GEO-MYTHOLOGY AS A POTENTIAL GEOTOURISM

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A. Introduction

Myths and legends are very closely related to local wisdom in an area because they are important from a historical or heritage perspective, but things like this are often broken because they don't have strong evidence in the field of science (science). The researchers then found something called geomythology, which is the study of mythology associated with science.

The study of geological events in the oral tradition is known as “Geomitology” a term coined by Indiana University geologist Dorothy Vitaliano (Hamacher, 2019). The basis of this discipline is the impact of geological events such as tsunamis, earthquakes, volcanic eruptions, and meteorites, which are incorporated into folklore and myths in the area.

Geomythology itself can show the relationship between the mythology that has happened with the geological conditions in an area. This knowledge can be a strong basis so that folklore, myths, and legends in an area are not ignored and can increase the enthusiasm of the people in the area to continue to maintain stories that are cultural heritage in the area.

Many stories are included in Geomitology in the world and Indonesia, it's just that there are still very few who study or research further about this scientific study. This makes the lack of literature which has an impact on the general public's ignorance of World Geo-Mythology and its Relation to Geotourism.

B. Discussion

1. Geo-Mythology of the World and Its Relation to Geotourism

For the development of Geotourism, geomythology can be an important site to attract the interest of the wider community on a local and international scale because it contains folklore that developed in the area.

Geomythology can also help maintain the cultural heritage of an area so that it is not eroded and time-consuming so that it can continue to be passed on to the next generation. There are several examples of Geomitology in the world that are contained in the Geological Survey Open Day according to Duane (2014 & 2019), including;

a) Tsunami on *Boxing Day*

Boxing day tsunami that swept across the Indian Ocean. One of the worst affected areas is the Andaman archipelago which stretches south from Bangladesh. Because they were worried about the affected area and in fact, there were no signs or knowledge of disaster mitigation in the area, the researchers then visited the area.

There was a surprising thing that they found in the area, namely, there was one indigenous community or tribe that had very few victims in the tsunami incident and then the residents told a legend in their customs which contained the message "if the seawater recedes quickly, then they have to go up to the sea. a higher place” this legend then saved and made an indigenous community not give up on the tsunami they faced.

b) Impact crater in Australia

There are 26 confirmed craters forming landscape basins in Australia, but only a few can be seen directly. This impact crater has a direct relationship with the tribes around the place, this makes this landscape basin has a geomythology as well as can be developed as Geotourism. Some of the craters included are:

- Bluff Gosse Crater

Bluff Gosse Crater is considered to be the eroded remains of an impact crater whose original crater is thought to have been formed by the impact of an asteroid or comet. Bluff Gosse Crater is located in the northern region near the center of Australia, is one of the attractions that have Geomythology.

- Liverpool Crater

The crater is located west of the 1.6 km-wide Arnhem Land that formed about 150 million years ago. People around believed that the place was a giant catfish nest.

- *Wolf Creek Crater*

Wolf Creek Crater is a crater hole formed after a meteorite hit the area, the crater is located in the Kimberly region, Western Australia. Wolf Creek Crater is also the second-largest meteorite crater in the world and also has Geomythology, where Aboriginal people around the area believe that the Wolf Creek Crater crater was formed due to the tracks of a giant snake.

- Henbury crater

Henbury Crater is located 13 km southwest of Henbury Northern Territory, Central Australia in the Henbury Meteorite Conservation Park. Is a crater formed by the fall of a meteorite cluster and the crater contains mostly flour and silica glass

Residents, namely the aboriginal tribes view the crater as a scary thing, even in the population it is known as the fire devil stone. The local people do not drink the water in the crater for fear of the fire demon according to folklore or myths that exist in their ethnic group.

According to (Kirchner, 2015) Apart from Australia, there are also several examples of Geotourism in the world that have developed geomythological sites in them. Among others;

- Geopark Blaník Knights' County

It is a geopark located in the Czech Republic. there is a rip hill in central bohemia which is one of the symbols of the Czech Republic and has a legend or myth in it, namely, according to legend, there was a knight sleeping on mount Blaník who said he would wake up if the country needed his help.

- ižkův stolec (throne ižka)

The ižkův stolec (ižka throne) is located near the town of Velké Meziříčí, on the southern border of the Bohemia-Moravian Plateau. This site is a collection of circular boulders with a diameter of about 7-8 meters that were intended for worship in prehistoric times.

- árské vrchy Hills

The árské vrchy Hills form the top of the great Hercynian Mountains – Bohemian-Moravian Highlands located in the central part of the Czech Republic. The characteristics of this area are that there are rock formations that make up the tower, its tower-like shape amazes the local community and is often associated with the myth of the devil's work.

Tisůvka, Peperek and Rozštípená skála sites ("Split Rocks"). Legend has it that Split Rock is the remnant of a dam that was built by the demons with the main aim of being able to flood the Hamri village but the demons did not manage to bring the last and largest stone to the dam, as a result, the rock fell into the Peperek hill. Because the fall of the stone made the dam split and buried the silver mine in the Peperek

2. Geo-Mythology as The Potential Geotourism Indonesia

Geographically, Indonesia is one of the countries located between the continents of Asia and the continents of Australia and is also located between the Indian Ocean and the Pacific Ocean. Judging from its origin, the western part of Indonesia is part of the Asian continent, and eastern Indonesia is part of the Australian continent and central Indonesia is a transitional area.

Based on its geological circumstances, the islands in Indonesia are divided into three regions, namely:

- Sundanese shallow areas, namely Sumatra Island, Kalimantan Island, and Java Island,
- Sahul shallow area, namely Papua and the surrounding small islands.
- A Transition area is an area that is between the Sunda shallows and Sahul shallows, which includes the islands in the Maluku Islands.

This geological position makes Indonesia has many volcanoes with various links and activities. Volcanoes in Indonesia are young mountain ranges in the world because they are part of the Circum Mediterranean and Circum Pacific.

This indicates that Indonesia has so much geological diversity that makes Indonesia one of the archipelagic countries that have its uniqueness. In addition, Indonesia also has a diversity of 1,340 ethnic groups according to the 2010 BPS census.

With so much ethnic diversity in Indonesia, there are also many folklores, myths, and legends about the origin of a character, animal, and area.

Geomitology looks for geological events witnessed by humans and is the cause of the birth of legends or myths, with the development of existing knowledge so that geomythology appears which has a major impact in sustaining the preservation of an oral tradition in an area.

The science of geomythology is also considered very important because it can explain some legends or myths geologically but without reducing the existence of stories that have been circulating among the public.

Geomitology also has regional tourism potential which has an important role in improving the standard of living and the economy of an area

Some areas in Indonesia that have the potential to develop geomythology in the area, for example, are;

- Mount Tangkuban Perahu, which comes from the legend of Sangkuriang, is called Tangkuban Perahu because of the shape of the mountain that resembles an overturned boat. Meanwhile, in terms of geological science, Mount Tangkuban Perahu has formed due to the eruption of the ancient Sunda volcano in the span of 105,000 and 55,000-50,000 thousand years ago.
- The legend of Lake Toba which, according to geological history, 74,000 years ago, the eruption of the Toba volcano produced a giant caldera of 87 x 30 km, which was then filled with rainwater to form a caldera lake, a tectonic volcanic lake which is the largest lake in the world which was later named Lake Toba. According to folklore, Lake Toba comes from a character named Toba. The story is famous for the name of the origin of Lake Toba. This story is very famous in North Sumatra, especially the coastal communities of Lake Toba and the island of Samosir.
- The Lapindo folklore which comes from the legend of Timun Mas, according to (Nurwicaksono, 2013) it is told that there is a widow who wants a child and meets a giant figure who gives her a child on the condition that the child will be returned to the giant when the child is 6 years old. And the giant gave him a mas cucumber in which there was a beautiful baby girl. Long story short, when Timun Mas grew up because the widow was very fond of Timun Mas, she was reluctant to return the child to the giant and instead brought Timun Mas to meet the hermit of Mount Barren and gave him four packages of Timun Mas, one of which was the shrimp paste that made Timun Mas. survived the giant chase because when the shrimp paste was thrown, a sea of boiling mud was formed which made the giant drown to death.

By utilizing geomythology as a Geotourism potential, it can prosper the surrounding community and can also be an important component to maintain and continue the characteristics of the area.

3. Geomitology as Botubarani's Geotourism Potential

Gorontalo province has a unique geological history as well as various legends and myths. With this diversity, the province of Gorontalo tries to create and develop the existing tourism potential so that it can be implemented in the form of Geotourism.

The Brave Rock Site is a historic rock site that contains elements of geomythology (geology and mythology) where the village's predecessors kept the corpses of pirates that interfered with the survival of the ancient village community. Currently, the geological wealth has not been able to be utilized optimally due to the lack of public understanding about sustainable tourism management through geotourism. (Suma et al, 2021).

Referring to the geological diversity that has been proven geologically, Gorontalo also has many and varied stories, folklore, myths, and legends. It is hoped that it can play a role in efforts to attract local and international tourists to come to Gorontalo.

One of the tours that have just been developed now is the potential for Geotourism in Gorontalo, one of which is eco-Geotourism Botubarani which is located in Botuberani village, bone beach district, Bone Bolango district. The government is currently boosting the eco-Geotourism program in Gorontalo, with the hope that eco-Geotourism can be an important indicator to improve the standard of living and the economy of Gorontalo, especially in the village of Botubarani.

The coastal area of Botubarani village has its uniqueness when compared to other areas in Gorontalo, where the coast of Botubarani village is a migration place for step animals, namely whale sharks, and is the only area in Gorontalo that has whale sharks in it.

Botubarani village also has geomythological potential that is not widely known by the wider community, especially Gorontalo province, where there are fossil human bones in a cave. He said the fossilized bones were the remains of a pirate who was killed by a hero whose name was also adopted as the name of the village as a form of respect for the local community.

In the hereditary story of Botubarani village, there is a character named Ti Barani, he is known as a valiant hero against Filipino pirates who are told that at that time Filipino pirates came to eat humans and brought Botubarani village girls.

C. Conclusion

Geomythology is a science that studies the study of mythology that is connected with science and can also show the connection between mythology that has occurred with geological conditions in an area. In addition to the development of Geotourism potential, geomythology also plays an important role in maintaining stories, myths, and legends that exist in an area so that they will continue to be remembered and not eroded by the times.

Geomythological aspects are an important part of cultural sites and can increase the value of a site from a Geotourism point of view. The existence of geomythology in Geotourism can increase the interest of existing Geotourism visitors.

Indonesia has many well-known geomythology that can be potential for Geotourism, for example; Tangkuban Perahu is derived from the Sangkuriang legend, the Toba Lake legend comes from the Samosir legend, the Nyi Roro Kidul Ratu legend of the South Coast which says the southern area is an area prone to tsunamis, and the Lapindo folklore comes from the Timun Mas legend.

Gorontalo province itself has several Geomythologies, including geomythology in Botubarani whale shark Geotourism which is currently being developed into one of the important sites in Geotourism.

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Glossary

Geotourism:	tourism objects by utilizing the potential of geological natural resources such as rocks, structures, and landscapes.
Mythology:	Folklore, myth, or legend.
Folklore:	Folklore, oral history, and others
Crater:	A large indenting located at the top of the mountain

Biography

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Born on July 21, 2001, under the nickname Fahmi. Growing up in the Banggai Regency of Central Sulawesi Province.History of education SDN 4 Batui, SMPN 4 Batui, SMAN 1 Batui in Banggai Regency Central Sulawesi. And now active students semester 5 Geological Engineering Study Program Gorontalo State University.

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