

CHAPTER EIGHT

Disparities in Utilisation of Natural Resources for the Development of Post-War Society: with reference to Freshwater Springs in “Kunchuttu” Region, North Central Province, Sri Lanka⁴

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Abstract

This research is focused on studying the water resources in the areas which have experienced conflict during Sri Lanka’s period of war and the lifestyles of people who are associated with the utilisation of these water resources. Nine freshwater springs which are located in the Kebithigollewa DS of the North Central Province of Sri Lanka are the subject of this study. In addition to secondary sources, data was collected through interviews, participatory observation, open discussions and testing of water samples. The study reveals the dynamics in the lifestyles of people who utilised these water springs during the pre-war, war, and postwar periods. It further discloses the social, cultural and political potentials surrounding these water sources that help to build peace and coexistence through reconciliation processes within the postwar period.

Key words: *co-existence, freshwater springs, lifestyle, peace, postwar period, reconciliation*

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8.1 Introduction

'Kunchuttu Koralaya' (region) in Anuradhapura District is a land which borders the Northern Province. The area is covered with forest and was exposed to the 30-year war. This region is known by the Tamil term 'Kunchi Ugaththung' which means 'made of little water springs'. Divisional secretariats of Kebithigollewa and Padaviya belong to this region. Naturally, this region consists of arid and dry ecological features. Eighteen freshwater springs which do not go dry throughout the year are a blessing for not only the humans but also the flora and fauna in this region. These springs can give immense direct and indirect support in developing the postwar community life of the people in this area. Most of these springs were abandoned as they were located in the area which was under the control of the rebel group LTTE during the conflict period. This study examined the ability for sustainable utilisation of natural resources (freshwater springs) within the postwar environment, with regard to the physical and human development of communities which were directly affected by the war.

8.2 Literature review

In this century water is referred to as the blue gold, because water bears the power of authority to decide life or death in the context of a global socio-economic, political and environmental atmosphere. 'In the social sciences, water resources research generally focuses on freshwaters of the world. Freshwater includes precipitation that falls over the continents as rain or snow, infiltrates into soils and ground water aquifers, runs off into stream networks that drain the continents, evaporates from lakes and transpires from vegetation, and ultimately flows back

into the deltas and estuaries along the continental margins' (Wescoat, 2015, p.437). This research focuses on spring water which is related to the water cycle as mentioned above. Freshwater springs are playing a crucial role in providing drinking water in the world as a spring's fresh water is not contaminated and polluted when compared with surface and other sources of water. Freshwaters constitute only 2.5% of the world's water resources, the bulk of which (96.5%) is in the oceans. The largest proportion of freshwater is frozen in ice caps and glaciers (68.7%), followed by groundwater (30.1%), lakes (0.26%), the atmosphere (0.04%), marshes (0.03%), rivers (0.006%), and biological water (0.003%) (Shiklomanov, 1993, p.241; Trenberth, et al., 2007, p.13).

Water and Ecosystems

There is no life without water (Adams, 2009). Water plays a crucial role in all ecosystems. Some ecosystems mainly depend on, and are distributed along, the water bodies and are associated with them, such as wetlands, lakes, ponds, rivers, sea etc. This study focused on freshwater ecosystems. These aquatic ecosystems have unique biological diversity and they provide lots of products and services. Moreover, some freshwater ecosystems have provided habitats for multiple types of animals and human beings as well (Tennakoon, 2009). In the evolution of human civilization, water resources were a compulsory component in deciding the path of evolution (Farmer, 1957). Some civilizations have developed their own knowledge and constructions to use water. Sri Lanka is one of the ideal countries for such development, with more than 5,000 man-made water resources (Weva) in the dry zone (Farmer, 1957; Bandara, 1985). The village tank cascade system was the systematic way of making tanks, practiced by ancient civilizations (Bandara, 1985).

The tank is a living organism (Bandara, 1985). Springs are a compulsory component of that system. However after the construction of huge irrigation systems, people who were living in those areas could use new systems rather than small water resources such as springs, but these springs are still functioning to date and assisting people to live in those areas. Moreover, springs associated with ecosystems have enabled wet zone ecosystems in the dry zone and provided habitats for both flora and fauna species.

Water and Climate Change

The impact of climate change is one of the burning issue with which the planet is suffering. According to the Intergovernmental Panel on Climate Change (IPCC, 2007), climate change has brought about extreme weather conditions which are unpredictable. According to World Health Organisation's Global Water Supply and Sanitation Assessment Report (2000, p.1) , at the beginning of the year 2000 one-sixth of the world's population (1.1 billion people) was without access to improved water supply and two-fifth (2.4 billion people) lacked access to improved sanitation. The majority of these people lived in Asia and Africa. 12 % of the world's population uses 85% of its water, and they do not live in developing countries (Maude Barlow, 2001, p.1). Climate change has a disastrous effect on water resources. Water is absolutely necessary for the existence of all living things (Intergovernmental Panel on Climate Change, 2008). The lack of adequate water required for drinking, sanitary purposes, agricultural and industrial purposes will definitely create many problems. Adaptation is the appropriate response to climate change effects until effective solutions are found, and as such more attention needs to be placed on local level resources and opportunities.

Freshwater springs are such a resource, and an effective factor in responding at a local and national level in Sri Lanka.

Water and Agriculture

Water and agricultural practices cannot be separated. The world's cultivated area has grown by 12% over the last 50 years. Over the same period, the global irrigated area has doubled, accounting for most of the net increase in cultivated land (Food and Agricultural Organization of the United Nations, 2011, p.9), and world fertilizer use has increased more than five-fold (International Fertilizer Industry Association, 2014, p.1). On the other hand, while two litres of water are often sufficient for daily drinking purposes, it takes approximately 3,000 litres to produce the daily food needs of a person. Agriculture makes use of 70% of all water drawn from aquifers, streams and lakes. Globally, groundwater provides approximately 50% of all drinking water and 43% of all water used for agricultural irrigation. Irrigated agriculture accounts for 20% of the total cultivated land but contributes 40% of the total food produced worldwide (Food and Agricultural Organization of the United Nations, 2011, p.9). In 2012, 179 million metric tonnes (Mt) of fertilizer (in nutrient terms) were applied to 1,563 million hectares (Mha) of arable land and permanent crops (Food and Agricultural Organization of the United Nations 2014, p.1). All this data shows two main dimensions related to water; the extensive use of water in agricultural practices and the high levels of fertilizer used in agricultural processes. The former often leads to the misuse and over use of water resources while the latter causes water pollution. As stated by the International Water Management Institute (2014, p.12) "there are a number of exacerbating issues, trends and pressures affecting the world's food supply, and the underlying natural resources and ecosystems that form its

foundation". In the Sri Lankan context this situation is very complicated and tragic. Poverty, debt, suicides, inadequate and weak marketing processes, postwar factors, political bias, environmental issues and health issues have made the situation worse.

Women and Water

Women are naturally the best conservationists in human society. They have inherent qualities and skills to live with nature and manage resources (Shiva, 1998). Moreover women are best at dealing with natural resources for themselves and their families in their day-to-day life (Shiva, 1998; Maathai, 2009). The woman plays a critical role in successful community driven programmes. Water is not exceptional from this discourse. "Clean water isn't just a matter of life and death. It's not just about thirst, hunger and sanitation. It's about opportunity. Without access to clean water, the world's poorest people will stay poor" (Miletto, 2015, p.02). Water scarcity has presented many obstacles for women. Time lost due to walking and waiting for water is having a ripple effect on women's lives, their communities and whole economies. On average, globally, women and children spend 200 million hours every day collecting water (World Health Organization and UNICEF, cited in WWAP, 2015, p.03). Surveys from 45 developing countries show that women and children bear the primary responsibility for water collection in 76% of households. This represents the time which is NOT spent in carrying out income generating activities, caring for family members, attending school or simply looking after women's needs and aspirations (United Nations World Water Assessment Programme (WWAP), 2015, p.03). Similar problems and issues can be seen in the dry zone in Sri Lanka and are unfortunately

spreading with the situation affecting other areas of the island as well.

Water and Conflicts

The study of all types of conflicts and wars factor in natural resources, such as land, minerals, energy, etc. because almost all human needs are based on natural resources and without resources they cannot maintain civilization. It is an endless struggle between the environment and civilization (Adams, 2009). In 2001 Kofi Annan stated that (Annan, 2001) "Fierce competition for fresh water may well become a source of conflict and wars in the future". Later he said "But the water problems of our world need not be only a cause of tension; they can also be a catalyst for cooperation...If we work together, a secure and sustainable water future can be ours" (Annan, February 2002 cited from The United Nations and Environmental Security, 2014, p.60). Wolf stated that in this modern world "water-related violence often occurs on the local rather than international level, and the intensity of conflict is generally inversely related to geographic scale" (1999, cited from UNES, 2014, p.60). Issues arise in the sectors mentioned below:

- 1) Access to adequate water supplies
- 2) Water, livelihood loss, and civil conflict
- 3) Water management and conflict

These sectors and related issues are very common in the Sri Lankan context, while extreme ethnic, religious, weather and geo-political influences, and privatization efforts have made the situation more complicated. *Ma vil aru*, *Ratupaswala*, and *Uma Oya* cases have embodied community sensitivity on the water related issues.

Water for Peace and Harmony

Water has the power of making conflicts and resolving conflicts, especially as there are no alternatives to water. Water has the potential to make people unite and to create harmony among them. Integrated river basin management is one of the methods which is practiced, and has been successfully practiced in international river basins and national level political boundaries. Not only rivers but also lakes, tanks and springs have this type of potential because water is compulsory for all living beings. However, some cultural barriers have affected access to water sources to some extent. For instance, in Jaffna, some water springs are especially allocated for the Tamil upper class elite communities through tradition. Sinhalese too practice caste based water resource allocation in the north central part of the dry zone. These water springs are working as a 'Harmony hub', developing mutual understanding between people, while promoting and sharing resources and communication as well. In the process of reconciliation these springs can be used as a bridge to connect diverse communities in an effective way.

Sustainable Development and Water

The concept of sustainable development has become a panacea. "In research, it seems to offer the potential to unlock the doors separating academic disciplines and to break down the barriers between academic knowledge and policy action" (Adams, 2009, p.5). This wide range of discourse can be introduced referring to the most commonly quoted excerpt from the Brundtland Report, in 'Our Common Future', "...development that meets the needs of the present without compromising the ability of future generations to meet their own needs" (Brundtland, 1987, p.43). In the context of sustainability, water is at the core of sustainable

development. Water resources, and the range of services they provide, underpin poverty reduction, economic growth and environmental sustainability. From food and energy security to human and environmental health, water contributes to improvements in social well-being and inclusive growth, affecting the livelihoods of billions (UNWDR 2015, p.2). The United Nations World Water Assessment Programme (2015) has highlighted three main dimensions between water and sustainable development. They are;

- Poverty and social equality
- Economic Development
- Ecosystems

According to those dimensions sustainable development should achieve objectives which are related to particular fields. The concepts of Green Development and a Green Eco- economy are extensions of the sustainable development process (UNEP, 2011). Finally those conceptual and theoretical perspectives have led to changes at the grassroot level. In particular, natural resources oriented integrated developmental programmes will be effective and efficiency solutions for the negative impacts of modern human civilization.

8.3 Study site: *Kunchuttu Koralya*

According to Human Geography, 'Kunchuttu Korala' is a multi-religious and multi-ethnic region which is rich in cultural heritage. In terms of physical geography, it is a region which consists of poly geologic land forms, hydrographical and climatological features. Literature studies on 'Kunchuttu Koralya' are rare. However, a few studies have been done on the history and the community life of the region. 'Rajarata

Janaviththi' by Dharmathilaka (2004) contains a brief introduction of this region. Wijepala (2009) includes brief information on the history of this region in his work 'Wangili Weliththan'. 'Anuradhapura Veddhas', written by James Brow in 1978, carries information on Wannu Sinhala people who lived in this area.

However, for a long time, these areas have been peripheral regions which are difficult to access as they are covered with forest. These areas were known as 'border villages' during the war. These communities have been overlooked, intentionally or unintentionally, in literature and studies on war or peace. As a result, only out of need for continuity and soundness (which should be presented in a literature review) there are only few incidents about the period of war without any detailed description.

The people of this region are farmers who use rain water for their cultivation. It is their only means of living. The prime factor which determines the success of their cultivation is water. After the war, awareness was created in these areas regarding issues such as chronic kidney disease, human-elephant conflict, drought, poverty and suicide. These issues in turn are directly or indirectly connected with the lack of water as a natural resource. Nevertheless, the sources of water which form a solution for these problems can be identified within the area.

Within the region, there are 18 water springs (main springs) which are active throughout the year. Among these springs, 'Sinhaya' spring contains potable water while 'Kalavedi Ulpatha' has muddy water. Around the land of 'Gonameriyawa' spring, many landmines have exploded in the past. However, presently the area is suitable for eco-tourism industry. 'Dunuke' spring,

which is located on wild land, has created a tank inside the forest itself. This tank feeds a few of the other 'village tanks' situated below it. The 'Bandara' spring too provides potable water for the area. Other springs, which are active throughout the year can also be used appropriately in this manner. This will not only solve many problems faced by the people in the area but also help to achieve goals of regional and national development.

8.4 Research problem

The geographical area under study consists of 'border villages' which were under constant attack during the war. Hence during the last 30-year period this region has experienced no significant quantitative or qualitative development in any sector or in people's lives. Even though the war has ended, these regions still remain underdeveloped peripheral areas. The suffering caused by the war can still be seen in these regions. After the war, the major challenges that prevail in this area are chronic kidney disease, human-elephant conflict, and drought. 'Pure water' is the ultimate solution for all these challenges. The region holds 18 freshwater springs which are active all year round. If this natural heritage can be utilised in a more sustainable manner, most of the problems of the communities in these regions can be resolved. Thus, the problem statement of this study is to examine 'how to utilise natural resources for the development of postwar society in a sustainable manner'.

8.5 Significance of the study

This geographical region was subjected to war over a long period of time. At present, the people of this area are experiencing the benefits of peace and this research studied the ability to use natural freshwater springs in the area for the development of these communities. The research focuses on the non-elite communities which were overlooked in the discourse of development. Therefore, this research is directly relevant to the themes of 'conflicts, peace and development' in the stage of reconciliation. The information revealed from this study will directly contribute to development in the following fields:

- Identification of water springs which are spread throughout the area and gather information on how to utilise them effectively and responsibly.
- The ability to gather information necessary for policy makers.
- Identification of potential in fulfilling drinking and agricultural water requirements of the community in the area.
- The ability to recognise suitable areas for peace tourism industry.
- Identification of sources which help to improve the standards of living of the people in the area.
- Identification of the lifestyles which prevail in the region and to preserve them in written form.

8.6 Objectives

- To identify the major challenges that the community is facing in the postwar context.
- To identify the potentials of the springs which are situated in the area to develop postwar society.
- To make an effective and efficient plan for the use of these springs in a sustainable manner.
- To understand the cultural profile that is related to springs.
- To explore the natural resources at the regional level for regional development in the context of postwar development.
- To fill the existing academic space regarding the postwar context in Sri Lanka.

8.7 Methodology

The research used both qualitative and quantitative data. The rationale behind using a mixed methodology of collecting data was to avoid the problem of simplification that is associated with computer based analysis. The data was tabulated manually after analysing the quality of water at the laboratory of Faculty of Fisheries, Marine Sciences and Technology, University of Ruhuna, Matara.

The qualitative data was helpful in understanding the complex relations that people had with the springs and the people to people interactions via those springs. The secondary data included books, reports, research papers, and e-sources. The primary data was collected through focus group interviews, open discussions, life history interviews and field observations. The people who had been using those springs were the study sample. The research team concluded that the distance to reach the springs was not significant, as in the present case people came from faraway places to fetch water from the springs. Moreover Global Positioning Systems (GPS) points were collected to understand the distribution of springs and e PH values measured to check the water quality of the springs. The data was presented in tables where necessary while a descriptive analysis was undertaken to comprehend and understand the interaction people had with the springs.

8.8 Discussion and analysis

8.8.1 War and Springs

The way people have customarily associated with the springs and their changes during the 30- year war period and in pre and postwar periods were identified.

Pre-war Period

People have identified these springs during the pre-war period. However, they were used only during droughts during the pre-war period and were not in diurnal use as they were at the time of the study. Some springs (such as Kebithigollewa, Gonameriyawa, Dambagaha springs) were used only by the communities located close to them. Therefore any organisation in utilising the resource cannot be identified. During this period,

people's focus was on other water sources (tanks, canals, wells etc.).

The land in which these water springs are situated had been maintained as a 'common land'. Most of the lands which contain water springs belong to ancient Buddhist temples. However, factors such as religion, race and cast were never considered when utilising this resource. The community deemed these springs as a gift of nature.

Ecosystems which contain water springs can be identified as wetlands within a dry zone. These ecosystems carry flora and fauna which cannot be observed in a dry ecosystem. In the pre-war period, elephants had a tendency to arrive at these springs during droughts.

War Period

With the first half of the second Eelam war, in other words after 1990, the study areas were directly influenced by the war. The civilian control in the area failed under the threats of terrorists and the village surrendered to a control between the government's army and the terrorists. These villages were known in the Southern part of the country as 'border villages'. While LTTE terrorists attempted to evacuate the villages in order to have the area under their control, the government desired the villagers to remain in these areas even with the prevailing threats and risks. However, due to terrorist attacks (massacre of civilians) certain villages had been abandoned and some villagers had migrated to civic areas such as 'Kebithigollewa' while another group of people continued to live in these villages. Those who remained in the area had organised themselves under the traditional leadership of a Buddhist monk. The responsibility of the leadership was to be provided for Sinhalese,

Tamils and Muslims alike. Realising that the civilians were organised in this manner the LTTE terrorists had killed the chief monk and attempted to cripple the associated network of organisations. Nevertheless, the role of Buddhist monk leadership was still evident in these villages at the time of the study. For instance, Buddhist monks were leading the awareness programmes on preventing chronic kidney disease.

Given the aforementioned situation during the war, the forest started to cover the springs (Garida spring, Kalawedi springs, Bandara Spring, Sinhaya (lion) spring etc.) which were situated at the fringe of the forest and had not been accessed due to the prevailing LTTE terrorist activities and insecurity in the area. Yet it was noticeable that under the traditional supervision and administration of Buddhist monks, these springs had been maintained throughout a period of more than 30 years of conflict.

Post-war Period

Even though the terrorist threats which had prevailed in these areas were removed with the defeat of terrorism in 2009, the lifestyle of these communities did not return to normal for another few years. During that period, buried landmines, unpleasant memories, destruction of homes and cultivated lands and security measures taken by the Government caused many irregularities in people's lives.

By 2015, the roads destroyed by the war and communication facilities, electricity, administrative work and other utilities had been re-established in these areas and they were once again open to the outer world. The resettlement of people, establishment of new settlements, and commencement of agricultural and commercial activities had taken place. Along

with these development accomplishments, these areas were severely affected by issues such as the human-elephant conflict, chronic kidney disease, and climatic change - issues which did not gain any previous attention during the war.

Under these circumstances, the importance of freshwater springs is highlighted and these springs can be identified as an alternative and an optimal solution in resolving the abovementioned problems. Similarly, the springs have a great potential in building the co-existence between different races, an aspect which has received more attention in the postwar period. At the time of the study, these springs were silently fulfilling this service and they had been subjected to the collective consumption of multi-religious and multi-ethnic communities along with their respect and protection towards these invaluable resources.

However, these water resources are being destroyed and the social texture associated with it has been ripped apart due to the development projects and the interference of certain companies during the postwar period. Due to the cleaving of hills and gravel in order to build roads and tamping roads, a risk has arisen that the water springs may dry out. An example of the communities' concern for the springs was when the Government had to surrender to the resistance launched by the community and the chief incumbent of the temple who asked 'not to tamper' with the road which was being widened alongside the Gonameriyawa spring. Furthermore, several private companies, under different governments, have tried to own the spring water to make bottled water but these attempts were discouraged by the people of the area together with the Buddhist monks.

This tendency highlights the rights and responsibility of the community in utilising and preserving natural resources. It can be recognised as a more progressive and democratic mediation that can be identified within the postwar period.

Rajarata which is known as the 'colony of tanks' inherits an ancient culture of water-related infrastructure. The area belongs to the dry zone of Sri Lanka and has an annual rainfall of 2,000 to 4,000mm most of which is received during the north-eastern monsoon. However, despite the rainfall, the people of the area have to face a continuous scarcity of water due to the dry season which prevails during most of the year. Even though the ancient tank system collects and contains rainwater, at present this water is mostly used for agriculture and cleaning. As research has identified drinking water as the cause of chronic kidney disease, people tend not to use water from the tanks and turn to alternative water sources for drinking water. The main sources of this are:

1. natural water springs
2. wells with potable water

According to the villagers, even though there are private wells which were dug for drinking water, the quality of the water is still not up to the standard required for drinking. In the researchers' opinion these waters should be artificially cleansed in order to bring them to a suitable level fit for human consumption. Therefore, people have selected natural water springs as the best alternative for this drinking water issue. At the time of the study, The Sri Lanka Water Works Board had inspected the water from these springs and they have put up boards alongside the springs stating that the water is fit for drinking.

8.8.2 Study Setting

This study was focused on nine natural water springs which are situated in the Kebithigollewa DS that belongs to the Anuradhapura District.

Table No.8.1: GPS Points of the springs

Entry	Spring	GPS Point	P ^H Value
1	Gonameriyawa	8.6289° N / 80.6376° E	7.4
2	Kebithigollewa	8.6399° N / 80.6665° E	6.87
3	Garida	8.6321° N / 80.7338° E	6.49
4	Kunchuttuwa	8.6622° N / 80.6564° E	7.04
5	Dambagaha	8.6451° N / 80.7683° E	6.68
6	Bandara	8.6383° N / 80.7595° E	6.87
7	Kalawedi	8.6177° N / 80.7516° E	7.67
8	Sinhaya	8.7455° N / 80.7422° E	6.55
9	Dunuke	8.6251° N / 80.7407° E	7.2

Source: Field survey, 2015

They are Gonameriyawa, Kebithigollewa, Garida, Kunchuttuwa, Dambagaha, Bandara, Sinhaya, Dunuke, and Kalawedi springs. These freshwater springs are scattered all over the Kebithigollewa DS and almost all of them are situated within or near the forests, or alternatively the forest around the spring has been conserved.

8.8.3 Public opinion on the quality of water

The main water sources of Kebithigollewa DS are tanks, wells, rain water, pipe water provided by the Water Board and natural water springs. Among these sources, spring water has been accepted by most of the people as most suitable for drinking. Research has revealed that it is the consumption of unsuitable drinking water which is the cause for the chronic kidney disease which is spreading rapidly in the north central area. They have identified that the contamination of tank water caused by the long term use of agrochemicals is the main reason behind this illness. In addition, it has been revealed that the water from private wells dug by people are not of the most suitable condition for drinking. Thus, the Health Ministry of the North Central Province conducts continuous tests and provides recommendations to the public. Furthermore, the ministry has provided facilities for free testing of water samples for everyone. Therefore, people in the North Central Province are highly conscious about their drinking water.

In the Kebithigollewa area, the spring water has been tested and notice boards have been posted near the springs which demarcates suitable drinking water sites. The spread of chronic kidney disease and the increased interest of various parties on this matter has made many people use natural spring water.

Prior to this drinking water issue, these springs were only used by those who lived in nearby villages. However, due to the current state of the problem, it was observed that people who lived 30-40 miles away from the springs were also arriving there to collect drinking water.

“This Gonameriyawa spring contains the best water in the area. Mr. Hemakumara Senanayake from the Water Board had done a research for about a year and stated that these waters are coming from Knuckles. The nearby mountain is known as “Veddah kanda” and the spring lies at the bottom of it. There are no kidney patients in this village. These people have drunk from this spring since ancient times. Every village in Rajarata area has kidney patients but there are none in this village. The reason is the drinking water from the spring. Earlier, only village folks used this spring. But with the spread of kidney disease, people come here from miles away for drinking water. Some of them hire vehicles and take back water sufficient for about one or two weeks. Daily, about 4,000 to 5,000 people drink from this spring. When you get used to this water you cannot drink water from anywhere else. A cement cylinder has been used as a well to make it easier to get water from the spring. The excess of water, run-off water, is turned in to a separate tank and used for bathing. All the villagers bathe from this tank. As there is no brackishness in this water, wax does not gather on your hair. The using of the spring didn’t cease even during the war period. The village has about 130 families and apart from them, people from far away villages also use this spring.”

Galkandewe Sumanarathana Thero (37), Gonameriyawa

“I was born in Gonameriyawa. After my marriage I came to live in Kebithigollewa and now I have been here for about 20 years. I have drunk and bathed in water from the spring since I was a child. No one in our village has kidney disease. Water from the wells in the village has resulted in a burning in the stomach and during urination. There are no such difficulties when using water from this spring. Spring water is far better than water from wells. When I came here from Gonameriyawa, my hair thinned and my skin was darkened. I think the reason is water.”
C. K. Dharmasiri (40), Hendegama, Kebithigollewa

The study observed that the people of the area have developed a strong reliance on the spring water. Everybody uses spring water for drinking as well as for domestic purposes such as cooking and making tea and other such beverages. Yet it was observed that water from wells and tanks too were used for bathing and washing. However, only at the Gonameriyawa and Kebithigollewa springs, were there separate places prepared for bathing. At both these springs about 500 to 600 people bathe daily. It was observed that the females had a special preference for bathing in these springs. In most of the bathing places associated with the springs there were more females and they strongly believed that the spring water helped to maintain healthy hair and skin colour. Spring water is much cooler than the water from other sources which are used by people of Kebithigollewa. This coldness is most crucial in an area like the dry zone. Most of the restaurants in Kebithigollewa also use water from these springs. According to these restaurants owners the use of spring water has attracted customers.

The research team had the pleasant experience of tasting and bathing in the spring water. The pleasantness of water was due

to the low brackishness. Even though the water from North Central Province has a natural brackishness in it, this spring waters did not give any such noticeable taste. When bathing from other water sources in the area, an ashy substance gathers on the skin and the hair gets wax-like salinity on it. Yet water from the springs does not give any such complications.

Due to the high quality of the water, people from distant areas were attracted to the springs. Some villages from certain villages form groups and came to the springs by land master trucks, tractors or three wheelers. They bathed from the spring and used jerry cans to collect water sufficient for one or two weeks. They treasured this water as they used it only for drinking. They returned to the springs as groups when the water they collected finishes. Apart from them, those who live near the spring and those who are from a few miles away, came by push bikes and motor bikes. They too used jerry can to carry water. According to them, the water collected was sufficient drinking water for an average family of four to five members, for two days.

8.8.4 The quantity of spring water capacity and the activeness of the spring

Except for Gonameriyawa and Sinhaya springs, water from the other springs was relatively insufficient when considering the population and the climate of the area. Especially as the area experiences severe dry weather during the months of June-July-August and during this time the water levels of many springs decreases. Therefore people of the area have faced many difficulties regarding drinking water. The water level of springs such as Kebithigollewa spring, Garida spring, Kunchuttuwa spring and Dambagaha spring had decreased by a considerable amount and people stood in queues to get water from the springs from around 4 to 5 a.m.

Figure 8.1: Gonameriyawa spring and community interaction



Source: Karunaratne,2015

The water which flows into the spring was extracted using a coconut shell or some other small vessel/container and filled into the jerry cans. The water extracted in this manner looked darkish brown as it contained more mud sediment. According to villagers, the jerry cans filled with water are set aside for two to three hours and the mud particles sink to the bottom making the water suitable to drink. As most of the springs run low in the dry season, people gather around Gonameriyawa and Sinhaya springs as the water level at these springs do not decrease. During this season, people can be seen near the springs at any time of the day. This situation occurs only in the dry season. During the rainy season the springs produce a sufficient quantity of water.

These springs were supplying water to the army camps in the area as well. Therefore, pipes had been fixed to the springs and water was being shifted to the curb sides of the roads. This has created an excessive consumption of water and the majority of the general public in the area were experiencing a low level of water consumption. This condition had become severe in Dambagaha and Garida Springs. When the army collects water in

browsers and plastic tanks, these springs take 3 to 4 hours to get refilled. As a result, the general public has had to face many difficulties. People from a faraway village cannot go back empty handed, therefore they have had to stay by the spring for hours to collect some water. The army has placed three 5,000 litre tanks near the Garida spring to be filled constantly.

There are two springs in Kunchuttuwa village and the smaller spring with less water were being used frequently. Therefore its water levels had decreased. Yet the larger spring, situated a bit further from the smaller one, contains more water. The water from the smaller spring had a better taste and it was observed that there were at least one or two individuals regularly at the spring while people used water from the other spring only if there was insufficient water in the smaller one.

The Kalawedi spring of Kattakaduwa is situated at the end of a tank. Its water was being used only during the dry season when water was scarce. When the tank dries out during a severe draught, the spring which has been covered by the thicket was cleared and its water was used by people. It was used for bathing, washing and drinking but when the dry season was over and when the tank was filled with rainwater the spring was once again abandoned as its water did not give a pleasant taste.

Bandara spring had been used by the villagers for over 15 years, but its usage has been declining in the recent past. Due to the clearing of forest land which nourished the upper shed of the spring, the water was spoiled.

The Sinhaya spring is situated in the forest and there is a narrow road which is used to access it by vehicle. As it is a habitat of elephants and other wild animals and as it is situated away from the villages, it was observed that the Sinhaya spring was a less

frequently used water source. Nevertheless, people from far away villages used the spring during the dry season as this spring's water level does not decline despite the dry weather. Most of the time villagers visited this spring in groups by vehicle.

8.8.5 Women and War

A part of the daily routine of the women in villages situated near the springs was to bring water to the homes. They collected spring water only for drinking. For washing and bathing they used water from tanks, wells or other water sources. Women bathed regularly in Kebithigollewa and Gonameriyawa springs as there were separate spaces provided for bathing as well as to obtain drinking water. The majority of those who bathed at these places were females - males were fewer in number. Women were eager to bathe from the spring as they strongly believed that the water made their hair and skin healthier. Apart from the women from the nearby villages, a majority of men travelled from faraway villages to collect water. These men travelled by pushbikes and motorbikes and sometimes women too rode these vehicles to collect water. Both men and women arrived from villages situated further from these springs in vehicles such as tractors and three wheelers. When compared with other springs, a majority of the women arrived at springs such as Gonameriyawa, Kebithigollewa, Kunchuttuwa, and Dambagaha. Men being engaged in earning their wages during the day time and the Sinhalese cultural identity of women being responsible for supplying water for the household might be main reasons for this trend. Yet, the majority of Tamils and Muslims who arrived at the spring were men.

Two main dynamics were identified in terms of collecting water from the springs. They are,

8.9 Daily community life and springs

These natural springs have become an essential part of the daily life of the communities. Water is a vital element for the existence of all life forms and humans are no exception. It is necessary for drinking as well as washing and cleaning, while maintaining health and proper sanitation.

Figure No. 8.2: Sinhaya Spring and Kebithigollewa Spring



Source: Bandara, 2015

8.9.1 Drinking Water

Most of the people used the spring water for drinking purpose. With the spread of chronic kidney disease in the north central region, the need for proper drinking water has received special attention from various parties. Therefore, people in the area are beginning to pay great attention to their drinking water. Notice boards had been placed in order to make people aware of the springs which have been identified as containing water suitable for consumption. Through their research, the Water Board has identified springs which are the most suitable for consumption.

This identification and the fear of kidney disease has resulted in those living away from the springs travelling to these springs to collect drinking water. Therefore the study identified that a great number of people used the spring water as drinking water. Based on information and observations it was evident that except for Bandara, Dunuke and Kalawedi springs, an average of 3,500 to 4,000 people were using the water of other springs for drinking purposes. Thus, natural springs are of great importance as a source of drinking water.

8.9.2 Washing

Only two springs were directly being used for washing purposes. At both Gonameriyawa and Kebithigollewa springs, apart from gathering drinking water places for bathing had also been provided. The overflowing water of the Gonameriyawa spring was being directed to a cement tank through a canal and was used for bathing and washing clothes. Separate spaces were provided for females and males. However, villagers did not seem to pay much attention to this division.

At the Kebithigollewa spring, a separate spring was maintained as a well for bathing. This huge well was made of cement but the situation was not as systematic as at Gonameriyawa spring. A great number of people seemed to use this place for bathing and washing clothes. However, this did not contaminate the drinking water spring as this place is situated below the spring for drinking water. Additionally, people used this spring water for washing in the kitchen and to bathe infants and babies. In particular, many of them were using this water to cook meals and to make beverages such as tea and coffee.

8.9.3 Health and Sanitation

Pure water is a crucial factor for maintaining health and sanitation and as the main source of clean water these springs fulfill an important need for the people of this area. Using water from the springs as drinking water has protected people from the kidney afflictions and many other diseases associated with the urinary system. Based on their experience, villagers state that the only water in this area which can subside the 'smarting of urine', which is common among women, is the water of these springs. According to them, although water from wells and other sources cause 'smarting of urine', no such difficulty occurs when spring water is used. Yet they never use spring water for toilet requirements which is central in maintaining health and sanitation. Instead they use water from wells, tanks or other water sources for these purposes. They use water from other sources to clean the outer body but they use spring water to make food and beverages which enters their internal system because of their concern for health and sanitation. Hence, freshwater springs provide a great service in maintaining the health and sanitation of the people of the area.

8.9.4 Spring water for agriculture

The springs situated in Kebithigollewa were being used for agricultural activities in the area as the North Central Province faces the dry season for a greater part of the year. The water flow from all these natural springs have been channelled to a tank or a range of paddy fields. The overflow from the Gonameriyawa spring was being taken through a paddy field range using a canal which ends at the tank. Thus water was being provided to cultivate a considerable area of paddy fields. Sinhaya spring was being used to cultivate a paddy field of about 5 to 6

acres. The overflow from the Dambagaha spring was also has being directed to a paddy field range. As this spring carries water throughout the year, farmers get the opportunity to cultivate at least a small area of the paddy field even during the dry season. Water from Dunuke spring, in particular, was being used only for agriculture. Water from this spring was being diverted towards a mini tank through one canal while the other canal provided water for a range of paddy fields.

8.9.5 Faiths and beliefs associated with springs

Many villagers believed that having such a spring in this area, which has a dry season for most of the year, was a miracle. Thus their activities show that they have a great respect mixed with sacred feelings towards these springs. A monument for God Pulleyar has been built close to most of the springs and offerings were being made to this monument while a ceremony of milk boiling was also performed annually. The milk boiling ceremony takes the form of a great festival with the gathering of a great crowd from the area. During this ceremony, people pray for God Pulleyar to protect the springs and to keep them flowing constantly even through the dry season.

Figure No. 8.3: *Pulleyar* (God) Temples



Source: Bandara, 2015

Another belief of the people was that the demons loiter by the springs during certain periods of the day. Hence they believed that women should not go alone to the springs at noon and at dusk. Therefore women did not go to the springs by themselves during the above mentioned times.

Performing transaction with water is prominent among Sinhala New Year rituals. People of this area begin this ritual by performing it to the springs. A coin is dropped in the spring and a bottle of water is taken from the spring. This bottle of water is kept safely until the next year. Generally, it is the female of the house who performs this ritual. This clearly exhibits their respect towards the springs.

Villagers stated that during some nights miraculous lights of gods from the sky arrive at the springs. They firmly believed that these springs were given by the powers of the gods.

Buddhists, Hindus and Muslims used these springs together. Despite their different religious beliefs, they pray to God Pulleyar. It was observed that praying to God Pulleyar, which is a folk belief that diverts from all the main stream religious beliefs, has spread widely in this area. Further, the protection of the springs has been handed over to Pulleyar who is a god that dwells in the forest. It was evident that almost all of the beliefs and faiths associated with the springs were being ascribed by the other faiths and beliefs of the folk community of Kebithigollewa area. With the culturalization of these springs from the past, it seems that main stream beliefs and magical interpretations have been assigned to the springs.

8.9.6 Approaches used in managing springs

Several approaches have been used in managing these springs located in Kebithigollewa:

1. Buddhist religious leadership
2. Community participation, traditional knowledge and experiences
3. Assistance from the Government
4. Environmental conservation

In these areas where the majority of people are Sinhala Buddhists, it was observed that Buddhist monks provided the religious leadership for the community. It was Buddhist monks who led the conservation of these springs as a public property. This was especially the case for Gonameriyawa and Sinhaya springs which are located on lands belonging to the Buddhist temples. Therefore, monks from these temples possessed a legal right to intervene directly in matters regarding these springs. It was the Buddhist monks from the Weragama ancient temple who met the preliminary expenses and guided the construction of the cement wall around the Gonameriyawa spring. This wall helps to collect clean spring water with ease. The community resistance led by these monks was the reason that a company aborted its attempt in 2014 to use the Gonameriyawa spring for the trade of bottled water.

Notice boards have been placed making people aware of the need to keep the springs and the surrounding area clean, and has resulted in a hygienic atmosphere around the water springs. Gonameriyawa spring constantly gets the attention of the chief incumbent of the temple as it is situated close to the temple. Thus the management of water of the spring for drinking and bathing along with its maintenance is praiseworthy.

8.9.7 Water springs and elephant-human conflict

One of the main issues which people of these areas have to face is the conflict between elephants and humans. This is the greatest issue they have had to endure after the war. When investigating the elephant-human conflict in this area it became evident that the competition between elephants and humans for water sources had become a major reason for the intensification of this conflict. The majority of the springs were situated within or at the fringe of the forest. Undoubtedly, elephants must have been using these springs for generations. Yet as elephants have had to give up their land/habitat due to various reasons (such as modern construction and segmentation of forests) they tend to enter settlement areas. Hence, springs which are located within and near the forests can be arranged as 'natural ponds' which can be used by both elephants and humans. Kalawedi spring and Dunuke spring can be taken as such an example. Elephants may get water from these ponds within the forest as well as near it throughout the year, especially during the dry season. As lands which contain some springs have been released from the control of Forest Conservation Department and Wildlife Conservation Department, there is a threat of these lands being taken over by private land owners. Such a situation may increase the elephant-human conflict in this area as forest segments which contain these springs are known to be the favourite habitats of elephants.

8.10 Main Findings

1. Nine major springs belonging to 'Kunchuttu Koralaya' which have water suitable for drinking were identified within the area and their distribution in the area was identified.
2. These springs were identified as secure water resources which can help control the chronic kidney disease that prevails in the area.
3. The lifestyles of the people from local communities are closely linked to these springs. The community plays a responsible role and holds a right in utilising this natural resource.
4. The springs can be viewed as a strong solution to mitigate the impacts of climatic changes and extreme climatic conditions.
5. In the past, attempts have been made by certain government institutions, the army and business organisations using their authoritative power to takeaway these water resources from the community.
6. Intervention of the government sector in utilising and conserving the springs takes a minimum and negative form.
7. These springs and the socio-cultural links associated with them have a great potential to build co-existence among different ethnic groups.

8. These springs are capable of maintaining an ecosystem of a wetland within an arid environment of the dry zone.
9. Certain development projects and interventions of organisations with various objectives disturb the sustainable existence of these water springs.
10. The value of these springs in the postwar situation are being highlighted as a means of combating chronic kidney disease, climatic changes, building of new settlements and rehabilitation, elephant-human conflict and development projects.

8.11 Conclusions

Global level discourses on natural resources, especially those regarding water, and activities and circumstances which are associated with them, can be seen in peripheral countries such as Sri Lanka. After the war, water springs (water sources) located in the areas which were affected by the conflict in Sri Lanka not only fulfill the water requirements of the surrounding communities but they also represent a socio-cultural, economic and political profile of the pre- and postwar society. After a long period of war which severed the socio-cultural texture, these springs have become sources of peace and co-existence. Furthermore, they carry solutions to new challenges such as chronic kidney disease, elephant-human conflict and climatic change which are the new challenges faced by communities in these areas after the war. Therefore it can be concluded that these springs which are scattered in the north central area have become springs of new hope and co-existence in the postwar society.

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