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Civilisations rose out of water

BY SHALUKA MANCHANAYAKE AND GAYAN NARANDENIYA

With the beginning of settlements in Ceylon, as in almost all the ancient civilisations of the world, water became an important necessity, and those civilisations rose out of water.

From the conquest of Vijaya, the first Aryan migration from the Oyanvi remnant, each of these settlements formed along the river valleys. Namely, the ancient Aryan colonies started by the Aryans such as Anuradha Grama, Upatissa Grama, Vijitha Grama, Uruvela Grama, Deeghayu, Kataragama, Sandungama, Magama, Ramagona, Kalyani and so on.

The Aryans, who established colonies in the river valleys of the arid zone, migrated inland as they had to increase food production with the increase in population. During the migration from the dry zone into the country, the geographical location of the plains in the area made paddy cultivation, the main crop of the Aryans, more suitable.

However, the arid region receives rainfall only once a year. The rainfall was between 50-75 milimetres (mm). The dry zone also suffered from famines and droughts at various times of the year. It is clear that the construction of tanks were created owing to such matters.

Early days of irrigation

The irrigation built in the early days was very simple and at that time a tank was built in an area surrounded by two mountain ranges. Also, simple irrigation systems such as obtaining water directly from the lake to the paddy fields existed in the early days.

Also, the commentary on the Digha Nikaya states that it was a tradition to build a temporary anicut across a canal to get water to the farm lands. The simple irrigation works built in this early period were mostly privately operated and these were built in the pre-Christian era as village tanks.

It is clear from the inscriptions written in the pre-Christian era that there were private tank owners. According to the chronicles, the oldest village tank built in Sri Lanka is the one built in Anuradhapura by Vijaya and the Minister Anuradha.

Tanks

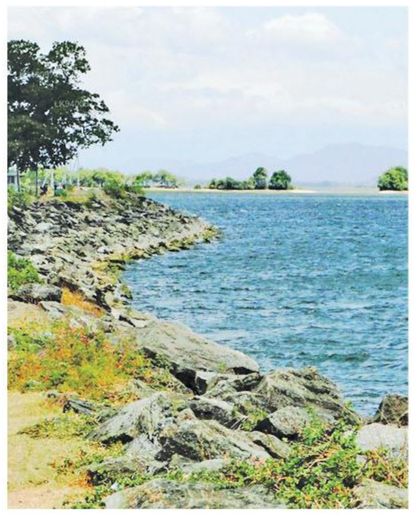
The construction of the tanks began primarily by obstructing a natural waterway, and later developed greatly through advanced and sophisticated technologies, basically developing into a design that could retain a very large volume of water.

Accordingly, modern features were added to the lake which started with the construction of a wall on one side to allow water to flow into two naturally occurring highlands. Accordingly, in addition to the tank bund and sluice, new features such as 'Bisokotuwa', 'Salapanawa' and 'Pitawana' were added to the tank.

Canals and anicuts

Although, at the start the building tanks was done by crossing natural canals and rivers, we can also see artificial canals built in the past. They were part of the ancient irrigation system which aimed at meeting the needs of the people.

Canals were built primarily for the purpose of bringing water to a lake or to divert excess water from one lake to another. The canals built in this manner applied the knowledge of irrigation in the past and were of a very high standard compared to the present designs.



Some designs were as large as rivers and were commonly referred to as rivers. Canals like the Jaya Ganga is one example.

Anicuts were often used to build tanks, especially to divert water from a lake to a river. In some cases, an anicut was constructed to divert water from a natural river to another area.

PONDS CAN BE CONSIDERED AS ONE OF THE HIGHEST ARTISTIC CREATIONS IN SRI LANKA. PONDS HAD BEEN CREATED ESPECIALLY FOR ROYAL PALACES, SHRINES, AND SO ON AND FOR THE USE OF KINGS, QUEENS AND CLERGY

Ponds

Ponds can be considered as one of the highest artistic creations in Sri Lanka. Ponds had been created especially for royal palaces, shrines, and so on and for the use of kings, queens and clergy. Due to this, artistic features may have been attributed to the design of the ponds. Pond creations can be seen in almost every place such as ancient royal palaces, pirivenas and so on which can be seen in the Anuradhapura period as well as in the Polonnaruwa period.

For example, there are large ponds in Abhayagiriya, Jethavanaramaya and Polonnaruwa Alahana Pirivena. *Kuttam Pokuna*, *Eth Pokuna*, *Nelum Pokuna* in Polonnaruwa are some of such high quality creations.

Sigiriya water park

In the 5th century, King Kasyapa, who ruled the kingdom during the Anuradhapura period, chose Sigiriya as his capital and developed it into an all-urban city. Remains of Sigiriya show that it was built on a 1.5 hectare area as a well-developed city with all the features of moats, walls, ponds, palaces, roads, and so on.

The significance of the Sigiriya Kingdom in relation to the irrigation technology in the country is that a very complex drainage system was in operation. From the water carried to the top of the Sigiriya rock which is still a mystery even today, many creations such as moats, ponds and fountains can be seen around Sigiriya. Since Sigiriya was developed as a fort, it is largely covered with moats.

Apart from that, a separate water park can be seen in Sigiriya. Natural rock excavated ponds as well as artificial ponds can be found in this area. Modern engineers are of the opinion that it was built on advanced city planning techniques that are still relevant today.

In addition, fountains can still be seen in Sigiriya during the rainy season. In particular, these fountains are designed in such a way that the water flowing down from the top of the rock is pressurised and activated by that energy. Each of these ancient creations speaks volumes about the ability of the ancient irrigation technology.