

Water Management and Conservation Systems in the Adil Shahi Dynasty of Bijapur Sultanate - A Study

VISHWANATH V. SIDDHANTI*

*Vishwanath V. Siddhanti, BLDEA's, A S Patil College of Commerce, Department of Business Management, Bijapur (Karnataka), Karnataka University Dharwad, India.

ABSTRACT

The fascinating past of Indian water management and conservation validates the natural abundance of water in the country. Our ancient religious texts and epics give us a good insight into the water management and conservation systems prevailed in the past. Some of the ancient methods, instruments of water management and conservation can still be witnessed in various parts of the country. Profound knowledge of these traditional water management systems can be the key in conserving water for the future. The Adil Shahis of Bijapur sultanate (1490- 1686) who ruled for close to 200 years, were well known for their able administration, love for music and were also recognized for excellent water management and conservation works and schemes that they implemented. Though many these water works still exists but due to prolonged negligence and lack of maintenance, most of them have silted up, which otherwise would have proved to be the best source of water supply for Bijapur city.

KEY WORDS: *Water management, Adil Shahi Dynasty, Talab's, Bavadi's, Gunj's.*

INTRODUCTION

The Bijapur dynasty was founded by, Yusuf Adil Shah. He is said to be son of the Ottoman Sultan Murad-II. When on his father's accession, Mahommed II gave orders for the strangling of all his brothers, Yusuf was saved by a stratagem of his mother. He then came to India, where he took service under the Bahamani king of the deccan, and ultimately became a person of great importance in the kingdom. In 1489 he took advantage of the breakup of the Bahamani power to establish himself as an independent sultan of Bijapur. He died in 1511 and was succeeded by his son Ismail, who reigned prosperously till 1534. The next king who is worth mentioning is Ali Adil Shah-I, who reigned from 1557 to 1579 and, besides the fort, built the Jama Masjid or great mosque, the lakes, wells, aqueducts and other notable water works in the city. His son Ibrahim (d. 1626), maintained the prosperity of the state; but his successors the rise of Maratha power began to make inroads. The kingdom started falling to ruin, and in 1686 the Mogul emperor Aurangzeb, who was Shah Jahans general had took Bijapur and annexed it to Delhi kingdom.

OBJECTIVES

The objective of this research paper is:

1. to discuss the historical outline of the Adil Shahi Dynasty of Bijapur.
2. to have a detail outlook on the water works of the kingdom.
3. to analyze the present situation of the water works and the severe water scarcity in Bijapur city.

RESEARCH SETTING

The location of this study is the city of Bijapur in the northern part of Karnataka state in

southern India. The Adil Shahi dynasty ruled the sultanate of Bijapur from 1490-1686. Being Bijapur was the capital of the dynasty, major monuments, citadels and water works can be witnessed in the city as well as the surrounding vicinity.

RESEARCH METHODOLOGY

The methodology used to collect the data was through the primary and secondary data. Various historians, academicians, officials of the municipal and archeological department, tourist guides were interviewed. As a part of secondary data, reports of Archeological Survey of India, articles on the subject and the related have been referred.



Fig. 1: Bijapur Sultanate



Fig. 02: Location of Bijapur

FACTS AND FINDINGS:

Table -1: Facts and Findings of the Study

Population (Bijapur district)	18, 06, 918 (2008 -09)
Average rainfall	578 mm
Ground water status	Over exploited
Literacy rate	56%
Primary sources of water	
Piped water	46%
Bore well	39%
Open wells	8%
Hand pumps	4%
Lake/Tank/ stream	3%
Multiple source dependency	12%
Access to water throughout the year	52%
Ground water dependency	97%
Satisfaction levels with the water service and management	41% satisfied, 39% are partially satisfied, 16% are not satisfied and 4 % did not respond
Storage	75%

HISTORICAL OUTLINE OF THE ADIL SHAHI DYNASTY OF BIJAPUR



Fig. 3: Bijapur Fort Map

WATER MANAGEMENT AND CONSERVATION SYSTEMS OF THE ADILSHAHI KINGDOM

The Adil Shahis of Bijapur, were well known for their able administration and love for music were also recognized for excellent water management schemes that they implemented. Historical evidences show that they possessed deep knowledge about water harvesting. They had looked upon water as a luxury commodity and not merely as a daily necessity. The water was collected in the hills outside Bijapur and supplied to the inner parts of the city through tunnels to bavadi's. Historians confirm that the density of population in Bijapur was so high during the reign of Ibrahim Adil Shah -II and Mohammed Adil Shah-II that the city probably consumed double the quantity of water it needed. The main sources of water conservation and supply in Bijapur during those days were talab's and bavadi's. Talab's or 'lakes' are the water bodies which were commonly seen in Bijapur during the reign. Ali Adil Shah-I had built 16 lakes (talab) in and around the vicinity of the city. Some of the lakes, which can be still witnessed, are Begum Talab, water supply scheme near Toravi and Aliyabad (summer palace). Begum Talab is an example of the technological excellence and involves a lot of scientific wisdom. This talab was built during the Adil Shahi era in ensuring water supply to the city of Bijapur. This is a man made lake which is 2 miles to the south of the city. This lake was built by Mohammed Adil Shah in 1651, and has a total capacity of 25-35 million cusecs. It is said that in ancient time this lake was surrounded by trees around the boundaries, which helps in reducing the evaporation of water and the lake use to be full of lotus plants, which possesses the natural property of purifying the water. On the right hand corner of the talab is a small window built of stone offering a glimpse of the underground room, which is presently full of mud. The ancient technology of water supply system dating back around 350 years lies buried beneath this pile of mud. It is said that, water collected in the lake was supplied to all the parts of the city through this underground room by using earthen pipes and use to be stored in the gunj's located at various parts of the city. Gunj's are the water towers of height ranging from 25 to 40 ft. The objective behind erecting these towers was to ensure that the dirt and slush in the pipes would remain at the bottom of the tower thereby allowing clear and free flow of water to the top. And most prominent part was water never overflowed from this gunj, but it maintained optimum level of water throughout the year. Many of these gunj's are still working, which confirms that the underground tunnel is still working after 350 years of its construction and stands proof of the tremendous construction skills of the kingdom. Another important source of water in that era was bavadi's. Though bavadi is another name for well, but the design of the bavadi is completely different as compared to a well. A bavadi is 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 bavadi and another significant feature of all these wells is that they had sufficient water even in acute summer. There were a number of bavadi's in the city of Bijapur. Some of them were Taj bavadi, Chand bavadi, Ibrahim bavadi, were the bigger bavadis and attracts tourists due to their artistic excellence. Nagar bavadi, Ibrahimpur bavadi, Mantri bavadi, Mas bavadi, Alikhan bavadi, Langar bavadi, Ajgar bavadi, Daulat koti bavadi, Baghdadi bavadi, Basri bavadi, Jhansa bavadi, Hashampeer bavadi, Mubarak Khan bavadi, Mukhari bavadi, Nalband bavadi, Sandal bavadi, Bukhari Bavadi, Thaal bavadi (plates), Gumat Bavadi and Sonar bavadi are smaller bavadis. In fact there was one Captain Syke who had visited Bijapur in 1815 and had documented all the numbers and status of the bavadi's. He had reported that there were around 200 bavadi's with steps and 300 kuwans (wells) inside the Bijapur fort. Captin Syke's report also outlines that these wells were serial wells that were interlinked in such a scientific manner that the last well at the lowest point gets water from all the wells on the way (**see Annexure II**). The water level was ensured in all the wells. This was after a century had passed since rule of Adil Shahis. People of the city still use around 30 bavadi's that exist today.

PRESENT SITUATION OF THE WATER BODIES AND THE SEVERE WATER SCARCITY IN BIJAPUR

According to some locals these talab's and bavadi's with their unique architecture, attractive carvings and grandeur were brimming with water till about three centuries ago. But off late the conditions of the talab's is not good. Though, considerable quantity of water still gets collected in it, but that is not put to proper use. The water is used by the farmer's cultivation in the vicinity and for cleaning, washing purposes. The area of the talab's is suffering from illegal encroachments and irrigation. The maintenance authority of the talab's had undertaken dredging work some 7 years ago which could not be completed because of shortage of funds and thus went in vain. The talab's comes under the Department of Minor Irrigation which does not take initiation in either maintaining or does the Archeological department takes steps in protecting these wonderful water bodies. The situation of the bavadi's is no different. Of the three bavadi's, Chand bavadi is totally dry, filled with debris and is virtually used as a public dumping place. It has thus breathed its last. The Taj bavadi, also is in the ruined state and is suffering from improper maintenance. Because of washing clothes, vessels, and open defecation has turned the water mossy. Though some years ago the Municipal Corporation has dredged the well, but again the well has become dirty because of public negligence.

The city of Bijapur faces an acute shortage of water. The municipal corporation supplies the piped water once in every 15 days. The situation reaches its hilt in the summer season. Due to its geographical location the temperature reaches to 45^o and all the sources of water deplete. The history of Bijapur which boasts of such grandeur in terms of water supply sources and management is posing dumb in front of such water scarcity. Only if the restoring of the all these historical water sources is taken care by the government or the local authorities, the sweet times of yester years can still be seen and witnessed.

CONCLUSION

Recent years have witnessed a drastic change in the water situation and depletion of water levels. On one hand the people of Bijapur city sing praises for the rulers and the philanthropist, who built these water bodies, but unfortunately the same pride is missing on the part of politicians, government officials, and concerned authorities who are in charge of the maintenance and protection of these wonderful water resources. The apathy of the people who use these resources is also shocking. The main reason for water pollution is the vessels and clothes which are washed nearby. Along with this the immersion of ganapathy idiol, puja items like coconuts and flowers are also one of many reasons. Drainage water from the near by houses is allowed to drain in the bavadi's and the sites are used as dumping places. In addition to the negligence of the city municipal and Archeological department the sites have been encroached for constructing buildings next to the walls of the sites. Many of such reasons have spelt death sentences to such traditional water conserving systems. The bavadi's have stood for testing times for many years without maintenance and have ruined only in last 15 to 20 years. This is because of negligence and carelessness of both the authorities and community at large. Sincere effort must be taken to revert to this situation and bring the talab's and bavadi's back to life once again.

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1. TAJ BAVADI



2. CHAND BAVADI



3. GUNJ



All the bavadi's were interconnected so that even the last bavadi also gets enough water.
WATER FROM THE HILLS

