Sri Lankans’ Geospatial Management at the Independence Struggles during the British Colonial Era

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Abstract

Sri Lanka became a colony in the second decade of the 19th century. Sri Lankans fought against it. The research aimed to study the utilisation of Sri Lanka's geographical environment in the struggle for independence by Sri Lankan fighters during the British colonial era through the philosophical teachings of war. This research has been conducted following the methodology of historical studies. Sri Lankans made extensive use of geographical and environmental factors in their protest for liberation from colonialism. Sri Lankans during the colonial period maintained a livelihood associated with the natural environment. They well-managed to effectively use the geological environment during the British anti-government freedom struggles. The tactics related to the environment used by the Sri Lankans seemed to be in their anti-colonial struggles at an effective level when referring to the philosophical teachings of war.

Keywords - Sri Lanka (Ceylon), Colonialism, Freedom Fights, Geographical Environment, War Philosophy

Introduction

Sri Lankans were heavily influenced by the colonial British in the early 19th century and fought for their independence. The 1818 and 1848 are two influential battles where Sri Lankans resorted to many tactics to fight against British colonialism. The use of geographical environment was one of the strategic applications of anti-British fighters in Sri Lanka. This research paper aimed to study how Sri Lankans used the geographical environment for their battles in line with Eastern philosophical teachings during the British colonial era. Historical studies have been used as a research methodology with reference to local and foreign primary and secondary sources. The information sources were analysed through the Content Analysis method.

Identifying the Kandyan geographical environment

The last kingdom of Sinhala, the Kandy Kingdom, originated in the 14th century during the Gampola period, then known as Senkadagala1 and later known as Kandy after the 18th century. Being the birthplace of a kingdom, Kandy is a crucial battleground in terms of location. Kandy's capital was situated in a large valley at the height of about 1400 feet above sea level (Senaratne, 2013, p.318). The Kandyan Highlands can be divided geographically into three parts: plains, bogs and mountains. The mountains rose from 300 feet to 4000

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1 It is said that the word 'Shailapura' was added to the word 'Senkhanda'. During the reign of King Wickramabahu Gampola, a Brahmin named Senkanda who came here from Dambadiva (India) considered this area as a conquest land and settled in a cave in the Udawatte forest for permanent residence. Accordingly, it is believed that the place became 'Sankhanda Shaila' and later developed into Sankhanda Shaila city (Wijesuriya, 2005, p.143). The province of the former Kingdom of Kandy known as the Kandyan Province was located between 60 20 and 80 45 North latitudes. East longitudes ranged from 80 8 to 81 45. The size was approximately 12,360 square miles (Senaratne, 2013, p.26).

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and 5000 feet above sea level. These ridges are conjoined, and most of the ridges are circular or ridged or peaked. The hills are very steep, and valleys are also found here. These are usually tiny valleys and very narrow in comparison with length and breadth. These valleys are 3000 to 4000 feet deep in most places (Senaratne, 2013, p.28). The hilly areas of the upcountry range from 100 to 500 feet, and the hills, like the hills, are somewhat connected by the usual short ridges. The outer shape is rounded and irregular, and the sides are rarely sloping.

"Kanda Udarata" is located in the Kandy plateau in the central highlands of Sri Lanka and is naturally surrounded by the Mahaweli River to the north, west and east (Survey Department, 1966). The Mahaweli River crosses the Kandy Plateau, and the 3740 feet high Hanthana peak is located to the south of the capital, which is the reason for the increase in the natural beauty of Kandy. The Gannoruwa ferry was the only way to cross the Mahaweli River and enter the Kingdom of Kandy from the west. Thus, Kandy can be divided into three parts according to its natural conservation: location of the mountains, surrounded by the Mahaweli River, and the passage of these roads through the gorges into the Kingdom of Kandy (Gamage, 1997, p.75). The Balana gorge and Kodugannawa gorge to the west of the Kingdom of Kandy, the Galagedara gorge to the northwest, the Balakaduwa gorge to the north and the Ginigathhena gorge to the south before crossing the Hatton Plateau (Survey Department, 1966). Sri Lanka was 18,000 square miles inhabited. The remaining 6,000 square miles were uninhabited, with one-eighth of the island being mountainous and three-quarters completely plain, all covered with dense forests. In a document compiled in 1849, Thomas Skinner points out that the existing open plains were exposed for cultivation (Skinner, 1891, p.215). Thus, the geographical disparity in Sri Lanka as early as 1849 can be identified.

**Anti-British combat activities and war philosophical practices of Sri Lankans**

The concept of "Earth" is a constant feature of martial arts in determining the conditions for victory on the battlefield. The world-famous war philosopher Sun Tzū stated that Earth comprises, great and small; danger and security; open ground and narrow passes; the chances of life and death (Giles, 1910, p.2). That is, to take into account geographical factors. Environmental location was a significant factor influencing the Sri Lankan fighter in determining danger and safety, both large and small. Like the British, the Sri Lankan fighters worked to expand their geographically divided territory. The philosophy of war shows that an army cannot move forward unless it is familiar with the face of the country, that is, mountains and forests, pitfalls, precipices, marshes, swamps (Gfiles, 1910, p.60). A significant factor contributing to the inability of the British to win the Battle of 1803 was the geophysical environment of Ceylon. A large number of casualties reported in the Battle of 1818 as the British failed to comprehend and adapt to the geophysical environment of Ceylon appropriately. The Kandyan fighters modified the methods used by the Sri Lankans to encircle the enemy on the plain battlefield according to the geographical factors of their battlefield. They encircled Britain's soldiers on three sides and trapped the other side in a fort. Opportunities for the organisation or command of armies
in sloping mountainous, forested areas in the highlands can be identified during the Battle of 1803 and 1818. Geoffrey Powell quotes Herbert Beaver as referring to the battles of 1803.

... I cannot give an idea of the country; the jungle is so thick, and the fastnesses so strong, that we are not a moment sure but what we may be destroyed by a masked battery. My whole force now consists of only 60 Europeans, 140 Seypoys and 170 Malays" (Powell, 1984, pp.138-139).

Analysing this statement, it is clear that the Sri Lankan fighters surrounded the enemy on three sides and used the forest environment extensively. The Sri Lankans did not have a large number of heavy weapons and attacked and bows, swords, knives and spears. It is revealed that the range of attacking the enemy was determined, taking into account the environmental conditions prevailing when attacking with guns and bows and arrows. This is an appropriate fighting technique to follow in guerrilla attacks. The encirclement of the Sri Lankans on three sides shows how the fighting plan was. During the outbreak of the Battle of 1818, in November 1817, a British battalion, including Sylvester Wilson, with about 200 fighters, led by Ratte Rale of Bootawe, attacked the enemy by encircling the jungle on three sides (C.O. 54/66 No. 248 Letter from Brownrigg to Bathurst, 7 November 1817; Vimalananda, 1970, pp.100-103).

The philosophy of war shows that it is appropriate to set up camps at high altitudes, be smaller hills and higher ground than the territory and that the geographical environment should be used in war (Giles, 1910, p.81). Sri Lankan fighters are very much in tune with this concept. The martial arts of the Sri Lankan warrior found that the location of the natural environment could be used for camping and attacking. The uniqueness of the Sri Lankan fighter is that he adapts to and blends with the environment during combat. It is also known as guerrilla warfare. This guerrilla warfare technique is the knowledge gained by the Sri Lankans by living with the environment. The origins and uniqueness of the Sri Lankan guerrilla warfare culture resulted from living as an ecological animal. In forest battles, they seem to have had a strong belief in the ability to subdue the enemy with their hands and feet, hiding from environmental factors and even the physical art of Angampora rather than weapons. Also, due to the high level of British arms use, Sri Lankans were able to face offensive weapons because they managed the forest areas well. The use of water canyons, mountain forts, forest canyons, weather, climate, seasonal changes, environmental factors such as Leprosy, mosquitoes to attack the enemy in the design of the enemy's route is poisonous to the environment in Sri Lanka mixed with martial arts the ability to do.

Sri Lankan warriors used the water fort as their defensive method of building safe havens. Water forts were natural locations that caused great disruption to the British. The area from Hanwella to Colombo was flooded in 1817 due to the mid to late October of the year. As a result, the rivers overflowed, making it difficult for British troops to enter. Also, with the help of these canyons, mails were intercepted by the Sri Lankans (Marshall, 1846, p.186). That became extremely difficult to effect prompt and specific cooperation of the British troops. Major Adam Davie and his army, who had come to the hill country for battles between 1803 and 1804, came close to the Mahaweli River and could not cross the river due to the severe floods. Arriving
at that time, the Sri Lankan warriors deceived the enemies and informed them that they could cross the water gorge using ropes and plotted to cut the ropes and destroy them when they crossed the river (Powell, 1984, pp.122-123). It was an opportunity for Sri Lankans to use the water forts to their advantage. Upcountry fighters surrounded and defaced the enemy until leeches attacked them during the rainy season. This is evidence that the water gorge was used as a tactic to suppress enemies. Fighters used water gorges for their defense and attack. By December 1817, the British had deployed special forces to cross the Uma Oya due to the rapidity of the water and the depth of the river. Accordingly, the joint operation of the British forces to suppress the Sinhala militants failed.

There are six kinds of terrain: accessible ground, entangling ground, temporising ground, narrow passes, precipitous heights, and position at a great distance from the enemy (Giles, 1910, p.100). The area where both sides can cross freely is called the reach area. The art of war points out that in selecting terrain of this nature, the enemy must first capture high ground and well-lit places and secure supply routes (Giles, 1910, pp.99-100). The Sri Lankan warriors occupied the territory before the British enemy and engaged in an advantageous battle, disrupting the supply routes of the British troops. For any army, the supply chain is as important as the heart of a man's life. Ground that can be abandoned but is hard to re-occupy is called entangling ground, and when the position is such that neither side will gain by making the first move, it is called temporising ground (Giles, 1910, p.102). It is possible to capture narrow gorges before the enemy. The advantage of the Battlefields is that they can subdue the enemy by sudden and unpredictable attacks since the beginning is in their hands in retaining their troops. If it is a precipitous height, the fighters must occupy sunny spots before the enemy and wait until the enemy arrives (Giles, 1910, p.102). The unique advantage of capturing high places and narrow forts is that the enemy cannot control the actions of the fighting group. Sri Lankan fighters captured these high places, and the enemy behaved not to be controlled. Although water, leeches, and mosquitoes plague low-lying rivers, they were essential factors in the battle planning, not found in high-altitude, well-lit areas. But Sri Lankan fighters were used extensively to hide high places and protect weapons. War thinkers identified and explained the nine varieties of ground: dispersive ground, facile ground, contentious ground, open ground, ground for intersecting highways, serious ground, difficult ground, hemmed-in ground, and desperate ground (Giles, 1910, p.114). Upcountry in Sri Lanka is not an open land. A ground on which each side has the liberty of movement is open ground (Giles, 1910, p.116); that is a problematic ground with mountain forests, rugged, steep, marshes and fens. Upland features can also be seen as hemmed-in ground; thus, the ground can reach narrow gorges.

Sri Lankan fighters are blocking any road to retreat in the allied terrain to show that they are defending their position, but the real intention is to break through enemies' roads. This concept of war is confirmed by the victories of King Wimaladharmasuriya, Rajasinghe II and Sri Wickrama Rajasinghe in their attacks on Portuguese, Dutch and English armies. The prospect of saving their lives on the desperate ground must be active. Accordingly, war philosophy advises that the burning of cargo, the throwing of what they have gained
from enemies, the closing of wells, and the destruction of cooking utensils should be used as war tactics. Sri Wickrama Rajasinghe's abandonment of Kandy and the retreat to Hanguranketha can be seen as a case in point (Veligala Kaviasundara Muddali, 2001, pp.62-63). Whether consciously or unconsciously, the Sri Lankan fighters seem to have achieved opportunistic victories in the face of hostile forces. As the war scene shows, the upcountry can be identified as a difficult area and an encroached land.

Based on weather and climatic factors, Sri Lankans tried a tactic during the war of independence by blocking the stores and provisions to the upcountry and starving and weakening British troops. Captain L. De Busseche noted:

In a country like Kandy, with no better road than a bridle path, and that frequently leading over difficult passes and high mountains; where all military stores and provisions must necessarily be transported by men, one of the great difficulties of carrying on war is the danger of starving; it requires, therefore, more than ordinary attention and exertion in the commissariat to obviate so serious an evil. (De Bussche, 1817, p.20).

This note shows that the British had to make a separate effort to address this serious problem. The fighters were organised to reap the maximum benefits from these weaknesses faced by the British when fighting. That was a positional, timely and localised methodology of the Sri Lankan fighters.

The philosophy of war shows that the best ally of a soldier is the natural formation of the country (Giles, 1910, p.108). The militants in enemy attacks heavily exploited the geographical environment of the upcountry. The central part of the Kandyan kingdom was a natural fortress protected in three ways. It was a jungle with dense forests and a gorge with tremendous peaks and precipices. During the rainy season, the Kandy environment became a water gorge. It is not very easy to maintain an upcountry and lowland connection due to flooding and the closure of forest roads (Mendis, 1963, p.22). Brownrigg also acknowledged in a general decree issued on 20 February 1815 that the British forces could have been severely defeated if a more planned evacuation had taken place in this environment.

Sri Lankan fighters affirmed their tendency towards warfare as a theoretical practice in war. Among their war tactics were water forts, forest forts, and rock forts at a very high level. Trapping and attacking the enemy on the riverbank is unique (When assassinating the British officer Wilson's in 1803-04 battle Sri Lankan used this unique method). The philosophy of war is that when an invading army advances across a river, one should not go into the middle of the river to meet that army and start fighting after half the army has crossed the river (Giles, 1910. Sri Lankan fighters followed this theory of war. Do not camp on the lower slopes of the river during river-based battles.

By anchoring higher than the enemy in the river, the chances of being attacked by floodwaters are nullified. Sri Lankan fighters seem to have had an understanding of these concepts. It was the custom of the Sri Lankan warriors in river wars to cross the river halfway, cut the ropes that help the enemy in the middle of the river, and take action to swept away the enemy, attacking and breaking the vessels. War theory advises that a river
that is expected to cross should be stopped until the water level drops if the water level rises and foams due to rain. Water currents flowing through steeply sloping peaks should be avoided as soon as possible, away from deep natural hollows, tangled thickets, quagmires, and crevasses (Giles, 1910, p.86). But the British enemy forces were unable to avoid this challenge. It took them considerable time to understand how to operate in a fortified area and adjust their combat strategy accordingly. Sri Lankan fighters were able to identify how these tactics should work on the battlefield. This situation can be identified because British enemy groups have been deployed in areas where Sri Lankans are expected. The enemy forces appear to have had to defend themselves from environmental factors and fighters and spies.

Sri Lankan battles across the forest forts had several advantages, such as covert espionage planning, covert attack, security, selecting suitable locations for attacking the enemy, and creating the space needed to determine how to attack. The forest became so important that the ancient kings adopted a protection method to protect the forest, which was very important for guerrilla warfare. According to Robert Knox, dense forests bordered every area, and deforestation is prohibited by royal law to protect the area. The king appointed forest rangers to protect forests (Knox, 1989, p.45).

On the day of King Senarath, a man named Galketiya was appointed to the Diyatilaka Korale, Wathkumbura to the Kohona area and a man named Bambaragama Samara to Gannawa as rangers (Rev.Lankananda, 1958, p.204). This is further confirmed by the fact that deforestation, which is divided to protect the country from foreign aggression, is prohibited by law (Dissanayake, 1997, p.53). Not only are highlands suitable and comfortable, but they are also convenient places from a military standpoint. The fact that the lowlands are wet and unhealthy makes them vulnerable to combat shows that the impact of mountains, valleys, and muddy terrain is crucial in combat.

The malaria epidemic caused daily casualties among British soldiers (Mendis, 1963, p.23) when travelling through the jungles.

It is extremely difficult to make any impressions upon a revolted province without a continual and active co-operation from the natives themselves. The rebels will not face the weakest Detachment of soldiers, they retire into the jungle, and patiently wait till the bad weather, scanty provisions or disease compels our troops to retire. To surprise them in their retreats or drive them out of their interminable forests, requires the aid of their countrymen used to the climate, and as well acquainted with their secret haunts as themselves. A long experience in former wars shows how impossible it is for any Europeans along to subdue even a part of their country... (C.O. 54/66 No. 251, Brownrigg to Bathurst, 27 November 1817; Vimalananda, 1970, pp.116-117).

This statement clarifies the Sri Lankans' tactic of 'postponement'. Given the adverse climatic conditions prevailing in the upcountry of Sri Lanka and the disasters of climbing the gorges, the British realised from experience that even if the Kandyan kingdom was invaded and won, the loss of life and property in the invasion was far greater than the gain of that conquest.
It was a Sri Lankan tactic to obstruct the British's movement by laid large trees across the roads, breastworks, and barricades (Marshall, 1846, p.32). Not only to destroy the method of obtaining food but also as a tactical move by the Sri Lankans to cut down the trees and destroy the British troops was one reason for the destruction of the trees by the British. The Kandyan fighters cut down trees on the road against the British soldiers led by Major de Latera from Trincomalee on 2 March 1818, preventing entering the Nalanda2. The warriors were adept at the use of gorges. According to the Mahavamsa (Mahavmsaya, 1963, ch.75; 31-33), when the Rohana people support the war of King Parakum I, they used guerrilla warfare, and it seems that Sri Lankan soldiers used the jungles even in medieval Sri Lanka. Governor Brownrigg says of the guerrilla warfare method of combat use:

The passes are guarded and the roads infested by Armed Natives, who retreat into the jungle when any strong party advances, but attack where they see only a few and put to death without mercy those who unhappily fall into their hands. This mode of warfare is harassing, because every massage or despatch requires a strong escort” (C.O. 54/66 No. 255, Letter from Brownrigg to Bathurst, December 15, 1817 (Vimalananda, 1970).

Sinhala fighters showed no mercy to the enemy during the battle. Another tactic used by the warriors was to cut down trees and encircle the enemy to prevent them from returning. The Sinhala warriors resorted to this tactic, especially on the routes of the enemy. The tree was initially cut down but held upright with the help of giant vines that prevented it from falling, causing it to fall when the enemy fled (Powell, 1984, p.28). Since fallen trees completely blocked the road, it was the custom of the warriors to kill the enemy by knocking down the trees held in the vines so that the enemy could not return.

Due to the geological location of the upcountry, the permanent result of the rains was the creation of muddy gorges (Panka Durga). The use of muddy gorge in ancient Ceylon was an essentially defensive strategy of the royals. Even after the European invasions, not as much as during the Sinhala Kingdom period, muddy gorges were used to endanger the enemy. Due to the prevailing rainfall in the upcountry, an ecological condition naturally created muddy gorges. In the upcountry, there were rocky hills and soil hills, so the landslides created mud gorges. Although the Kandyan fighters understood landslides, the lack of a proper understanding of the landslides and locations by the British forces caused them severe damage. The situation of the British army was aggravated because the herds were not accustomed to such a journey and not prepared to face hardship. Despite the situation, Brownrigg began an exhausting training program for the soldiers, but it was unsustainable. The British fighting teams used wet tent cloths, and the British had to postpone the voyage as

2Nalanda Kapolla is a unique place where Sri Lankan troops provided security during the Kandyan battles and Kandy is an important place to inquire about the geographical environment. During the Battle of 1818, the British troops, including Major Delatre, arrived at the Nalanda Bridge, 96 miles from Trincomalee. Sri Lankan fighters who had heard of the voyage in advance had been guarding the Nalanda breach for four days and the enemy was attacking from both sides as they crossed the Gonava River. Delatre right arm was fractured and two soldiers were killed and four wounded in a shooting by Sri Lankan militants (Marshall, 1846, p.194). These figures from British sources are unbelievable. In the face of the onslaught, Major Delatre decided to take the Nalanda security forces with him to Kurunegala. He arrived in Kurunegala on March 27 and was severely attacked by Sri Lankans on the way.

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they could not start their journey until they dried up. Moisture in the environment created an unfavourable and dangerous situation when using things like gunpowder. During the monsoon season in Sri Lanka, this risk was multiplied by several times, and strict discipline was required to keep the firearm in usable condition at any time. British soldiers had a long, heavy bayonet to use if they had to face a battle. But in a country like Sri Lanka, where there are plenty of places where fighters can cover their defences, the benefits to the British of using such guns are small.

Sri Lankans used jungles and mountain gorges to focus on challenging areas for the enemy to capture. The skilled fighter in the attack jumps forward from a high position, making the enemy defenceless. Accordingly, the place of attack is the place where the enemy cannot guard (Giles, 1910, p.44). Sri Lankan fighters seem to have adopted this concept of war by hiding in the trees and jumping in front of the enemy, hiding behind rocks and attacking the advancing British troops. Attacking the enemy on the way is highly effective in such situations as it is not exactly a place where he is guarded. The hiding place of the one who is good at securing is hidden in the deepest abysses of the Earth so that the enemy cannot find it (Giles, 1910, p.44). The secret abysses explained in the theory of war are the extremely difficult gorges to cross. A skilled fighter stretches the bait and deploys the enemy on the journey. He then hides with a select few and waits to face the enemy. These tactics are often used by militant leaders such as Sri Wickrema Rajasinghe and national fighters on their battlefields.

**Conclusion**

In the 19th century, Sri Lankans fought against Britain, one of the most technologically advanced countries globally in maritime, with a large number of colonies. The British made significant sacrifices and made Sri Lanka a colony. Although the British were one of the most powerful colonial nations in the world, they were challenged by the geographical location of Sri Lanka and the militancy of the natives. Sri Lankan fighters focused more on the geospatial tactics that can be used during a battle compared to the weapon management to face the enemy with advanced weapons. In the anti-British battles, Sri Lankans achieved the maximum possible results against the British depending on geospatial war strategies. Sri Lankans mostly carried out covert or guerilla attacks for security purposes in addition to the direct attacks. The fighters constantly closed their hiding places on the battlefield and the access roads to the upcountry. In other words, Sri Lankans were increasingly using the geophysical environment to attack and they adopted natural environment-related tactics such as holding trees directly with the help of vines, causing trees to fall when the enemy fled, paving the way for roadblocks, occasional retreat, encirclement, displacement, encroachment on enemy paths, ambush, cutting down trees and obstructing narrow passages, cutting down trees first but not allowing them to fall, and attacking based on weather and climatic factors.
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