Jotte

A pot with a difference

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Traditionally used in areca-nut plantations in Uttara Kannada, Jottes are an intelligent devise which uses local material and human labour to lift water from wells and tanks. The Jotte system ensures not just economical extraction of water from the wells and tanks, but also guarantees maximum and effective utilization of the water available. Over the years unfortunately, this system has fallen into disuse.

I grew up in an areca-nut plantation in my village in Uttara Kannada. My childhood home was indeed a picturesque setting. Deep green trees pierced high into the azure blue sky. Crystal clear canals meandered through the plantation murmuring gently with the sound of gurgling waters. My brothers and I would spend many hours splashing around in these canals.

At other times, the still water reflected the blue of the skies and the green of the trees – making it a picture in tranquility and abundance. The abundance was largely due to the water which was responsible for the rich produce of the land.

I often looked for the source of the flowing canals. Where did these canals start? How did these canals always have so much water? When the tank in the house was emptied by the servants of the house, how would it fill up overnight? Puzzling questions which had only one response, *Jotte*. All the elders muttered this word when asked for an answer. But this continued to pose a constant sense of mystery.

Yet every morning, at the crack of dawn, I would hear the servants assemble the tools required for the day's work. I would wake up to the cluttering and clanking as they handled the tools. My brothers and I would tumble out of bed and with the hastily drunk rice gruel still sticking to our lips, we would run to the plantations and jump into the canals - unquestioningly.

We were not at an age when we could comprehend the intricacies of traditions, or understand a specific agricultural practice, or realise the significance of water management. Neither did we have the patience to learn about it. But the curiosity that arose while playing in the water and the questions it generated are probably finding an answer today.

Searching for answers today...

In recent years, whenever I visit my family home in my village, I am faced with sparse plantations, wilting seedlings and dry canals – all of which bear testimony to the fact that *Jottes* are no more. Have these dried up naturally? Or has it been allowed to collapse?

The planters and farmer cultivators of Uttara Kannada district devised an economical system of water usage called *jottes,* which had a double value and purpose. The *jotte* system made use of local material to lift water from the wells and tanks and feed this into canals. This ensured that a minimum amount of water would be drawn out. It did not draw upon the groundwater levels in any way, which therefore remained unaffected.

Hence, water shortage was an alien term in these regions. People lived in harmony as water sharing was worked out in an amicable manner.

What is a Jotte?

A *jotte* is a traditional device used to lift water from a well using a lever using human labour. It is a word used for a wide-mouthed copper vessel with a stringed hook at the center. A long areca tree trunk supported by two poles is used to immerse the vessel in water. With a heavy stone tied to one end of the areca trunk, the entire system works like a seesaw plank to lift water from the well. A platform erected at a specific spot of the tank is provided with an outlet to let the *jotte* down.

A man stands with his back to the tank and pulls the *jotte* before he immerses the vessel in the tank. Once the water fills in the pot, he loosens his grip and lifts the areca pole. The heavy stone tied on the other end, provides the necessary counter weight to lift the vessel. Just as the water-laden vessel comes up, the worker tilts it into the canal mouth. He pulls the *jotte* and fills it up with water again and tilts it once more into the canal. This process continues for about three to four hours. A man can effortlessly fill up the *jotte* with about four pots of water at a time and release it into the canal.

At the same time, another person erects temporary bunds made out of banana stems and sugarcane leaves to stop the water at several spots. With the help of an iron plate, he drenches the roots of the plants. Once all the nearby plants are irrigated, he moves on and undertakes the same process all over again. When all the plants near the canal are fed with water, its direction is turned towards another canal.

The *jotte* system depends solely on human labour. It requires understanding, skill and fine expertise in managing the amount of water that is drawn out and how it is used. The quantity of water to be lifted to irrigate a particular portion of the field is carefully calculated and worked out before the operations start. Yet careful management ensures that neither is there any shortage of water for the fields. Thus, the word shortage carried no meaning in places where this system was used.

The *jotte* system ensured that not a drop of water is wasted. As the water is lifted from the tank with human labour, the groundwater level is never touched. The *jotte* system does not deplete the groundwater level. Instead, only the surface water of the tank is utilized. Even after water is lifted from the tank and it appears to be empty, it fills up again the next morning, due to the rainwater which was always directed to the tank.

A common resource for sharing

In the community-centric *jotte* system, one tank was generally used as the water source for the surrounding fields, which could be owned by three or four families. Even if the tank was located in the land of one particular farmer, and though it would belong solely to the concerned landowner, yet despite this, a co-operative principle was followed for the usage of water.

Similarly, the maintenance of the tank would be the responsibility of all the users. In return, the tank owner received a fixed amount and a portion of the agricultural produce (areca) every year. As water was distributed on a rotation basis during summer, there was no room for any dispute and even if some small issues came to the fore, it was resolved through amicable discussion and compromise.

In the beginning of the year, all the farmers met to discuss the availability of water. The share that each farmer would get depended upon the expected quantum of rain and availability in the tank. People with bigger fields would get more water and therefore were charged more. If it was felt that the quantity of water was less, there would be a cut for the bigger landholders and this would continue on a tapering basis. It was, therefore, possible to conserve water till the next monsoon. This ensured there was never a shortage of water.

The special value of canals

In Uttara Kannada, canals also play a major role in groundwater conservation and moisture retention. The water that flows in the canal is naturally absorbed by the soil and cools the areas in the vicinity. In addition, the ends of these canals have fairly large circular pits where the excess water which flows into the canal collects. This excess water is absorbed by the soil.

While this is the process in summer, in the monsoon, the canal and the pits effortlessly absorb the rainwater. The canals arrest every drop of rain that falls on the plantation and drain it into the pit. Once in two or three years, the canals are deepened and

the mud is piled on either side of the banks. This is again helpful in absorbing water. The same happens in the pit at the end of the canal. Thus, the drained water joins the tank all over again.

Today, diesel pumps have replaced the *jottes* and are used widely in all the plantations. In fact electric pumps are used to empty and drain water from the tank to the maximum extent possible. Even the slush that remains as the residue is drained out and cannot provide enough water for the areca trees.

A lost practice

Today, these practices are passing into local memory. Given the change in the practices, it is likely that people have forgotten how to string the *jotte*. The change is also evident in the use of the vessels used in this system. Once regarded as the basic utility item of every family in Uttara Kannada, these are seldom seen today. In some cases, these have now been moved into the loft, while in others cases, people have converted the copper *jotte* into household utensils. Most unfortunate is the case of others who have sold off the traditional pots.

The *jotte* system which was once an inseparable part of the cultivation practices among the areca-nut growers of Uttara Kannada District is now a rare practice, and worse still, a disappearing practice. Today the system of drawing water using *jottes* has almost disappeared. As a chain reaction - nobody cares for the tank. As the tanks become extinct, the canals also dried up and have died a natural death - ending the entire process of water retention.

How then will the fields get water? Is this is nightmarish situation a product of our own creation? Do we really need modern agricultural technology in an area where indigenous traditional knowledge had once been adequate and appropriate?

No answers are forthcoming …….. and yet the gurgling canals and soothing greenery are vivid and alive in my memory!

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