

## Flora and Fauna in Danau Singkarak (Ecolinguistic Study)

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### **Abstract:**

*This article is focused on the ecolinguistics which discusses about the ecology study and linguistic study. This study discusses about the flora and fauna around Dana Singkarak area. It aims to give the name of plantations and animals which live so long near the lake. The animals are also so a little and nearly endanger because many people search the animals and plantation. They find out some animals to sell in the market because the cost is expensive and the animals meats are so delicious and full of vitamins so that there are some animals that have endanger and difficult to find. Then the plantation also nearly endanger because there are so many pollutions either air pollution or water pollution that have made the humans as the predators of them. This search has found some the unique plantations. So in the context of preserving the habitat of flora and fauna around Danau Singkarak. Because of that, ecolinguistics is to rename the flora and fauna to write in the dokumen or library and it will be useful for the next generations.*

### **Keywords:**

*Ecolinguistics; ecology; linguistics*

## I. Introduction

The language plus ecology is the language ecology. The first serious sociolinguistic tried to elaborate the language ecology pleaded for the linguistics to be grounded in the societal context and the change. The ecological approach to the language considered the complex web of the relationship that existed between the environment, the language, and the speakers. The environment means that the physical subject, the biological, and the social environment (Crowley & Bown, 2010; A. F. Fill & Penz, 2018; Skutnabb & Kangas, 2011)

If we talk about ecolinguistics, it automatically discuss about the interdisciplinary studies that focus on the relationship between the ecology study and the linguistics study. In the discussion and its nature involves the study of sociology, anthropology, psychology. In addition to the social aspects, ecolinguistics considers the ecological aspects of the language spoken by speakers in a society. Socioecological aspects greatly affect the maintenance, balance, and environmental inheritance of future generations. Ecolinguistics or language ecology, seeks to create a healthy environment, by incorporating local ecological wisdom into the language (Crowley & Bown, 2010; A. Fill & Muhlhausler, 2001; Muhlhausler, 2020; Simanjuntak, 2019). It is same meaning about the definition of Ecolinguistics. Ecolinguistics is an umbrella term for the wide range of approaches, the linguistic (language) and the ecology as generally. The form of ecolinguistics analyses the language to reveal the stories we live by, the judges those stories from an ecological perspective, the resists damaging stories, and contributes to the search for new stories to live by (Chen, 2016; Stibbe, 2015). In the ecolinguistic studies, the ecosystem links are seen as part of the human life systems (ecology) with the language used by the humans in

communicating in their environment (linguistics). The environment is a physical environment which includes many languages in a society (Eliasson, 2015).

Muhlhausler (1996:3) elaborated that there were four things which enabled the relationship between the language and the environment, such as: a) the language is free and full of meaning; b) the language created by the world; c) the world is created by the language (the structuralist and post-structuralist view); d) the language is interconnected with the world (both of which are arranged and arranged but sometimes also free). The four elements which had so close relationship between the language, the human and the environment, namely, the language functions as a meaning, created by the environment or world, the world or the environment was created by the language, and the language is a means of communications between the human and their environment. So it was so clear that the language can not be separated by their environment or society as the social creature (Muhlhausler, 2020).

The language and the environment had so closely relationship one another as the existence of a language that was influenced by the surrounding natural environment where the language was exploited by the human as the community. The development of language had been clearly observed with the emergence of linguists who had conducted to the numerous studies on the relationship between the language and the environment: the labeling of the objects or the animals which were correlated with the sounds produced by surrounding environment, such as the sounds of thunder, gurgling of water, and roars of animals. In this explanations that the language and the environment were related to the human and the environment related to the animals and other objects surrounding the human life (Gunarto, 2018; Isti'anah, 2020; Kittakoop, 2001; Sibarani, 2014; Yuniawan et al., 2017, 2019).

There are some study some points for the language ecology, such as the comparative historical linguistics, the demographic linguistics, the sociolinguistics, the dialinguistics, the dialectology, the philology, the prescriptive linguistics, the glotopolytics, the ethnolinguistics, the anthropological linguistics or the cultural linguistics (cultural linguistics) typology. In other terms, it was also called as the language ecology. There were four terms which referred to it, they were the linguistic ecology, the ecological linguistics, the ecology of language / the language ecology, and the ecolinguistics (Garner, 2005; Simanjuntak, 2019; Steffensen & Fill, 2014). From some points above, the ten points explained that they had so close relationship to the ecolinguistics because they discussed about the environment and the language or the linguistics in the human life or the neighborhood (environment). It can be seen the demographic, the historical, the sociology, the ethnology were about the environment and the history. Meanwhile the dialectology, the perspective, the glotopolytics, the anthropology and the cultural study were still related to the human and the language as the speaker to communicate in their society or community of the people.

Language in society is developed and passed down from generation to generation through spoken and written forms. If the reference becomes extinct or disappears without a trace, the lexicon will also not be taken down. Danau Singkarak, which is located in an area of West Sumatra, Indonesia, is one of the lakes that has conservation problems that must be maintained. The waters of Danau Singkarak are often poisoned by commercial aquaculture feed waste. This situation resulted in a drastic decrease in some members of the ecosystem in the lake waters. The reduction of species in an ecosystem results in the loss of the species lexicon. Language and environment are closely related because language also reflects the reality of human life in a particular environment.

Language and society are the two different words. Society is defined as people in general, living together in communities, whereas language is a means of communication to express our feelings, thoughts, ideas, etc. The language and the society are closely related and could not be separated. (Ramlan, 2018)

The problems in the Danau Singkarak catchment area are that there is land use that is not in accordance with land use, there is critical land, erosion in the rainy season and pollution due to the entry of household and small industrial waste along the watershed that empties into Danau Singkarak. The construction of settlements in the lake border area and the disposal of garbage by the community also reduce the aesthetic value of this lake. Such conditions can be stated that the load of organic waste that enters the water body of Danau Singkarak is increasing. The organic material can come from household waste, small industries, agricultural and livestock waste, tourism and the burden of fishing activities in floating net cages (KJA). The fertility rate of Danau Singkarak was oligotrophic, namely poor in nutrients, the fertility rate increased to mesotrophic, which is somewhat fertile. All of the problems above are related to the ecology that surrounds the Singkarak Lake environment (Hafrijal Syandri et al., 2014).

## II. Research Methods

In this study, the researchers used the qualitative design. In this study, the data can be taken from the library or documentary research and interview to give the description of the data which were obtained from the people who live the society (Adedoyin, 2020; Creswell, 2014; Cropley, 2019). In this study, the researcher took the data from the documentary or online library that is related to the ecolinguistics of flora and fauna in Danau Maninjau. After that the data are able to take from the interview to the people who really know about the Danau Singkarak and they live in Medan around Sukaramai and Kota Maksu. The Minangkabau ethnic people live in the areas so dominant and it is called Kota Maksu or Kota orang-orang Padang in Medan.

Data collection technique. 1). Researchers look for data related to Danau Singkarak. 2). After getting about Danau Singkarak, researchers also searched for flora and fauna around the lake in online media. 3) After getting everything about Danau Singkarak, the researcher took several things related to its flora and fauna to be analyzed in an ecolinguistic study. In this case, the researcher also asked people who really knew about the flora and fauna around Danau Singkarak. Most of the people who live and live in the Sukaramai area and Kota Maksu are people who have their hometowns in the surrounding West Sumatra. The cities of Maksu and Sukaramai are communities that have Minangkabau ethnicity, so this is also the target of researchers to inquire about the flora and fauna around Danau Singkarak.

## III. Results and Discussion

Flora is all types of plants. The flora lexicon found in the waters of Danau Singkarak include kalayau, lumuik, jaiia amun, sikajuik lauik, pandan lauik. Fauna is all types of animals. The fauna lexicon which are in the Danau Singkarak, namely: Reniwati, and Pramono; 2014). ideh, mussel, pensi, rinyuak, bada, gariang, tilapia, majalaya, kolai, catfish, catfish, shrimp, leech, bachelor side, asang, rutiang, langkitang, sipuik, lokan, acek, and bilih fish. All of flora and fauna which have found by many researchers, are so small numbers and they are needed to take care so that they will be remain alive to the next generations.

### 3.1 The Flora Lexicon in the Danau Singkarak

Kalayua is water hyacinth (*Eichornia crassipes*). This plant has lilac or lilac flowers. The leaves are green and shiny when exposed to sunlight. In addition, the leaves are oval in shape. These aquatic plants live on the surface of the water and reproduce vegetatively. The breeding process of this plant is very high and has a great ability to adapt to changing environmental conditions. According to local people, sometimes this water hyacinth will grow and fill the lake, and as far as the eye can see only water hyacinth is visible. Water hyacinth growing on the surface of the lake is not cleaned. However, this plant will sink by itself.

Lumuik or mosses (bryophyta); is a type of small green and yellow plant. Grows in clusters to form pads or layers. Jaiaa amun is a plant like seaweed. Then, sikajuik lauik and pandan lauik are plants that are similar to perennial flowering plants. Because this plant is found in lakes, people call it sikajuik lauik and pandan lauik. Sikajuik in Indonesian is called Putri malu (perennial flowering plant). While lauik is the designation of lake waters by the people around the lake. Therefore, sikajuik lauik is a soil plant that is also found in the lake.

### 3.2 The Fauna Lexicons in the Danau Singkarak

A small fish in Singkarak Lake is called ideh. Kijing is a large freshwater clam found around Danau Singkarak. The Latin name of this type of shell is *Anodonta woodiana*. Pensi or *Corbiculamoltkiana* is a type of freshwater clam that lives in the waters of Danau Singkarak. Rinyuak or Rinuak, is a very small fish that lives in Danau Singkarak. In the past, the population in this lake was very abundant, so it was easy to catch. Many types of food that can be processed with the basic ingredients of this small fish. It has even become one of the food ingredients for famous souvenirs from Danau Singkarak. However, nowadays it is increasingly difficult to obtain so that food made from palm oil becomes very expensive. This is caused by the contamination of toxins that the community calls tubo.

Bada is one type of the fish in Danau Singkarak which according to local people can only be found in Danau Singkarak. This sweet and savory fish has the Latin name *Rasbora argyrotaenia*. This fish is also one of the processed fish that is often used as souvenirs typical of Danau Singkarak. This fish breeds naturally in lake waters without being cultivated. Gariang is one of the fish that can still be found around Danau Singkarak even though they are increasingly rare due to the pollution that occurs in the lake waters. The scientific name of this fish is *Neolissoschilus* and this fish is also a native species of Danau Singkarak.

Tilapia is one of the fish cultivated in the waters of Danau Singkarak. Tilapia is one of the economic commodities of the Singkarak Lake community. The Latin name of this fish is *Tilapia nilotica*. Majalaya is one type of carp that is cultivated around the waters of Danau Singkarak. Kolai is a type of fish endemic to Sumatra which can also be found in Danau Singkarak. In other Minangkabau languages, this fish isolate is also called kalua or kalai.

Catfish (Lele) is one of the popular types of fish in Indonesia. This fish is the favourite menu in the various restaurants. This fish with the Latin name *Clarius batrachus melanoderma* is also a commercial fish in Singkarak Lake. In addition to living freely in nature, these live fish are also raised by the community in special ponds. Patin with the Latin name *Pangasius nasutus* is also a fish that can be found almost all over Indonesia and is commonly consumed by the public. Like catfish, catfish are also cultivated by the people of Danau Singkarak. Shrimp (Udang) is one of the commodities of high economic value in some of the vegetation cultivated by the people of Danau Singkarak. The shrimp that live in this lake are of course freshwater shrimp with the Latin

name Crustacea. Leeches are aquatic animals that are shaped like worms. This animal has a blood sucker at the end of its body. The Latin name of this animal is Hirudinae.

Bilih fish whose Latin name (*Mystacoleucus padangensis* Bleeker) is a species of freshwater fish that can only live in Danau Singkarak. Name Indonesian fish bilih is “Bako”, but more popular with the name "Bilih". By language Minangkabau bilih means devil / devil. Form Bilih fish body is flat, slender and oval. The body is covered with silvery cycloid scales. silver. The pectoral and pelvic fins are slightly oblique, the mouth is slightly lower and does not have tentacle. In front of the dorsal fin there is one thorns. At the beginning of the discovery of bilih fish in Danau Singkarak length reaches 11.6 cm

Bujang sambilan is a type of large fish (up to 2 meters) that will appear at certain times. According to the people of Danau Singkarak, this fish is the form of nine youths who plunged into the crater. Asang is a type of fish that is a native species of Danau Singkarak and is threatened with extinction due to pollution. Rutiang is one type of freshwater fish which in Indonesian is known as snakehead fish or its Latin name is *Channidae striata*. This fish is a predatory fish. Langkitang is a soft-bodied animal (mollusca) with a size of up to 4 cm that lives in fresh water. These animals use the stomach to move (gastropods).

Besides the all animals above, The composition of mollusc species in the ter . transect area itselfon 7 types of snails and 1 type of shellfish. The clumps Pok snails obtained are from the Thiari-dae which is the largest group, includes the types of *Brotia costula*, *Melanoides tuberculata*, *Mela-noides granifera* and *Thiara scabra*, followed by the Planorbidae tribe with its types *Gyraulus feunerborni* and *G. sumatranus* and one species The Bulimidae family is *Emmericiopsis lacustris*. To The species found were *Corbicula molt. keana* from the Corbiculidae tribe. Outside the transect in meet the *Contradens ascia verbecki* clam from the tribe

Language cannot be separated from the humans because the language always follows every activity in its environment (Almos and Pramono, 2013:1). In this regard, the language and the environment are closely related. The environment will affect the language of the people around the environment. The slow destruction of the environment will destroy the language. If the habitat or the part of the environment becomes the extinct, the reference of a lexicon can also become extinct. When a lexicon is not used frequently, the inheritance process will be disrupted and lost.

The waters of Danau Singkarak has been poisoned several times by the people around the lake called kanai tubo (poisoned). As a result, the poisonous water turns black and emits a foul odor. The fish on local farms die which causes huge losses for fish farmers. Small fish and native lake fish that live freely in the lake also contribute to poisoning and death. This fish carcass is very bad for the health of the people around the lake. All of flora and fauna that are in Danau Singkarak, have to keep their habitat so that all of our next generations will be able to know and enjoy the results of flora and fauna around the Danau Singkarak especially Bilih fish which is the target of people around the lake to sell because the cost is fantastics. Besides that, there are also some other animals around the Danau Singkarak to keep.

## IV. Conclusion

Based on the above analysis, it can be concluded that there are many flora and fauna lexicon found in the waters of Danau Singkarak. The flora lexicon found included kalayau, lumuik, jaiia amun, sikajuik lauik, and pandan lauik. While the faunal lexicon found in the waters of Danau Singkarak are ideh, mussel, pensi, rinyuak, bada, gariang, tilapia, majalaya, kolai, catfish, catfish, shrimp, leech, bachelor side, asang, rutiang, langkitang, sipuik, lokan, and check. The relationship between environmental change and exposure to ecological lexicon in the waters of Danau Singkarak is a manifestation of the close relationship between language and the environment. The environment will affect the language of the people around the environment. Environmental damage will gradually destroy language. Some of the fish that became the original habitat of Danau Singkarak can no longer be found. If the fish really don't exist then the lexicon of the fish names will be used less and less. As a result, the process of inheriting the lexicon will stop and the next generation will no longer recognize the lexicon.

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