

Wealth in the Well

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The ubiquitous common well are found everywhere and indeed anywhere in the state of Karnataka. The well are constructed in a range of different styles and techniques. Regarded as the main source of water, rural communities have had a long-standing relationship with the water bodies in their area. This article outlines some of the different types of wells in the states and the practices and rituals associated with it.

Excavated wells that were once an inseparable part of the irrigation system and the life of farming communities have over time been relegated to the background of the social fabric of rural societies. According to data of the Statistical Department, Govt. of Karnataka, the State has about 4,00,000 excavated wells. Out of these, about 3,50,000 are used for agriculture while the rest are used for drinking purposes. These figures have not taken into account private wells and wells located in factories and individual premises. In fact records indicate that each town had a public well – the water from which was freely available to all communities. The public wells also met the water needs of travellers as well as banjaras.

Almost every town which has a tank would have about 50-100 wells. Water was drawn from these wells using traditional technologies such as picot, pulley, Persian wheel, spinning wheel etc. as well as diesel and electric machines. Paddy, millet, maize, pulses, groundnut, sugarcane, fruit, vegetables, mulberry and garden produce grew in plenty, thanks to the continuous availability of well water. Patterns show that even when tanks dried up, wells continued to be a reliable water source, a commonality which can be likened to a fixed deposit in a bank.

The state of Karnataka is well known for its variety of wells. Picot wells, spinning wheel wells, brick wells, stone wells, *Bavadis*, wells fitted with pre-cast mud rings, mountain wells, tunnel wells and many others are found in the state. Kolar has the largest number of open wells. Belgaum is in the second place with Bijapur occupying the third place.

The wells of Bijapur

Interestingly, though Bijapur has the third highest number of wells, it holds the first place in providing water to the largest area of land. History is replete with details of the wells built since 1620 by the Adil Shahi kings. The local *bavadis* in Bijapur are as famous as the wells. History reveals that the *bavadis* were constructed

for the royal queens where they indulged in luxurious baths and gambolled in the cool waters.

A spacious tank surrounded by square stone walls with steps that descend to the water level, a passage to walk around the tank, seats for resting, rest rooms and a

system to prevent the sewage water from entering the tank – are some of the intricate features of the *bavadis* of Bijapur. Despite the commonalities, each *bavadi* is different from the other.

Due to its geographical location, Bijapur is very hot in summer with temperatures reaching as high as 45° in the middle of the season. The *bavadis* therefore played a dual function – of providing water to the community as well as keeping the city cool.

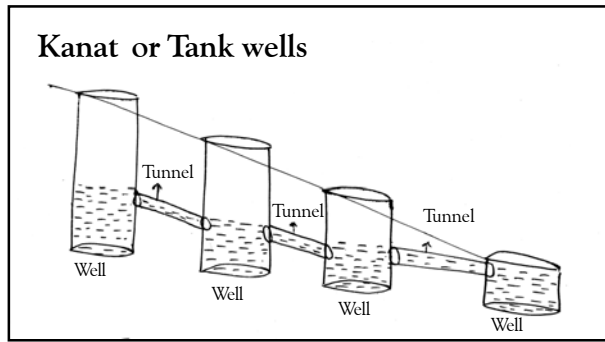
Historical records

Captain Syke, a traveller has documented that in 1815 there were 200 *bavadis* and 300 wells in the city of Bijapur. Captain Syke's records also outline the tent wells in the villages to the north of Bijapur. Known as *kanuts*, these were serial wells that were interlinked in such a scientific manner wherein the last well at the lowest point received water from a number of wells along the way. This was through tunnels. The water level was ensured in all the wells and pure, clean water was available even in the last well.

Unfortunately, not much information is available about these tent wells now. The farmers of Bijapur believe that that borewells are responsible for the disappearance of these traditional wells.

Basavanabagewadi, a temple town in Bijapur district is a place of major religious significance with hundreds of temples dedicated to Lord Shiva. Each of these temples has a black stone well where the water level is not too high. The water is generally used only for the temple activities and for drinking purposes.

History states that a feudal chief called Mannesahib built 1,200 wells in the Lingasugur area. Though people in Gurugunta of Lingasugur have heard of him, no information has been chronicled on the Chief or his wells. Some elders believe that the design and structure, square shape, use of Shahapura stones, steps touching the water level and the compound built around the well and the fact that this was a public property indicate that these could have been built by Mannesahib. Though eight wells of similar design were spotted, the exact period of their construction has not been determined.



Shahapura, which is famous for its limestone has wells that are only five meters deep but water is always available here. The neighbouring village Surpura also has many wells. History states that the King, Venkatappa Nayak, was instrumental in constructing tanks and bunds, wells and water stations. He encouraged afforestation as well as initiated many measures for soil and land conservation. Even today the greenery of Surpura makes it appear that it is a part of Malnad, the land of green forests in the Western Ghats.



Wells of Bailhongala in Belgaum District that once supported extensive agriculture, primarily sugarcane, have today dried up. The farmers believe that the well water is not sufficient to grow sugarcane and therefore borewells are the only solution. The black soil of the region locally can be used to grow crops that require less water, but even for this, the volume of water in the wells today, is insufficient.

In the lift irrigation system in Haveri District, a folk tradition called Kappali is followed. A hide bag is tied to one end of the rope that slides over a spindle. The other end is tied to the wooden bar which draws the oxen. With the oxen moving forward, the water is drawn out of the well and used for irrigation.

Reviving open wells

Channabasappa Shivappa Kombali of Kakola village in Haveri District has been making sincere efforts to give a new lease of life to the dried up wells in his area. Till about 25 years ago, the farmers of Kakola were able to irrigate their lands through pulley wells. However, with the agricultural demand increasing after the Green Revolution, the pulley wells were replaced by borewells, which were installed indiscriminately all across the lands. The traditional wells gradually became redundant and the tanks went dry.

In 2002, Kombali took stock of the situation and decided to revive the traditional wells to their original state. For this, he worked closely with the community, particularly the elders in the area. The gradient of the land was surveyed and canals which channelled the rain water to the wells were constructed. The wells slowly were filled with water that ran down the slopes. Gradually, with the help of the community, he was able to revive 70 wells and construct three tanks.

However, Kombali's job is not over. He aspires to get the pulley wells back into action once again.

Folklore goes that the Vidurashwatta well has the distinction of never becoming empty even if 1000 pots of water are lifted out of it. Everyday, several hundreds of pilgrims have a bath here and water is drawn for ritual purposes. Yet the water continues to be abundant.

Dakshina Kannada has been relying on the wells for water for its plantations. However as the number of plantations have increased, so have the number of wells. The plantation owners are fully aware of the value of their wells and have ensured that these are maintained properly. They also protected the quality of water.

The highest number of wells and tanks were located in Kolar district, where records indicate that there were more than 60,000 water bodies. The Persian Wheel was used to draw water from over 25,000 wells. However this method cannot work if the water level is low. Unfortunately wells can no longer be seen in Kolar town. A common sight, however, is people carrying pots to fetch water from the Antaraganga hills. Wells with Persian Wheel are still active at the top of this hill as the level of water is high.

Wells within houses

According to the Economics and Statistical Department, Shimoga District has about 4,000 wells, most of which are in private houses. The Brahmins generally dug a well even before building a house. If there was no prospect for a well, they would give up the idea of constructing the house. This principle was followed by all the elders - source water, support a living. As a consequence, wells can be found in the houses at Sagar, Soraba, Hosanagara, Thirthahalli, Shimoga, Shiralakoppa of Shimoga District, as well as Siddapura of Uttara Kannada. The wells were commonly dug in the kitchen or front platform. Open space in the courtyard, inner courtyard, backyard, central courtyard and other parts of the house were also sometimes used as locations for the wells. The kitchen and

Refrigerated wells

The wells built within the houses of Malnad keep the atmosphere cool. These wells are also used to keep betel leaves, neem leaves and lemons fresh. Can you guess how? The betel leaves, neem leaves and lemons are filled into a bucket which is hung midway into the well using a rope. This ensures their freshness for at least a fortnight.

Sweet water

In order to keep the water sweet, people would drop a twig of a gooseberry tree into the well. This was believed to clear any muddy residue in the well water. If gooseberry was not available, a branch of the purple berry tree was thrown into the well as a substitute.

bathrooms were built close to the wells to ensure that water was readily accessible.

The depth of the wells in this area varied from 20- 60 feet and were protected from light and heat. As soon as the well was dug, it would be lined with bricks or stone and a one-meter high brick or a stone platform was raised from the ground. Recently, a well was excavated in Ulavi of Soraba which had been strengthened using mud rings. Locals call it *Kundanada Bhavi*.

The rulers of Keladi Kingdom of the area considered construction of tanks and wells as the most important social duty and constructed over 6,000 tanks. Each town has at least one or two tanks, though there are some towns with as many as 10 tanks.

The wells of Malnad were perennial sources of water but unprecedented demand on the resource led to the installation of pump sets. The excessive consumption and demand on water along with degraded forests, inadequate rainfall and drying up of wells led to the collapse of the water cycle.

In 2002, a well at Badami dried up unexpectedly. With a depth of 10 meters and a circumference of five meters, the well had circular steps to reach the water level. The platform at the top has water-drawing wheels in three directions. The elders believe that it was the first time that water had dried up in the well in their entire lives.



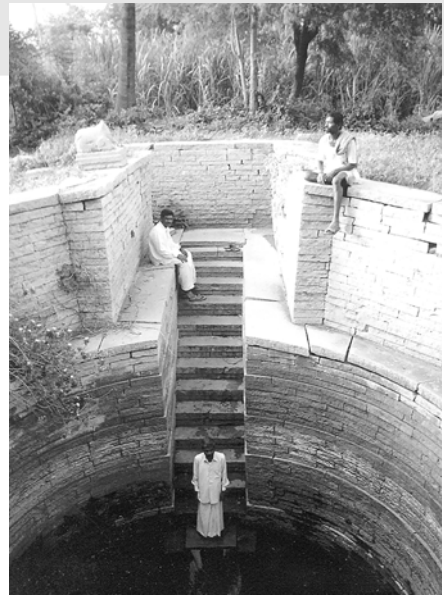
Some villages like Kakola of Haveri District have constructed separate wells for each caste. The system of separate wells for each caste is also noted in Mangal village near Mandya till as recently as 85 years ago. Unfortunately in this system, the backward community does not have access to wells. Refusal to allow use of well water due to untouchability and communalism has led to

riots and disturbances. Several Hindu-Muslim riots which have their genesis in the usage of the well have been documented all over the state.

Festivals with well water

The well platform of Urotti in Malnad was a place for religious festivals and brought all the womenfolk together. For instance on the first day of Diwali celebrations, the well platform was decorated with red soil, clay and Rangoli. The water was drawn from the well using a new earthen pot and once pulled up, it was decorated with a

garland of cotton flowers, fresh flowers, turmeric and vermilion powder. A lamp was placed in front of it which was subsequently carried into the house. The lamp was kept in the prayer room and worshipped for three days by decorating it with betel leaves, coconut and fresh mango leaves. On the fourth day, the water in the pot was sprinkled on the manure pit, in the belief that the manure would be enriched. A portion of the pot water was also added to the bathing water. Some people used the water for bathing on the first day itself. People felt that this ritual of using the holy water cleansed the body and the mind of the human being.



This is not an exceptional case. Water festivals were an integral part of life in many districts. Songs were also composed in reverence.

Water Diviners

Prior to digging a well, a Water Diviner who followed traditional methods to assess the availability of water was always invited to examine the site. The practices included listening to the sound of water in the ground and assessing the type of soil/earth where it was proposed to dig the well. Another traditional method was to place a fresh coconut on the palm of the hand. If water was available at a particular spot, the coconut stood vertically. The quantum of water depended upon the speed with which the coconut turned upwards.

There were other Diviners who tested for water by merely walking on the area chosen for digging the well with two sticks. They used the thumb and the index finger of both the hands to hold two long sticks and searched for water by joining the tips of these sticks. If water was divined, the sticks spun at a great speed and they could state with certainty the exact spot and the depth of water. However, this required skill and years of experience. Though there is no documented scientific proof of how this system worked, yet the failure rate was quite low.

Traditionally, digging a well was an easy job and experienced diggers could complete the work within a month. Even today, excavating a well does not require high expenditure. The cost of providing water for agriculture is also a nominal amount. However, the quality of the water has to be tested to ensure that it is potable in order for it to be of use for household and irrigation purposes.

Construction of Wells

Digging of wells requires expertise. There are several issues associated with the digging of the well and one should be knowledgeable about the entire process.

The questions that arise are:

- Is the water flow horizontal or perpendicular?
- Is it sub-terrain or is it available just below the surface?
- Where will the place of maximum availability be?
- Once the well is dug, should it be built with stone or bricks or cement rings?

The persons digging the well should know the characteristics of the particular soil and the rocks surrounding it. For some kinds of soil, the well may be round in

Like tanks and canals, wells were also traditionally used for irrigating agricultural land. Some wells provided water for a single crop, though there were many more which provided water for two crops in a year. In 2006, more than one lakh wells still have the capacity to provide water for three crops². About 2,70,000 wells are less than eight meters deep. It was, therefore, recommended that the government should dig another 6,00,000 wells to irrigate an additional area of 6,50,000 hectares.

shape and for wells dug in rocky terrain, it may be square in shape, or if the soil is red clay then the well should be lined immediately etc. All these factors have to be taken into consideration. While constructing the well, care should be taken not to obstruct the water source. All rainwater springs should join the well. The collection of water per hour has to be measured.

If the water is available at a higher level and the soil is hard and firm, the expenses for digging such a well are generally less. In Malnad, the cost for digging a 30 feet (eight meters) deep well and lining it with stones is about Rs 50,000.

Axes, shovels, spades, baskets, rope, spindle etc are some of the implements needed to dig a well. To draw water, picot, pulley, Persian wheel, spinning wheel as well as pump sets are the important tools. An implement called *patala garuda*¹ is used to lift the pots that happen to fall into the well by mistake.

Wells are assets of the family, of the community and of the town. It is everyone's duty to protect them and use the water economically. Once water is drawn out of the well, it cannot be put back or replenished. The area around the well should be clean, with trees and plants growing around it. Wells are a comparatively cheap source of water and if maintained properly and with care, the wellbeing and prosperity of the community is assured.

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¹ A circular ring with iron hooks and can lift any vessel that has fallen into the well.

² This figure does not include borewells and private wells