

Grand Anicut Canal System

February 13, 2021

In news : Recently, the Prime Minister laid foundation stone for the extension and modernisation of the Grand Anicut Canal System

Key updates

- Prime Minister laid foundation stone for the extension and modernisation of the Grand Anicut Canal System
- The canal is important for irrigation in the Cauvery delta districts.
- It will be modernised at a cost of Rs. 2,640 crore so as to improve its carrying capacity.

About the Grand Anicut/Kallanai Dam

- **Construction:** The dam was **constructed by King Karikala Chola of the Chola Dynasty in between the 100 BC- 100 century AD.**
- The dam is **located on the River Kaveri**, approximately 20km from the city of Tiruchirapalli.
- The purpose of the dam was to divert the waters of the Kaveri across the fertile Thanjavur delta region for irrigation by canals.
- The dam provides water for irrigating 400,000ha of land along the Delta Region.
- The structure measures 329m in length, 20m in width and 5.4m in height.
- Improvements were made to the dam in the 19th century by Arthur Cottons, a British general and irrigation engineer.
- It is the fourth oldest water diversion or water-regulator structures in the world and the oldest in India which is still in use

Unique Design of the dam

- The Grand Anicut is a simple check dam constructed across the direction of flow of the Kaveri river in order to divert water into the fertile delta of Tamil Nadu.
- Its unique structure majorly involves **several large unhewn stones extending across the Kaveri, stuck in the Cauvery river to divert the flow** of current to the fertile delta.
- Before the modifications made by the British, the original Kallanai dam had some unique design features which worked well for both the environment and residents.
- These features include the curved shape of the masonry section, an irregular descent, and a sloping crest.
- These features reshaped the water current flowing towards the dam smoothly and it had a good sedimentation process.

Imperial cholas

Vijayalaya was the founder of the Imperial Chola dynasty which was the beginning of one of the most splendid empires in Indian history

Historians point out that Vijayalaya was the a feudatory of the Pallava dynasty, took an opportunity arising out of a conflict between the Pandya dynasty and Pallava dynasty in c. 850, captured Thanjavur from Mutharaiyar, and established the imperial line of the medieval Chola Dynasty and Thanjavur became the Capital of Cholas

Famous Chola Kings:Rajaraja Chola I and Rajendra Chola I were the greatest rulers of the Chola dynasty, extending it beyond the traditional limits of a Tamil kingdom

King Karikala Chola

- He was a Chola dynasty king who ruled southern India.
- Karikala is recognised as the greatest of the Early Cholas
- The story of Karikala is mixed with legend and anecdotal information gleaned from Sangam literature. The only sources available are the numerous mentions in Sangam poetry.
- The raising of the banks of the river Kaveri(Cauvery) by Karikala is also mentioned by the Malepadu plates (seventh century CE) of the Telugu Chola Sovereign of Renadu
- He is credited with the conquest of the whole of India up to the Himalayas and the construction of the flood banks of the river Kaveri.

History of the Grand Anicut during British time

Caldwell:

- After the invasion by the British, they were fascinated with the structure and saw that it could be improved.
- Therefore a military engineer known as captain Caldwell was assigned by the British military to perform a study on the Kaveri river and promote irrigation in the fertile delta land.
- Caldwell discovered large amounts of water from the river passes through the Grand Anicut, in such a way the dam diverts minimal water for irrigation purposes.
- Caldwell's initial solution to the problem was to raise the height of the dam sunken stones to 27 inches.
- This was predicted to increase the capacity of the dam for irrigation purposes.

Arthur Cottons:

- He was a British general and irrigation engineer. He devoted his life to construction of irrigation and navigation canals throughout British India.

- He is known as the “Delta Architect” of the Godavari District because of his pioneering work in irrigation engineering.
- The Lower Anaicut built by Sir Arthur Cotton in the 19th century CE across Coleroon, the major tributary of Cauvery, is said to be a replicated structure of Kallanai.

Other projects in which he contributed were: Dowleswaram Barrage, the Prakasam Barrage and the Kurnool Cuddapah Canal (K. C. Canal).

Difference between Dam and Anicut

A dam is simply a barrier built across a river or any large water source. Its function is diverting water; to prevent flood or for irrigation and also to retain water for domestic use and power supply.

Anicut is a dam built across a stream or river for maintaining and regulating irrigation.

In terms of function, a dam can clearly do more than the Grand Anicut. A standard dam has the ability to divert and retain water from a large water source for water supply and power generation. The Grand Anicut, on the other hand, was designed to retain water and divert the surplus to irrigate lands.