Kakatiyas' Irrigation System & its Legacy N. RAMESH GOUD

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Abstract: In the history of south India during medieval period Kakatiyas' era is a splendid episode. They united Telugu regions i.e. Telangana & Andhra Pradesh and ruled independently during last half of the 12th century to first quarter of 14th century. They were contemporaries of Delhi Sultans and the south Indian rulers such as Yadavas of Devagiri (Maharashtra), Hoyasalas of Dwarasamudra (Karnataka), and Pandyas of Madhurai (Tamilanadu). The history of Deccan is enriched by the contributions of these rulers. They developed irrigation system by digging of chain linked water tanks/ponds/lakes by understanding the nature of soil of the region. This legacy is being continued by later rulers of the region also such as Musunoori Nayakas, Rachakonda Velamas, Qutub Shahis, Asaf Jahis and Telangana state government's "Mission Kakatiya" programme.

Key words: Kakatiyas, Irrigation system, Musunoori Nayakas, Rachakonda Velamas, Qutub Shahis, Asaf Jahis and "Mission Kakatiya".

Introduction

While north Indian kingdoms such as Pratiharas, Gahadwalas, Chauhanas, Chandelas, Paramaras, Kalachuris and Pala were indulged in internecine wars which ultimately weaken all of them certainly and led to establishment of Delhi Sultanate in 1206, Deccan region of Telugu speaking people was ruled by Kakatiyas during 956AD - 1163AD as Vassals/Subordinates of Rashtrakutas later on of Eastern Chalukyas; since 1163 onwards to second invasion of Juna Khan in 1323 they ruled as Sovereign/Independent rulers. They developed irrigation facilities in their kingdom to support farmers as main occupation of the people was agriculture as usual. They constructed the tanks/ponds/lakes in each and every village; all these ponds were linked with each other by feeder channels to fill them with gravity force during rainy season.

This type of system is called as 'chain linked ponds system'. This is unique system which has been prevailing in the region since then.

Objectives of the study:

- 1. To explore the causes behind the construction of water tanks/ponds/lakes
- 2. To study the legacy

Sources:

- 1. Literary
- 2. Archaeological

Literary sources: Palkurki Somana's 'Basava purana' & 'Panditaaradhya charitra', Baddena's 'Neetisaara muktavali' & 'Sumati shatakam', Ekamranatha's 'Prataparudra charitam', Vinukonda Vallabha Raya's 'Kreedhaabhiraamam', Kase Servappa's 'Siddeshwara charitra', Kolanu Ganapatideva's 'Shivayoga saaram', Tikkana's 'Andhra Mahaa Bhaaratam', Gona Buddhareddy's 'Ranganatha Ramayanam', Vidyanatha's 'Prataparudra Yashobhushanam', Jayapa's 'Nrutya Ratnavali' and Marana's 'Markandeya puranam'.

Apart from these sources there are writings of contemporary Islamic historians such as Ferishta's 'Tarikh-i-Ferishta', Isami's 'Futu-us-Salatin', Jiauddin Barani's 'Tarikh-i-Firozshahi' as well as foreign writings such as Marcopolo's 'The Travels' and Ibnbatuta's 'Rehla' provide valuable historical information of the times.

Archaeological sources: Easterrn Chalukya Danarnava's Maagallu inscription of 956AD, Kakatiya Rudra's Anumakonda thousand pillared temple inscription of 1163AD, Prola-II's minister Inagala Brahma Reddy's Draksharama inscription, Ganapati Deva's sister Mailamba's Bayyaram inscription of 1219AD, Ganapatideva's Motupalli inscription of 1244AD & Malkapuram inscription of 1261AD, Rudrama's military general Mallikarjuna's servant Puvvula Mummadi's Chandupatla inscription of 1289AD and Prataparudra's minister's son Induloori Annayya's Tripurantaka inscription of 1291AD.

Brief political history: Kakatiyas' political history can be divided in to two parts, Feudatory/Vassal Kakatiyas and Sovereign/Independent Kakatiyas.

Feudatory/Vassal Kakatiyas: They rendered their services in different designations, under Rashtrakutas and later on under Eastern Chalukyas, such as military servants, Chiefs of forts, military generals and rulers of provinces.

1.	Kakartya Gundyana	956-995
2.	Beta-I	995-1052
3.	Prola-I	1052-1076
4.	Beta-II	1076-1108
5.	Durga	1108-1115
6.	Prola-II	1115-1157
7.	Rudradeva/Prataparudra-I	1158-1162

Sovereign/Independent Kakatiyas: Rudradeva/Prataparudra-I declared independence in 1163, according to inscription of thousand pillared temple of Anumakonda.

1.	Rudradeva/Prataparudra-I	1163-1195
2.	Mahadeva	1195-1199
3.	Ganapatideva	1199-1262
4.	Rudramadevi	1262-1289
5.	Prataparudra-II	1289-1323

Main occupation of majority of the population was agriculture as usual. Except the lands possessed by temples, nayankara sthalavruthas, employees and royal officials, rest of the lands belonged to the king which were known as 'Rachapolam' (Royal lands), where as the newly brought agricultural lands were called 'Podu' (arable land) and the forest grass lands were known as 'Beedu' (waste land). Arable lands were devided in to three categories; those are wet lands, dry lands and waste lands. The lands whichever had irrigationfacilities were known as 'Nadimatrukas' where as the lands depended upon monsoon rainfall was called as 'Devamatrukas'.

According to 'Dharmasastras' whoever wants to get rid of their sins and attain salvation they have to follow 'Saptasantanas' theory i.e.

- 1. Having a son
- 2. Construction of a temple
- 3. Plantation of a garden
- 4. Digging up of a water tank/pond/lake
- 5. Donation of an agrahaara
- 6. Patronisation of literature
- 7. Concealment of a treasury

Among these the Kakatiyas followed the 4th one i.e. digging up of water tank/pond/lake.

Causes behind the construction of water tanks/ponds/lakes:

- Main source of income to the State was land revenue
- Main occupation of the subjects was agriculture
- > One of the Sapta santanas (Seven Children) to attain salvation
- > Nature of soil

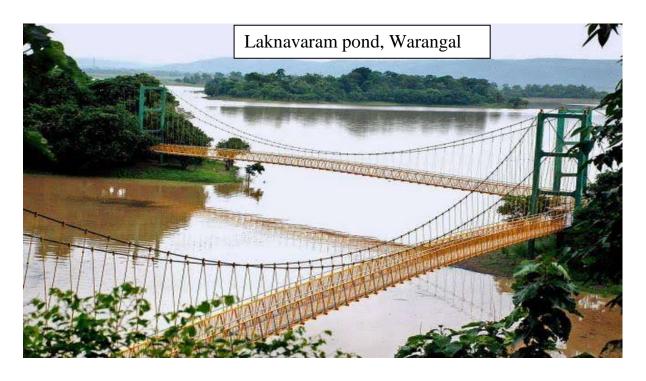
By providing irrigation facility, could get good yielding and the State coffers were filled, could meet the expenses of military State. To increase the taxable land they brought forest lands under cultivation were called Podu lands. As temple lands & agrahaaras were tax free lands they might caused revenue deficit, the rulers had to fill the revenue deficit and they might chose digging up of the ponds to promote agriculture.

Apart from the above causes they might have known the characteristic feature of the region as it is part and parcel of Deccan plateau which is formed of basalt rocks beneath the soil as these rocks are impervious they don't let the water to percolate into deep layers of the earth, so that water logs such that the region is very much conducive to construct the ponds.

At the time of digging up of ponds they used to install an idol of 'Varunadeva' (Rain god) on the bank, at present also we can see the village goddess (Katta Maisamma) idol on the banks of ponds. This practice has been continuing since the time of Kakatiyas. Lands were surveyed by the measurement tool called 'Gada'.

The significance feature of these ponds is they are chain linked ponds in other words they are connected by feeder channels, during rainy season all the rain water flows from upper region to lower region, whenever upper region pond is filled then the flow continues to lower region ponds automatically, such that all the ponds were filled. Almost all the villages of Telangana state are having minimum one or two ponds, credit goes to the Kakatiyas. Rivulets were diverted through canals to irrigate lands and Persian wheel was used to bring out water from the wells with the help of bulls.

As Kakatiyas developed irrigation facilities their subjects could get good yielding of crops thus peasants had surplus production which led to growth of trade and commerce. We can see 'perika' caste people who were traders, the word 'perika' meaning itself is 'gunnybag', they maintained caravans. This community people concentrated in Warangal and Nalgonda districts at present also. Brisk international trade was there as we have the motupalli inscription of Gananpati deva and Marcopolo's "The Travels" also mentions the same.



Some of the famous ponds:

Name of the Pond	Built by	Location	Significance
Kesari samudram	Prola-I Arigajakesari	Mahabubabad	On the title of Prola-I
Setti keriya pond	Beta-II	Warangal	Varunadeva's idol was
			installed on the bank
Hanmakonda pond	Rudradeva	Hanmakonda	
Pakala lake	Mummadi Jagadalu	Narsampet	Irrigates 9037 acres land
Ramappa lake	Recharla Rudra	Palampet	Irrigates 4350 acres land
Ghanpur lake	Ganapatideva	Warangal	Irrigates 350 acres land
Lakhnavaram lake	Ganapatideva	Warangal	Tourism
Bayyaram lake	Mailamba	Khammam	
Kundasamudram	Kundamamba	Kundavaram	
Choundasamudram	Malyala Chounda	Kondaparti	

The legacy:

After downfall of the Kakatiya kingdom there emerged petty kingdoms such as Musunoori Nayakas (1325-1368), Padma Nayakas (Rachakonda Velamas – Devarakonda Velamas) (1324-1475), Qutub Shahis (1518-1687), Asaf Jahis (1724-1948). These rulers followed the footsteps of their predecessors i.e. Kakatiyas and continued the maintenance of ponds (lakes).

Musunoori Kapaya Nayaka (1335-68) was defeated by Muhammad Shah Bahamani (1358-1375) in 1364-65 and a treaty was made thus "*Golconda fort*" took over by Bahamanis. On the remnants of Bahamani Sultanate there emerged five Deccan Sultanates those are:

1. Nizam Shahis – Ahmed Nagar

2. Adil Shahis – Bijapur

3. Imad Shahis – Berar

4. Barid Shahis – Bidar

5. Qutub Shahis – Golconda

Qutubshahis (1518-1687):

On the lines of the Kakatiyas Qutubshahis also dug up of new ponds and made repairs to old ponds. From Ibrahim Qutub Shah (1550-1580) to Abul Hasan Tanasha (1672-1687) the last ruler of Golconda not only made repairs but also dug up of new ponds also. Especially Ghanapur, Panagallu, Koilkonda, Khammam, Palvancha, Warangal, Bhuvanagiri, Karimnagar and Medak ponds were repaired. Panagallu lake was repaired by Ibrahim Qutub Shah (1550-1580). Hussain sagar was built under the supervision of Hussain Shah Vali in1562 by Ibrahim Qutub Shah, after the name of supervisor it is called as Hussain sagar. Ibrahim Qutub Shah also constructed Budvel lake and Ibrahimpatnam lake.

Mohammed Qutub Shah (1612-1626)'s mother Khanam-Agha constructed "Maa Saheba" (Maasab) tank and dedicated it to Banda Nawaz Gesu Daraz, sufi saint of Gulbarga.

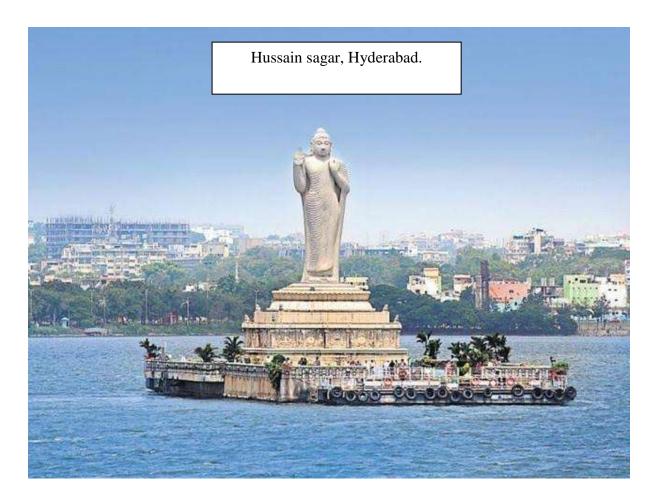
Durgam cheruvu (lake) was constructed exclusively for water needs of Royal family, the water was supplied through pipeline and the lake was constructed for drinking water purpose.

Asaf Jahis (1724-1948):

After death of Aurangzeb (1658 – 1707) the Mughal Empire was weakened thus provincial governors declared their independence. One of them was Mir Qamruddin Chinkliz Khan, he had a title "Nizam-ul-mulk Asaf Jah", he founded independent Hyderabad kingdom.

These Asaf Jahi rulers undertook the repairing of lakes of Kakatiyas times of 13th century. Mir Alam tank (1806) was constructed under the guidance of an English engineer by name Henry Russel by Sikender Jah (1803-1829) the Nizam – III of

Hyderabad State. During the time of Mir Mahaboob Ali Khan (1869-1911) the Nizam – VI Fateh Nahar Lake was constructed in 1905. During the time of Mir Osman Ali Khan (1911-1948) the Nizam – VII & the last Asaf Jah constructed new lakes under the supervision of Ali Nawaj Jung Bahadur such as Osman sagar (1920), Manair and Pocharam (1922), Vaira (1923-1930), Palair (1924-1929), Himayat sagar (1927), Nizam sagar (1923-1931) and Ali sagar (1932).



Mission Kakatiya:

After formation of Telangana state in 2014 the state government took up the rejuvenation programme of ponds as its flagship programme under "Mission Kakatiya", by remembering the contribution of the Kakatiyas, under this programme around 45000 ponds silt was removed, bunds/banks were strengthened, outlets were repaired or replaced, pond/lake area was demarcated to prevent from the encroachments to continue the legacy.

Epilogue:

The Civilisations emerged with beginning of agriculture, since then the main occupation of majority of population has been agriculture only. To cater the needs of increased population rulers took up construction of ponds/lakes, as we have reference of 'Sudarshana tataaka' of Maurya Chandragupta's time i.e.4th century B.C. Later on almost all the rulers of Indian sub continent constructed the lakes or arranged irrigation facilities. In Telangana region of Deccan plateau also the ponds were constructed in large scale but the significance is all these ponds are chain linked. This is unique feature of the irrigation system. Kakatiyas were pioneers in the chain linked ponds irrigation system, the later rulers of the region also followed the footsteps of the pioneers. Present Telangana state government also initiated 'Mission Kakatiya' programme to rejuvenate the system. Thus the legacy of Kakatiyas' irrigation system is being continued to till date by rulers of the region.

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