

**GEOTOURISM AS A TOOL FOR TOURISM DEVELOPMENT IN SRI LANKA:  
AN EXPLORATION**

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**Abstract**

Geotourism is a tourism activity witnessing ABC attributes, abiotic, biotic, and culture focusing on abiotic properties of the natural setting. This investigation explores whether Geotourism could be a lucrative tool for sustainable tourism development. An interpretive exploratory approach was entrusted for the study given its applicability to trace deeper feelings, thought, and attitudes of individuals. Twenty in-depth interviews from tourism stakeholders including tourists, the local community, and government officers at two different geologically significant sites were conducted over 04 months. Transcriptions were thematically analysed by coding and axial coding. The study revealed that lack of awareness towards Geotourism concept causes Geotourism in Sri Lanka in its infancy, though Sri Lanka is having an abundant marketable opportunity for its diversified tourist locations to initiate Geotourism developments. Geotourism can be used as a lucrative tool for tourism development by addressing certain issues like improper place management, lack of promotion by examining two excellent heritage sites.

**Keywords:** Geotourism, Geotourists, Geoheritage sites, Tourism development, Ussangoda National Park, Mahapelessa hot spring

**Introduction**

Tourism has become a key industry with a positive contribution towards the economy in the contemporary era been the third-largest foreign exchange earner in 2017, till present in the Sri Lankan economy (Sri Lanka Tourism Development Authority, 2017). Sri Lanka can be portrayed as a tourism paradise with its uniqueness, natural beauty, authentic culture, and warm hospitality, enriched with the natural and cultural phenomenon that even belong to the United Nations Educational, Scientific and Cultural Organization (UNESCO) World Heritage list. Although challenges caused by recent blooming in South and Eastern Asian tourism and the latest terrorist attack on Easter Sunday, setback Sri Lankan tourism, to sustain and gain a competitive edge over rival world markets, Sri Lanka has to offer a variety of niche tourism products and services to meet the expectations of the tourists.

Geo tourism tends to be such a marketable opportunity for tourism development in Sri Lanka since it is an astonishing destination rich in geoarchaeological, geomorphological, and geological significances. But the utilization of the approaches is limited and rare in the Sri Lankan tourism scale (Ranasinghe & Cheng, 2020). The deterioration of mass tourism, the consciousness towards the climatic changes, and environmental impacts can be evaluated as favourable platforms for new forms of sustainable tourism as Geotourism in its adaptation process toward tourism development in the country parallel to other destinations in the world.

Geotourism is defined as a concept that was introduced in a 2003 report by the Travel Industry Association of America and National Geographic and successively adopted by Hose as “tourism that sustains or enhances the geographical character of a place, its environment, culture, aesthetics, heritage, and the well-being of its residents”. Geotourism, conservation, geoparks are relatively new terms that promote tourism to geosites and the conservation of geo-diversity, and

an understanding of earth sciences through appreciation and learning. (Dowling and Newsome, 2010). According to International Union for Conservation of Nature (IUCN), geoconservation refers to the recognizing, protecting, and managing sites and landscapes identified as important geological or geomorphologic features. Geotourists can be defined as 'tourists who visit geoparks, geosites or other geological heritage resources realizing its intrinsic values i.e. Aesthetic, cultural, recreational and scientific values' (Ehsan, Leman, and Ara Begum, 2012).

Although Geotourism will be a positive approach as an emerging trend in the globe, the concept is relatively new in Sri Lanka. There is only a very low rate of Geotourists visiting the country. But Geological Survey and Mines Bureau has published the 'Geotourists map' which pinpointed 201 Geotourists locations in Sri Lanka (Ranasinghe, 2002). But still, there have not been enough promotional activities towards the Geo tourist locations. Also, there are no current statistics or information in the Sri Lanka Tourism Development Authority (SLTDA) regarding Geotourists and Geotourism. Hence Sri Lanka has outstanding geology and geomorphology, Geotourism has to be adapted as a lucrative tourism development tool in the country, also identifying the empirical and knowledge gaps, attaining the core objectives of the Study.

## **Literature Review**

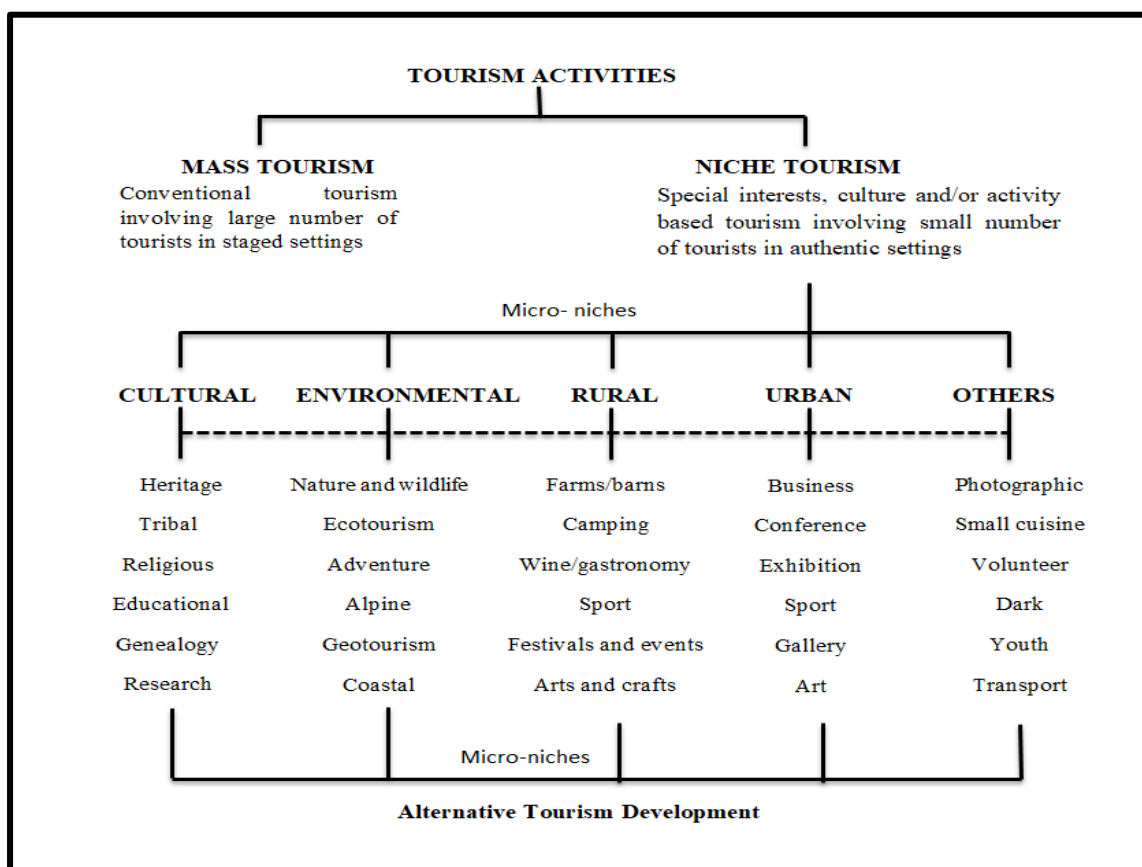
### **Tourism**

Tourism is considered a major social and economic phenomenon that narrates to the largest peaceful movement of people across the world (Sharpley, 2014; Haile, 2017). Many of the natural, cultural, and historical assets that are unique to several developing countries provide a comparative advantage within the global tourism industry and are a source of potential revenue for emerging economies (UNWTO, 2016). This provisional advantage becomes probable development assets for Least Developed Countries like Sri Lanka to flourish their economies that guide sustainable tourism-based markets.

Sustainable tourism is a concept that was developed by the UNWTO and the United Nations Environment Program (UNEP), which defines tourism development as "tourism that takes full account of its current and future economic, social and environmental impacts, addressing the needs of visitors, the industry, and environment and host communities" (Nations and Programme, 2005). Geotourism is a good platform to interact with the local community more with conserving culture, heritage, geology, and environment while aiding in the overall livelihood of the community. Also, it is a good opportunity for cultural sustainability, opportunities for greater employment in the region, and a decrease in emigration (Farsani, Coelho, and Costa, 2011).

The term “Geotourism” was primitively used in literature by Thomas Hose in 1995. Geotourism is emerging as a new global phenomenon (Dowling and Newsome, 2010). Geotourism is sustainable tourism with a primary focus on experiencing the earth’s geological features in a way that fosters environmental and cultural understanding, appreciation and conservation, and is locally beneficial. (Dowling and Newsome, 2010). “Geotourism is a form of natural area tourism that specifically focuses on geology and landscape. It promotes tourism to geosites and the conservation of geo-diversity and an understanding of earth sciences through appreciation and learning. This is achieved through independent visits to geological features, use of geo-trails and viewpoints, guided tours, geo activities and patronage of geosites visitor centers” (Dowling and Newsome, 2010). As Geotourism is a new concept and a form of alternative tourism, it is difficult to define. Dowling and Newsome, (2010) characterize Geotourism as a sustainable way of experiencing and appreciating the Earth’s geology.

**Figure 1:** Niche tourism: contemporary issues, trends, and cases (Novelli, 2005).



Geotourism gives a space to experience geology, increase the knowledge of earth sciences, and conserve to sustain the utilization of resources effectively (Ranasinghe, 2018). It is geologically based and focuses on sustainability, conservation, benefiting the community, appreciation of cultural and geoheritage value through education and interpretation, and tourist satisfaction (Dowling and Newsome, 2006). The scope and nature of Geotourism can be drawn by the integration of three elements: form, process, and tourism. (Dowling and Newsome, 2010). Forms refer to the way that geological resources can be employed for the consumption of tourism like quartz formation, volcanic rock formations, caves, dunes, etc. Process pertains to the dynamic activity of the Earth such as weathering, erosion, hydrothermal process and etc. Tourism refers to the activity or practice of touring, especially for pleasure (accommodation, attractiveness, activities, amenities). The elementary explanation of Geotourism is tourism which focuses on

geology and the landscapes of the area and also provides more scrutiny on abiotic features of the environment. (Risteski and Kocevski, 2016).

### **Geotourists**

Geotourists can be defined as 'tourists who visit geoparks, geosites or other geological heritage resources realizing its intrinsic values e.g. aesthetic, cultural, recreational and scientific value (Ehsan, Leman and Ara Begum, 2012)). The 'dedicated geo tourists and casual geo tourists' were classified as two typologies by Hose (2007). The main desire for dedicated Geotourist is personal educational and intellectual gain and enjoyment and for casual tourists is a pleasure (Hose, 2011). According to travel motivation, there are five categories of geo tourists namely purposeful, intentional, serendipitous, accidental, and incidental (Allan, Dowling and Sanders, 2015). To grab the attention of potential geo tourists and promote the outcrops with dazzling patterns there should be a proper interpretation by guides, brochures, special signs, online resources, etc. According to Mikhailenko *et al.*, (2007) "aesthetics first, geology second" approach can facilitate the necessary tourist flows to geo sites and geo parks.

### **Geoconservation**

The steps of safeguarding geo sites and geo composites from damage, degradation through the application of management and protection are called Geoconservation and it is considered as a prerequisite for the Geotourism industry (Hose, 2011). Different geo heritage sites need to be protected and managed in different ways. The geo conservation concept also includes the development of mechanisms and measures that will enable the preservation of Geodiversity for future generations. This primarily includes the inventory and interpretation of geological diversity, creating tourist trails and pathways, publishing various publications, both scientific and those intended for the general audience, maintaining geo sites in good condition, and of course adequate presentation at visitor centers or museums (Boškov *et al.*, 2015). Enhancing public awareness of the value of geo heritage sites (scientific, aesthetic, and economic) through Geotourism is a productive method for Geoconservation. Some countries like Iceland, indicate that the number of planning and management efforts to promote the development of sustainable tourism industry by integrating Geotourism. (Newsome, Dowling, and Leung, 2012).

### **Geology of Sri Lanka**

There is wide geomorphological variation like rugged mountain ranges, valleys, flat plains, isolated hills, etc. can be seen in Sri Lanka. There are three morphological regions namely Coastal lowlands from about 0-270 meters, Uplands from about 270-1060 meters, and Highlands from about 1060-2240 meters (Ranasinghe, 2002).

### **Geo sites and Geo heritage**

Geosites is a site or an area, with geological and scientific significances and geo heritage means the sites or areas of geologic features with significant scientific, educational, cultural, or aesthetic value. The Geological Survey and mines bureau identified 201 geo tourist locations around Sri Lanka in these subdivisions.

- **Geo-archaeological locations**
- **Geomorphologically important locations**
- **Geologically important locations**
- **Geotechnically important locations**
- **Mineral Deposits**
- **Mineral Based Industries**

### **Ussangoda National Park**

Ussangoda National Park is the 21<sup>st</sup> National Park which was established on 6 May 2010 area with 3.49km<sup>2</sup>. It is the only coastal area consisting of Serpentine soil at National Park in Sri Lanka. The Ussangoda serpentine outcrop is located (coordinates 6°06'00"N 80°59'22"E) in the southern coastal end of the HC-VC boundary. (Rajakaruna and Bohm, 2002).

The uniqueness of the Ussangoda National park is the visitors can experience the dark red soil, small rocks and see sporadic vegetation due to the high amount of Ni and Cr in the soil by the weathering of the serpentine rock. 29 species of flowering plants, which included trees, shrubs, vines, and prostate plants growing within the Ussangoda serpentine site were identified (Weerasinghe and Iqbal, 2011). *Cassia kleinii* was identified as a Ni hyper-accumulator. According to IUCN Ussangoda National Park is categorized in type 2 in their segmentation. Also, it was proposed to designate as a Geo-park because of its historical, cultural, and archaeological value (National *et al.*, 2018)

### **Mahapelessa (Madunagala) Hot springs**

Geothermal springs are the natural springs that contain hot water. Generally, three important components control the formation of hot springs, including heat sources, groundwater, and reservoir rocks. (Premasiri *et al.*, 2006). Hot springs have become popular tourist destinations because of the healing powers that hot springs have, especially the combination of the temperature of the water with a high content of minerals like calcium, lithium, etc. Mahapelessa (Madunagala) springs belong to the semi-arid zones and are located in the southern lower flat plains. The annual rainfall for the Madunagala area receives 950- 1500 mm. The origin of this spring is related to the boundary of the Highland and Vijayan complex (Ranasinghe, 2002). Mahapelessa (Madunagala) hot spring is 11582ft deep with its water running at a speed of about 645ml per second and has 44.9°C outflow temperature (Premasiri *et al.*, 2006).

### **Methodology**

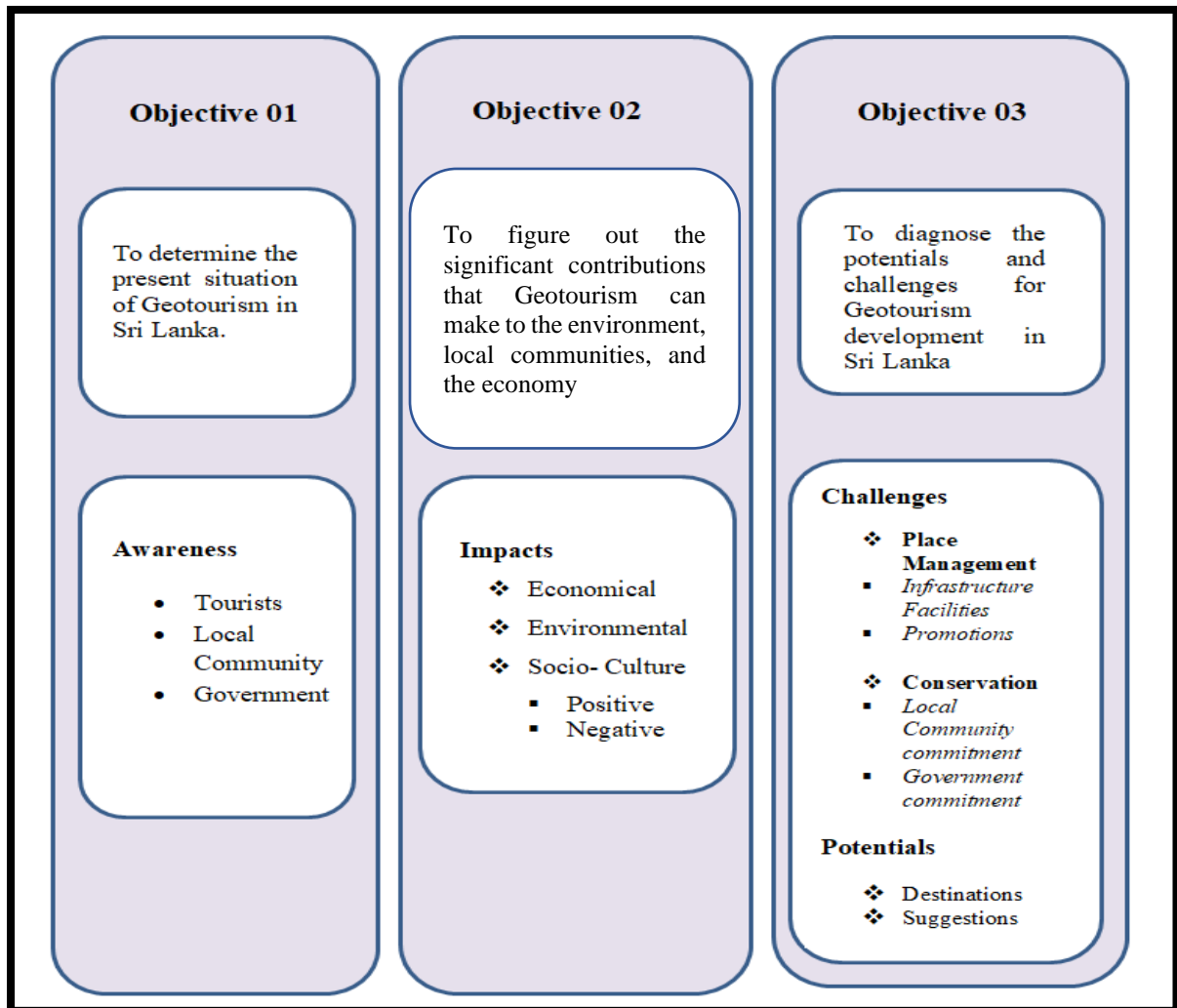
Ussangoda National park and Mahapelessa (Madunagala) hot springs are located in the Hambantota district in Southern province in Sri Lanka are selected as research areas. The population represents tourism stakeholders in Sri Lanka. The sample size consists of 20 stakeholders, disperse between Visitors (foreign and domestic), the local community, and representatives from government institutes (Department of Wildlife Conservation, Sri Lanka Tourism Development Authority, Geological Survey, and Mines Bureau, Ruhunu Tourism Bureau). A purposive sampling technique is used, which is selected based on the characteristics of populations and objectives of the research. The researcher utilized in-depth interviews and field observations to gather data. Secondary data were gathered through newspapers, research articles, books, journals, the internet and Geological Survey and Mines Bureau (GSMB), Department of Wildlife Conservation., UNESCO, and Sri Lanka Tourism Development Authority (SLTDA) annual reports. Under a phenomenological research design, thematic analysis is used in identifying themes in the data set, in which the developed theme is summarized and finalized as a whole.

### **Results and Discussion**

#### **Respondents and Themes**

In approaching the purpose of the study, the results are depicted in the manner that, total respondents of twenty stakeholders scatter as 40% were tourists. The local community including business owners represented 40%. The rest of the respondents 20% were the envoys representing government institutes. Out of this 40%, tourists' respondents' and 40% local communities' respondents (50%) were from Ussangoda, and the rest (50%) were from Mahapelessa (Madunagala) site.

The data gathered guided to development of the main 04 parent themes as basic categories that developed according to research objectives. They are awareness, impacts, challenges, and potentials. The researcher has further divided the main themes into sub-themes and further into other sub-nodes. All these themes are extracted from the information given by the respondents.



**Figure 2:** Theme Visualization (Source: Developed by the Researcher)

**Objective 01: To determine the present situation of Geotourism in Sri Lanka**

**Theme 01: Awareness**

Awareness can be defined as a concern about and well-informed interest in a particular situation or development. The researcher has identified the different awareness levels that respondents mentioned during the interviews.

**Table 1: Awareness of Interviewees**

Type of Stakeholder	The number of respondents who participated in the study	Number of respondents who are aware of the Geotourism concept
Tourists	40%	30%
Local Community	40%	0%
Government Envoys	20%	15%
Total	100%	45%

(Source: Personal Interviews 2019)

### **Tourists Perception**

Since researchers identified more younger and educated tourists at the site, most state their awareness of geo-tourism due to their involvement in updated technology, Curiosity, creativity, and better perception of geo-tourism compares to other generations. (*"I heard this concept in my visit to Italy. I think it's a good concept which we can market our unique landscape and environmental conditions sustainably"*, Participant 02: Personal interview, 2019), (*"Yes, I read an article I think it more focuses on geological values in sites. It is a sustainable approach."* Participant 03: Personal interview, 2019), (*"It is a good concept which we can promote our unique landscape in our country"*, Participant 05: Personal interview, 2019).

### **Local Communities' Perception**

Local communities' response was unsatisfactory with zero awareness on geo-tourism since most seem uneducated and lack language usage although interaction with tourists makes them knowledgeable. (*"I have no idea about the concept."*, Participant 13: Personal interview, 2019). Also, the unavailability of information materials on geo-tourism within mainstream information sources in Sri Lanka makes locals reach awareness on these new concepts at the sites. (*"Geotourism, no we don't know. We guess it is something that relates to geography"*, Participant 09: Personal interview, 2019).

### **Governments' Perception**

Although more government envoys awareness is at a good standard, there is the proper mechanism and regulatory framework to initiate the concept. (*"Geotourism is a vast subject in the world. We think about Geo-tourism, to give much awareness, knowledge about the geologic values to the general public. There are lots of places that have geological significance. People are only seeing these things like rocks or soil. It is new to Sri Lanka. Sri Lanka is having a good advantage with diversified significances in small are that tourist can access very easily"*, Participant 19: Personal interview, 2019). Yet Sri Lank endorse diversified tourist locations, attention has declined to relate to new and nature-based tourism concepts as geo-tourism. Overall results predict 45% of the awareness towards the Geotourism satisfactory. It is essential to step on this emerging sustainable approach for tourism development in Sri Lanka. (*"There are no declared geo-sites. There are no laws relating to the protection of geo-sites. In wildlife laws, it covers the"*

*vegetation and animals only. The legal framework is too poor that it is difficult to control the sites with existing laws.*" Participant 19: Personal interview, 2019).

## **Objective 02: To figure out the significant contributions that Geotourism can make to the environment, local communities, and the economy.**

### **Theme 02: Impacts**

The study categorized impacts relate to the third objective with three aspects of sustainable approach identified as economic, environmental, and socio-cultural impacts.

The stakeholder response predicts economic impacts are higher and favourable due to geo-tourism at the site since, it generates varied job opportunities, modern living standards, access to small and medium scale businesses, infrastructure development, while creating more alternative income paths to the host community. The depicted results generated through stakeholder views emphasize the similar idea of (Farsani, Coelho, and Costa, 2011), proving that that geo-tourism inspire opportunities for the community.

The findings reveal more women gain a favourable yield through tourism-based activities at Madunagala and Ussangoda sites, proving that the Host community's attitude towards tourism is more favourable if the economic benefits are higher. The researcher identified host communities in Ussangoda and Madunagala expect more at their sites since it benefits their economic sustainability. (*"Mostly we depend on this site. We can sell our products and they enjoy our local drinks like belimal as well. We have good business with the locals. Women are running this small business and it helps us a lot. With the income derived from this, we can manage our lives"*, Participant 09: Personal interview, 2019).

Environmental impacts seem to overpower the negative side due to increasing pollution at the sites, specifically at Ussangoda geo-site although it is declared as a National Park since 2010 as the first proposed geo-park of Sri Lanka. Even though tourists showed consciousness about environmental protection at sites, none of the implementations of the regulatory framework, environmental rules and regulations are practiced at the site. (*"Foreign tourists are conscious of the environmental protection. They follow the normal practices. Our local visitors do not adhere to any practice. They throw the garbage here and there. The lack of garbage collection bins is another problem."*, Participant 10: Personal interview, 2019). Researchers identify it is necessary to enforce environmental conservation of this geo-site especially for locals since it results in the degradation of valuable inherited plants and creepers and animals' lives of Sri Lankan biodiversity. In contrast, Madunagala geo sites perform better with a responsible authority of Ruhunu Tourism bureau (RTB) who collaborates with locals to protect the natural setting of the geo sites, implementing restrictions to preserve its geo heritage and to manage over usage of its resources (hot springs), by tourists.

Socio-cultural impacts determine both positive and negative observations at both Madunagala and Ussangoda geo sites. Local communities derive a higher quality of life, Local Pride due to income and tourist interaction derived through their tourist business that has led these communities to acquire a standard education to their children, community's knowledge on different countries, cultures, and perspectives that sharpen their lives. (*"We earn our living by the business we do on this site. It helps us to raise our living standards"*, Participant 10: Personal interview, 2019).

But on the other hand, alcoholism, and illegal drug usage, indecent behavioural patterns, and costumes reserved through tourists, badly influence young children that collapse their own identity enacted by demonstration effect of western tourists. Although the literature predicted through (Dowling and Newsome, 2010) reveals the involvement of geo-tourism only generates positive cultural and local benefits, relatively, the above study finds both positive as well as



negative impacts in which negative influences outweigh the local benefits in the prevailing scenario of geo-tourism. Upon analysis, of all types of economic, environmental, and socio-cultural can be adopted positively to develop tourism in Sri Lanka, *“Some young tourists do not behave properly. That badly influences the young ones here. Also, drug addicts and alcohol conscious people also come here. The behaviours of young couples are disgusting”*, Participant 09: Personal interview, 2019).

### **Objective 03: To diagnose the potentials and challenges for Geotourism development in Sri Lanka.**

#### **Theme 03: Challenges**

As the third objective of the study the researcher has identified the potentials and challenges for geo-tourism development in Sri Lanka. Place management and conservation are the major challenges identified in this study. The absence of basic infrastructure and facilities and lack of effective promotions to the foreign tourists’ market was identified as the issues in place management. The development of touristic infrastructure helps to elaborate on the territorial management plan. Based on the findings the researcher wants to emphasize the good quality infrastructure facilities and promotions are important to ensure economic growth as well as the inclusive growth of these areas. *“Roads leading to the Madunagala area should be improved. Overall rural development should take place”*, Participant 10: Personal interview, 2019). Inclusive growth will help to reduce the income inequality in these geo sites. Infrastructure and promotions will contribute to increasing functional development as well as destination competitiveness. Another challenge was the lack of knowledge of geo conservation. Even though the community commitment to preserving these geo sites is appreciable, the lack of government commitment to conservation is also a major challenge. Lack of integration between the government institutes, lack of funding, lack of enthusiasm to conserve the geo sites as it belongs to the abiotic environment are identified as some challenges for conservation of these geo sites. Initiating strategies will help to overcome these challenges. *“Land exploitation is one of the major challenges, no infrastructure facilities are available”*, Participant 20: Personal interview, 2019).

#### **Theme 04: Potentials**

There are some destinations like Madunagala hermitage which have the potential to develop as a geo tourists’ location that consists of geo-archaeological values. According to the responses of local communities and relevant government officials, there are so many locations in Madunagala areas that can draw the attention of tourists as follows, Karadulena Buddhist monastery, Ridiyagama Safari Park, etc.

Ussangoda is having good potential on turtle hatcheries and Ussangoda beach is a dazzling place where tourists can cherish *“Yes, the place should be improved with new activities to attract tourists. If there is a chance to engage in other activities like nature trails it will be better”*, Participant 5: Personal interview, 2019). To overcome some issues, the researcher illustrates some suggestions based on the responses of the tourism stakeholders. Such as using modern technology for interpretations as well as for geo-conservation, creating geo-tourism products and services will be a good platform for experience hunters, rural development without harming the local values. Also considering the potentials based on suggestions and destinations will be used to Geotourism development in Sri Lanka in a sustainable manner

### **Conclusions and Recommendations**

The findings of this investigation amplify that the Introduction of the Geo-tourism concept can foster economic, environmental, socio-cult sustainable development of tourism in Sri Lanka done within a structured framework. Based on the first initiative, it can be concluded that, although the

awareness of the local community at attraction seems low, the impression of tourist and government are at a higher range than make a favourable scale to promote this emerging concept, since Geotourism is a good platform where visitors can enjoy their journey while appreciating nature and geo heritage of the land.

Reference to the second attainment of the study proves Geotourism can make significant contributions to the economy, environment, and socio-culture in a country. Specifically, It accelerates alternative income generation paths as a poverty alleviation tool to the host community, Also, it is a conservation tool for Environmental protection. But the study depicts the importance of geo conservation strategies since prevailing geo sites are addicted to over usage of natural resources and environmental pollution. As an example, lack of implementations of the available regulatory framework created freedom in Ussangoda National Park has led to polluting the environment such as losing valuable inherited plants and creepers and some animal lives. In the same manner, it fosters life standards, pride, and peace of the local community that guides social consistency in the sites.

The third objective illustrates as follows. The proper place management with quality infrastructure facilities and good promotions are contributing factors to the functional development and competitiveness among destinations. Ussangoda National Park needs to be rehabilitated from the start. Whereas Mahapelessa geo-site needs only upgrading present facilities. Conservation is another challenge observed through the responses. The commitment of the community to preserve these geo sites is appreciating. The Government's commitment towards the development of these geo sites is in a very poor status. Geotourism development does not require big investments as it is a type of niche tourism. It can generate large income with small investments. The government needs to commit more towards the conservation of this geo heritage. The researcher demand that there should be more consideration on environmental conservation of the Ussangoda National Park geo-site as it is the first proposed geo-park of Sri Lanka. Considering the potentials, the researcher identified it under two categories. Destinations to Madunagala and Ussangoda areas will help to develop tourism especially the places that have geo archaeological values. Suggestions like the use of new technology, the introduction of new geo-tourists' products and services will be useful in Geotourism development.

Based on the findings of this investigation it can be concluded as these geo sites, Ussangoda National Park and Mahapelessa (Madunagala) hot springs are in the exploration stage of the Geotourism destination life cycle. So, it is necessary to modernize the road signs, create geo-tourism products and services, and provide quality geo-interpretations, etc., to develop these destinations to increase the arrival of tourists. Although this analysis is on the two geo sites selected by the researcher the principles followed here could be used for any geo sites in Sri Lanka which will fulfil the requirements. When all the findings are analysed, it could be emphasized that Geotourism can be used as a lucrative tool for tourism development in Sri Lanka.

## **Recommendations**

The study predicts Sri Lanka occupies a marketable opportunity to develop Geotourism with astonishing destinations rich in geological, geoarchaeological, geomorphological, significances. Therefore, the researcher suggests the following recommendations to use Geo-tourism as a lucrative tool for tourism development in Sri Lanka.

### **1. Effective Promotions on Geotourism**

Promotional work on Geotourism has to be increased if we are to attract foreign clientele. The geo tourists map should be updated and promoted in a manner that could attract more tourists to these destinations.

## **2. Propagating awareness programs**

Good awareness of the Geotourism concept should be created in society. So that our geo heritages and their values are popularized among people. Steps can be taken to get people who are interested in this field so that they realize and admire the importance and values of our geo heritages.

## **3. Provide Quality Geo interpretations**

To deliver the geological information effectively staff and tour guides have to be trained specially in the less attractive geo sites.

## **4. Declaration of Geo sites**

Geosites will be more popularized if they are declared by the government with relevant maps.

## **5. Improve proper Place Management.**

Place management in geo sites may be undertaken by private, public, or voluntary organizations to provide better facilities to the tourists. It should ensure that both tourists and the place are well protected and secured in the process.

## **6. Adaptation of Geoconservation**

Geosites should be well maintained and protected for future generations. There are numerous ways of preserving and conserving these geo heritages, for instance, the establishment of geo parks. Though a proposal has been made in this regard no action has been taken yet in Sri Lanka. Serious thought should be given to this geo conservation concept to protect the geo heritage and geodiversity.

## **7. The Government Institutes Should Have More Integration**

To protect the geo heritage sites all over Sri Lanka, the relevant government institutes should get integrated. That will be the proper way to preserve the resources. So that Government institutes can focus on Geo-tourism as a novel strategy for the development of tourism in Sri Lanka.

## **8. Introduction of Geo-ethics**

The early transmission of skills and knowledge on geodiversity, biodiversity, and culture to children will contribute to making a critical person. Providing awareness, knowledge about geology using geo ethics can help to make a responsible future generation.

## **9. Provide Incentives for Researchers to Promote Research on Geotourism**

Providing incentives would be a good strategy to increase the research on Geotourism. The researchers would not choose this geo-tourism field as it is more focused on the abiotic environment. If the government could provide the incentives to carry out the research on the geo-tourism field, it will lead to motivate the research.

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