

Historical Evidence of Water Management in Ancient Sri Lanka

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Water and land was the foundation on which human habitations and their development revolved. The Sinhalese civilization, developed around three elements namely the tank, the village and the stupa. The *wewa* provided the water resources for production and consumption, the *gama* provided the environment for habitation, and the *dagoba* the spiritual necessities for life. But, water was a vital, yet scarce, resources of the ancient Sinhalese.

The earliest Indo-Aryan settlers, around 500 B.C. are said to have purposely avoided the areas of heavy rainfall because of their dense forests and rocky mountains and settled in what was termed the 'dry zone' of the island. But in taking the line of least resistance they created a problem for themselves. They found that in their chief settlements they had a limited rainfall. The North East monsoon, which on occasions was not dependable, brought rain for only four months of the year. With the increasing population in the early 'dry zone' settlements the need to obtain adequate supplies of water for cultivation of rice began to receive greater attention of the early Sinhalese.

Two different systems were generally adopted in early times for conserving the monsoonal rain water dispersed over the plains of the Dry Zone. According to one, the natural and effective plan of making use of the upper reaches of a valley and embarking from its outlets was resorted to. The other system was based on a much more scientific and ambitious method and aimed at securing a greater volume of water than any local catchment area could have supplied. This was effected by constructing mas-

sive causeways and anicuts across the larger rivers and turning the water into excavated channels which conveyed it sometimes many miles, over apparently flat country and impounded the water eventually in large reservoirs or a chain of reservoirs.

The history of the early Sinhalese provides adequate evidence of systematic water management. Sinhalese water laws as reflected in customs and practices prevalent and found in stone inscriptions and chronicles are regarded as a tribute to the engineering skill of the ancient Sinhalese and worthy of study for use in the modern times, rather than borrow from alien water laws and practices which may not suit our socio-economic environment.

The fact that the early settlers who came from India opened new settlements in areas where river water was readily available (Vide: Mahavamsa Tika P. 261) is clear evidence that they were an agricultural people. When population began to spread throughout the country, water storage became an urgent necessity, especially in areas where water was not easily available.

This primary need was met by building tanks and anicuts. The Mahavamsa refers to the construction of such tanks by particular kings. A few inscriptions refer to some of these tanks (Vide: EZ 1 pp 66 — 74, No. 6: p 208 — 211, No. 18; pp. 252 — 256, No. 22).

According to the Tonigala inscription there were three seasons of harvest of crop during the year. They were known as "*Pitadadaha*, *Akalahasa* and *Madehasa*". These three seasons of crop can be seen even today in the villages of the North Central Province when water is assured and where fields are irrigated by means of tanks and do not depend solely on the uncertain rainfall. Of the names of the three crops occurring in this inscription, two can be identified with their modern equivalents.

Akala is the crop now known as Yala. The yala crop is sown at the time of the southwest

monsoon. *Pitadada* corresponds with Maha. A third crop called *Mada* in this inscription is still known as Mada (Middle) and is so called because it intervenes between the two major harvests. It is the least important of the three; and in many a year when the tanks are not full it is altogether neglected. (EZ III pp. 185). We observe thus that there was a cultivation time table even in ancient times.

In ancient Sri Lanka the *Da oba* was constructed on the tank bund or in close proximity to it. The monk in the temple prepared auspicious times for the ploughing ceremony. Local Gods also found their place in this ceremony. Kings and nobles celebrated both the harvest festival and the sowing festival. When Girikanda Siva held the harvest festival, his pretty young daughter also participated in it with her retinue. (Vide: Mahavamsa X, vv 30—31). When a wealthy Kutumbika of Mahela nagara near Anuradhapura held a sowing festival (*Vapamangala*), he wanted hundreds of people to celebrate the occasion. (Vide: Rasawahani, II, p. 166). At this festival ploughing was done with the help of pure white oxen (*Sabba-seta-Balivadde*) washed with turmeric water. Festoons of shell fish were tied round their necks and their horns were decorated with sheaths of gold and silver. The people, who were decked with beautiful clothes and ornaments, after lending a hand with the ploughing, enjoyed the festival meal. The women who remained at the farmers house enjoyed themselves in a similar manner (Vide: Rasawahani, II p. 166). Thus, *vap magala* or the ploughing ceremony, is a traditional ploughing ceremony borrowed from India. Buddhist legends speak about the ploughing ceremony carried out by King Suddhodana, the father of Siddhartha who later became the Buddha. Ancient Sinhalese Kings too followed the custom when at the time of ploughing they took the lead stepping into the fields

with a golden plough. Collective participation thus ensured both religious and cultural practices. The monks performed the rituals such as *Pansil Deva Ashi rudaya* and when the laymen got into the fields chanted pirth. The kapuralas invoked the blessings of the local Gods. The Vap Magul brought about the unity of the community regardless of social factors such as caste. The procession associated with the ritual emphasised the importance of the cultural traditions. Dancers, drummers, folk artists all had their significant roles to play there. Among the rituals were those performed in honour of local Gods. In the Yapahuwa the local God Kalu Dewata was honoured. Unlike today, the ritual proved the basis for everyone to unite and participate in work collectively and in ploughing the land at the same time ensuring methodical cultivation; thus ensuring the conservation of water and a better harvest.

Evidence of similar ceremonies connected with water is available. *Pen Pidima*, or the offering of the fresh water of a tank to the Buddha and Gods, is a ritual associated with fertility cults. The priest in the temple at the auspicious time collected some water from the tank and brought it in procession to the temple where the water was used to bathe the Bo-tree. *Kayiya* was a ritual for communal participation for self-help in agriculture. The farmers followed auspicious times fixed by the village monk for cultivation of paddy, proper utilization of water, broadcasting of seed, the release of water to the fields, weeding and fertilization. Thus, in ancient Sri Lanka before the villagers participated in collective work in the field they assembled at the temple, performed religious rituals, listened to the admonitions of the monk who was the acknowledged leader, guide and philosopher; and then proceeded to the field. In the evening they came back again to the temple and after the performance

of religious rituals, listened to the monk and went back home. These rituals closely cemented the bond between the temple and the village.

Since water was scarce in the tank a rational and a democratic water use and management system was evolved, known as the *Bethma Strith* system whereby a limited acreage was cultivated in the *yaya*. *Kanna* meetings was another democratic system that evolved where all farmers met at the temple premises, at an auspicious time and fixed dates, for the first issue and last issue of water from the tank. Farmers, unlike today, did not wait till the tank was full to cultivate. They prepared land long before and sowed paddy in the form of *Kekulan* which is known today as the *Walagamba* concept. No one in the *yaya* deviated from these decisions. The *Kondavattavan Pillar* inscription (EZ Vol. V.p. 135) records certain offences which were punishable relating to water management. For an offence connected with flooding (*Gal*) of the fields a fine of two *Akas* was levied. For an offence connected with ploughing a fine of a *Kalanda* (See *Codrington, Ceylon Coins and Currency* p. 54) was levied. For an offence of having ploughed late a fine of five *kalandas* was levied.

In ancient Sri Lanka a land tax referred to as *Bojaka-Bojika* or *Bojiya-Pati* in the inscription of the first to fourth centuries (Vide: EZ III 167, *Codrington ALTR*, p. 31) irrigated fields were subject to *water rate* called *Daka-Pati* in the inscription (Vide: EZ IV, p. 227) which were collected in the case of some fields at one harvest only, while in the case of others at every harvest during the year. The water rates was very often the property of private individuals. A third impost, named *Matra Majibaka Pati* (with variant forms) in the inscriptions (Vide: EZ IV p. 227) was also levied from fields. These water rates achieved the objective of bringing discipline and co-

operation amongst farmers and a sense of responsibility about proper water management.

In ancient Sri Lanka, although the king in theory was the lord of the soil, and the land tenure system was based on the principle that all land belonged to the King, it did not preclude any private individual from constructing tanks which was their proprietary interest and it entitled the tank owner to water rates from fields irrigated by them. There are numerous epigraphs, from about the 2nd Century B.C. upto the end of the early period, which refer to private individuals who owned tanks or shares of fields irrigated by them. These could be donated or sold at the owner's will and were heritable.

There were *vel mudalis* or *vel vidanes* during the *Kandyan* period (Knox) *We Badde Lekam* for fixing rent for paddy where paddy stores existed and *we kultiya* was common in the *Anuradhapura* period (Vide: *Galoruwa* inscription). These officials were connected with water management in the ancient Sri Lanka. The *Wessagiri* wall inscription (No. 2 A. EZ Vol. 1 p. 31) refers to ancient water management methods.

Thus it is seen that water management as practised in ancient Sri Lanka was systematic and democratically executed. The disruption of tanks and agricultural development with the break out of unstable political conditions, the influx of modernism with foreign invasions and the changing economic structure and relationships, and the eroding of ancient customs and practices which were inextricably interwoven into the social and economic system of the Sinhalese, led to the insolation and break in the link between the village and the temple and a disruption in the rationale and meaning behind many ancient customs and practices, including those of management systems in agriculture, and water use.