (Lubis, 1996).

Toba Batak cultural values that are maladaptive to environmental conservation, namely: *hamoraon*, *hasangapon*, *hagabeon*, *mata hepengon*, *elat*, *teal*, *late*, *hosom*, *selfish*, *mokus*, penetrates, does not care about the environment, does not care about cleanliness, does not maintain local wisdom and lacks discipline (Simanjuntak, 2015). These cultural values color the lifestyle, character and mentality of the Toba Batak people in their daily lives. Therefore, the existence of these cultural values needs to be redefined in the context of the present and progress, so that the Toba Batak community can be more adaptive to the environment which is manifested in their daily behavior and interactions. That in the context of contemporary and modern life, the noble values of Batak culture should be straightened out which includes all values relevant to the development of society, both cultural values, local wisdom, politics as well as ethical and aesthetic values that live in society, for example: honesty, cooperation, work hard and others (Simanjuntak, 2015).

Utilization of traditional wisdom is very important in environmental conservation efforts. Traditional/ecological wisdom is all forms of knowledge, belief, understanding, insight and customs or ethics that determine human behavior in interacting reciprocally with its ecosystem in an ecological community that is wise and wise (Iskandar, 2014). Traditional wisdom is the behavior, values and norms of people's habits that have been passed down from generation to generation and are useful in past, present and future life, cannot be separated from human life and the environment. Local wisdom in environmental conservation functions: (a) Institutionalize and re-empower traditional local wisdom in the form of behavior, values, norms, traditions and habits of the community related to the environment. (b) Be aware of modernization and the emergence of a society that is at high risk of environmental conservation. (c) Strive for sustainable society through a systems approach in environmental management and sustainable development (Dwi Susilo, 2008).

The original ideal life goal of the Toba Batak people is formulated in a series of three words that existentially support each other, namely: achieving wealth, many descendants and honor (Simanjuntak, 2009). In the life philosophy of the Toba Batak people, power is reflected in the life goals of *hamoraon*, *hagabeon* and *hasangapon*. Wealth is used to obtain power-laden status, the greater the accumulation of wealth, the greater the power obtained. To achieve this ideal life goal, today's Toba Batak people often justify all means. If this is related to the development policies and environmental conservation activities of Lake Toba, such behavior is very contrary to environmental conservation. Therefore, it is not surprising that the condition of Lake Toba is not getting better, but increasingly alarming.

Toba Batak Adaptation Strategy in Maintaining the Lake Toba Environment

In general, adaptation strategies can be interpreted as ways that individuals or groups of humans both consciously and unconsciously respond to various challenges in order to survive. Adaptation strategy can be interpreted as human behavior in allocating and utilizing the resources they have to deal with problems as an appropriate choice of action for adjustment to the socio-cultural, economic and ecological environment in which they are located (Marzali, 2003). There are three key concepts in adaptation strategies, namely: (a) Adaptive behavior is a form of behavior that shows the adjustment of ways to achieve goals, make choices,

and refuse to take action or involvement with the intention of adapting. (b) Action strategies are actions that are specifically planned in an adjustment effort to achieve progress which is the goal in the process of utilizing resources, (c) Adaptive strategy refers to the actions that humans choose in their decision-making process because their success is predictable (Bennet, 1976).

Furthermore, Rambo (1993) states that humans will carry out strategies that are in accordance with their cultural knowledge to deal with change. People who have the right strategy will succeed, and those who don't have the right strategy will fail. The adaptation strategy is at the actor's awareness level while the adaptive process is formulated by the researcher (Ahimsa Putra, 2003). This strategy does not always succeed in solving the problems faced by humans. Understanding of adaptation strategies reflects the cognitive form that is learned through socialization from supporters of a culture, which is then expected to be able to provide explanations for existing social phenomena (Poerwanto, 2006). If the strategy can be implemented properly by the cultural community living in one place, then the adjustment and harmonization between humans and the environment will be well maintained. Adaptation at the social level into adaptive behavior, strategic action and the synthesis of the two is called adaptive strategy. Adaptive strategy is a component of strategic action or specific actions with predictive levels of success, which are selected by individuals in determining their decisions (Hardesty, 1977).

Starting from this view, in setting an adaptation strategy in environmental conservation in Lake Toba, various modern approaches must be considered in the form of using advanced technology that is environmentally friendly, adopting a socio-cultural approach strategy and carrying out adaptive behavior towards the environment. In addition, the current environmental conditions of Lake Toba must be considered, the availability of natural resources and other resources that can be used optimally to meet the needs of life without compromising the environmental sustainability of Lake Toba.

The adaptation strategy of the Toba Batak community to the changing environment of Lake Toba is an effort to meet the needs of life and overcome the problems they face in order to survive. Changes in biophysical environmental conditions, technology, economy, livelihoods, socio-cultural values, and others require the Toba Batak community to take various strategies by realizing diversification of various types of livelihoods and utilizing existing natural resources for their daily needs. The adaptation strategy aims to optimally meet the needs of the Toba Batak community. The success of this adaptation strategy is strongly influenced by various factors that exist around Lake Toba, including: cultural values, attitudes of the Toba Batak people, availability of natural resources, population growth, use of technology, extreme seasonal changes, availability and conditions of agricultural land, conditions of Lake Toba environment and other supporting factors.

The Lake Toba environment is one of the most important elements in the life of the Toba Batak community, because the Lake Toba environment is not only a place for them to move, but the environment plays a role in supporting the life of the Toba Batak community which takes place continuously. Through this interaction, it is ensured that the environmental conditions of Lake Toba will also be influenced by the behavior of the Toba Batak community. Therefore, the attitude and behavior of the Toba Batak community will determine whether the environment of Lake Toba is good or bad.

The interaction between the Toba Batak community and the Lake Toba environment is closely related to the ecology and ecosystem of Lake Toba. An ecosystem is a unified order formed by the interaction of reciprocal relationships between living things (biological) and non-biological elements (Manik, 2016). Referring to this view, the Toba Batak community who live in Samosir district so that they can continue their life and survive must interact reciprocally with the local environment. In carrying out this interaction, they are adaptive without damaging the environment with the aim of creating a balanced reciprocal relationship between the Toba Batak community and the Lake Toba ecosystem.

Environmental conservation has two meanings: a. that what is preserved is the function of the environment itself, meaning that the environment can change due to development but the function of the environment must be maintained, b. that what is preserved is the environment itself, meaning that development activities should not be carried out in that environment because its function cannot be preserved by the existence of development activities (Manik, 2016). The life of the Toba Batak community cannot be separated from the Lake Toba environment, where they are located in both the natural and social environment. The Toba Batak community and other living things interact with the Lake Toba environment. The Toba Batak community affects their environment and vice versa they are also influenced by the Lake Toba environment.

The Toba Batak community is not only able to change the environment but on the contrary the Lake Toba environment can also have an influence on them. The Toba Batak community lives on environmental elements in the form of: air for breathing, water for meeting household needs and other needs and land for

housing and agricultural production. Therefore, the Toba Batak community is an integral part that cannot be separated from the Lake Toba environment because without the Lake Toba environment they will be difficult to continue and maintain their lives. The interaction of the Toba Batak community with the environment takes place in a balanced condition. The Toba Batak people always try to adapt their lifestyle to environmental conditions. The behavior of the Toba Batak people towards the Lake Toba environment is marked by the attitude and wisdom of action towards Lake Toba which is manifested in various traditions that are obeyed by the entire Toba Batak community.

Starting from the various views on the environment above, if it is related to the life of the Toba Batak community, it cannot be separated from the existence of the environment wherever they are. Therefore, the good or bad of their life is very dependent on the good and bad conditions of the physical environment of Lake Toba and its surroundings. For this reason, a wise attitude is needed, namely that the Toba Batak community in Samosir district is not prohibited from utilizing the natural resources that exist around Lake Toba on the condition that they must maintain and preserve them. The importance of maintaining natural resources and the environment in a planned and sustainable manner so that future generations can enjoy natural resources and a good environment.

Approaches to Conservation of Lake Toba

Various efforts have been taken to preserve the environment of Lake Toba. One of these efforts is carrying out reforestation, nature conservation in the Lake Toba catchment area and other environmental conservation activities. Nature conservation is a human effort in managing nature to obtain the maximum profit in a sustainable manner. Nature conservation includes aspects of protection, maintenance, preservation, sustainable use, restoration and strengthening of the environment in an effort to achieve a balance between environmental, economic and socio-cultural interests of the community (Iskandar, 2014). Nature conservation efforts mean not being unable to utilize natural resources for welfare on the condition that the natural environment must be properly maintained.

Environmental conservation efforts in general, including the preservation of the Lake Toba environment, have two dominant concepts, namely: humans as environmental conquerors and humans as environmental fighters and as designers of environmental sustainability. The understanding consists of: Anthropocentric understanding states that humans are rulers over nature who can do anything to nature. This view gives birth to exploitative attitudes and behavior because nature is not considered to have meaning in this life. Such an attitude is very contradictory to environmental conservation because (a) Ignoring environmental problems that do not directly touch human interests, (b) Human interests for achievement are always changing and vary in degree, (c) What humans think about are only short-term interests. and oriented towards economic interests (Keraf, 2010).

Maintaining the balance of the environment with the welfare of the community is pursued without overexploiting natural resources and other species. This is in line with sustainable development which is based on integrated ecological, economic and socio-cultural development. Sustainable development is essentially an integrated development between socio-cultural and environmental economic development with other developments. This means that environmental development does not stand alone but is an integral part of the development of other sectors (Soemarwoto, 2008).

All communities living around Lake Toba and even outside the Lake Toba area in an effort to preserve the environment should avoid an anthropocentric approach because it has the potential to damage the environment. The approaches used in preserving the environment of Lake Toba are biocentric, ecocentric and ecofeminism approaches. If this approach is used in the policy of preserving the environment of Lake Toba, which is currently polluted, its condition will gradually be restored.

Conclusions

Based on the analysis above, the writer can conclude that, In preserving the changing environment of Lake Toba, it is necessary to revitalize Toba Batak cultural values that are not in accordance with environmental conservation so that these cultural values can support the adaptation of the Toba Batak community to the environment. The adaptation of the Toba Batak community to the Lake Toba environment is absolutely necessary because the adaptive behavior of the entire Toba Batak community in Samosir Regency has a positive effect on the Lake Toba environment. The adaptation strategy adopted by the Toba Batak community in maintaining the Lake Toba environment in Samosir Regency is pursued by re-activating the values of local wisdom derived from the socio-cultural values of the Toba Batak so that the Lake Toba environment can be well maintained. Obstacles faced in maintaining Lake Toba, it is still found that some of the cultural values of the Toba Batak do not support environmental conservation and various community activities such as the

tourism industry, animal husbandry, and other home industries that have the potential to damage the environment of Lake Toba.

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