

Historical Study of Upper Krishna Project

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Abstract

The Upper Krishna Project is one of the most significant multipurpose irrigation and water resource development projects in Karnataka. It has played a vital role in transforming the agricultural, economic, social and cultural landscape of the Krishna River basin, particularly in the northern districts of Karnataka. The present study aims to examine the historical background, origin, planning, development and implementation of the Upper Krishna Project, with special reference to Bagalkot District. Historically, the Krishna River has been an important source of water for human settlements, agriculture, trade and cultural development. The region has witnessed the rule of several dynasties, including the Satavahanas, Chalukyas, Rashtrakutas, Kalyana Chalukyas, Hoysalas, Kakatiyas and Vijayanagar rulers. The study highlights the historical importance of the Krishna River and its contribution to the development of the region. The research also focuses on the establishment of the Upper Krishna Project, construction of dams and reservoirs, irrigation facilities, agricultural expansion and socio-economic changes. Special attention is given to the impact of the Almatti Dam and Narayanpur Dam on the development of Bagalkot District. Furthermore, the study examines land acquisition, displacement, rehabilitation and resettlement of affected families, along with changes in the traditional lifestyle and cultural heritage of the region.

The study adopts historical and analytical research methods based on primary and secondary sources, including government records, historical documents, reports, books, research articles and field-based information. The study concludes that the Upper Krishna Project has significantly contributed to irrigation, agricultural productivity, regional development and socio-economic transformation. At the same time, it has created important challenges relating to displacement, rehabilitation and environmental sustainability. Thus, the project represents a significant chapter in the modern history of Karnataka's water resource development.

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INTRODUCTION

The Krishna River, which originates in the Western Ghats, receives an abundant supply of water during the monsoon season. A significant portion of this water flows into the sea and goes to waste. Consequently, a massive multipurpose irrigation project has been undertaken in North Karnataka to harness these water resources. This project provides irrigation facilities for an area of approximately 1.4 million hectares (14 Lakh hectares) and contributes to the nation's development through the agricultural sector. Irrigation is facilitated through conventional canals, lift irrigation systems, and drip irrigation. Furthermore, it is worth noting that neighboring states have also submitted proposals to the Central Government seeking to utilize the waters of the Krishna River.

Agitations were organized during the 1950s and 1960s for the implementation of this project. This is significant not only because it fulfills the dreams of the people in this region, but also because it marks a major step toward utilizing the 734 TMC feet of water allocated to the state by the Krishna Water Disputes Tribunal headed by R.S. Bachawat in May 1976. Under the provisions of the Bachawat Tribunal's verdict regarding the allocation of water, the state has earmarked 173 TMC feet of water for the Upper Krishna Project.

History of the Upper Krishna Project

Under the Government of India Act of 1935 water became an entirely provincial subject. Specific provisions were made for the resolution of water disputes. When the Constitution came into effect in 1950, the entire basin of the Krishna River fell within the boundaries of the states of Bombay, Mysore, and Andhra Pradesh. Consequently, the states of Maharashtra and Andhra Pradesh proposed the undertaking of major projects such as the Konya, Upper Krishna, Lower Krishna, and Krishna- Pennar schemes to utilize the waters of the Krishna River.

The States Reorganization Act of 1956 brought about significant changes regarding the states situated along the Krishna River basin. The former riparian states Bombay, Hyderabad, and Mysore (Karnataka) were replaced by the new states of Maharashtra, Karnataka, and Andhra Pradesh. In North Karnataka, several districts Vijayapura, Bagalkot, Kalaburagi (Gulbarga), Raichur and Yadgir faced drought conditions; due to extremely low rainfall, the situation for farming families was often dire. The *Imperial Gazetteer of India* (Hyderabad State volume) notes the lack of soil moisture, the year-on-year decline in rainfall, and the heavy dependence of farming families on the monsoon. Similarly, the *Karnataka Gazetteer* (Vijayapura District volume) records that the local population relies on the monsoon rains; any delay in the onset of the monsoon, or the failure of the *rabi* (post-monsoon) rains, adversely affects both *kharif and *rabi* crops. Consequently, in 1960, the Central Government granted approval for the Upper Krishna Project. Initially, the erstwhile Hyderabad State had planned to construct a 'Lower Krishna Project,' but the initiative could not be launched. This was because the Bijapur (Vijayapura) district fell within the project's scope, and following the reorganization of states in November 1956, the districts of Kalaburagi and Raichur which were also set to benefit from the project became part of the new state of Karnataka. Consequently, it became easier for the State of Karnataka to thoroughly examine and undertake the Upper Krishna Project.

The Central Government approved the report for the Upper Krishna Project in November 1963, with an estimated cost of Rs. 58.20 crore. On May 22, 1964, the then Prime Minister of India, Lal Bahadur Shastri, initiated the implementation of the Upper Krishna Project. He announced that the project would be completed within eight years, rather than the originally planned 10-year timeframe. The project included the construction of two storage reservoirs at Almatti and Narayanapura. Additionally, it was planned to bring 1.2 million (12 lakh) acres of agricultural land under irrigation through three canal systems: the Almatti Left Bank Canal, the Narayanapura Left Bank Canal, and the Narayanapura Right Bank Canal. It was initially decided to execute the project in two phases.

1. In the first phase, it was reported that a reservoir would be constructed at Narayanapura, and 103 TMC of water would be provided annually for irrigation in those areas;
2. In the second phase, a plan was formulated to construct a dam (Lal Bahadur Shastri Sagara) at Alamatti. Under this project, it was proposed to bring a total of 20.84 lakh acres of agricultural land under irrigation as part of the Upper Krishna Project. This irrigation was to be provided through canal networks, utilizing both gravity-flow and lift irrigation methods.

The project report was submitted to the Central Government. In 1964, the Government of India granted permission for the construction of the Narayanpur and Almatti dams; however, it also suggested shifting the site of the Narayanpur dam 5 to 6 kilometers upstream. At that stage, the originally proposed design for the Narayanpur dam was excessively long spanning 10 to 12 kilometers. Relocating the dam upstream allowed for greater storage capacity, which helped compensate for any potential loss in storage volume. Consequently, the Government of Karnataka shifted the dam site from Narayanpur to Siddapura. Nevertheless, the structure continues to be referred to as the Narayanpur Dam.

Accordingly, the Upper Krishna Project was approved in 1963, with a provision to utilize 103 TMC of water. At this stage, the dam height was set at 500.2 meters above ground level, with the spillway crest at 500 meters and the gates standing 12.2 meters high. Phase 1 was subsequently revised to allow for the utilization of 119 TMC of water. Following a directive from a Union Minister, the project was re-examined, which led to a change in the location of the Narayanpur Dam. According to a revised report dated March 17, 1965, Phase 1 was designed to provide irrigation to 6 lakh acres of agricultural land. Given that the total cost for irrigating 16 lakh acres amounted to 168 crore rupees and taking into account the scarcity of funds it was proposed that the second stage of Phase 1 be undertaken only during the Fourth Five-Year Plan period.

The Upper Krishna Project was revised again in 1986–87. This revision was approved by the Planning Commission via a letter dated September 24, 1990. Although the project was proposed as a multipurpose scheme, actual water utilization was limited

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to 173 TMC. Accordingly, the revised Phase 1 of the project proposed the utilization of 119 TMC of water. Phase 2 proposed raising the Full Reserve Level (FRL) of the Almatti reservoir to 519.600 meters utilizing an additional 54 TMC of water to irrigate an area of 197,120 hectares while Phase 3 proposed raising the reservoir's FRL to 524.256 meters and utilizing an additional 130.90 TMC of water.

The World Bank's financial assistance of 117.64 million US dollars has been fully utilized for the first stage of the Phase I project.

The details of the major works undertaken during this first stage are as follows:

1) Construction of the Almatti reservoir, along with the partial construction of canals and other related works;
2) Construction of the left bank canal of the Narayanapura Dam, extending from the 35.5 km mark to the 78 km mark;
3) Construction of the Narayanapura Dam and other associated works; and Provision of irrigation facilities to 79,629 hectares of dry land during this first stage.

- **The activities under the second stage of the first phase are as follows:**

1) Raising the crest of the Almatti reservoir to 509 meters above riverbed level.
2) Constructing flyovers and bridge approaches.
3) Constructing a portion of the distributary canals in the Indi division.
4) Completing the construction of a portion of the distributary canals in the Moodabal division.

The third stage of the first phase includes the completion of all remaining works of the first phase, as well as the provision of irrigation facilities for 1.5 lakh hectares of agricultural land. The second phase of the Upper Krishna Project involves raising the water level of the Almatti reservoir to 524.235 meters to store 54 TMC of water, thereby providing irrigation facilities for 2.25 lakh hectares of agricultural land. Currently, under Phase 3 of the Upper Krishna Project, it is envisaged to provide irrigation facilities for 5.94 lakh hectares of land across the districts of Vijayapura, Bagalkote, Yadagir, Raichur, Koppal, and Gadag, utilizing 130.90 TMC of water.

CONCLUSION

The upper Krishna Project occupies significant place in the history of Irrigation agricultural development and socio-economic development transformation in Northern Karnataka. The project was initiated with the primary objective of providing irrigation of Bijapur, Bagalkot, Gulbarga, Yadagiri and Richur districts. The foundation stone for the project was laid by the them prime Minister of India, Lal Bahudur Shastri on 22 May 1964. This marked an important milestone in the history of Planned irrigation development in Karnataka.

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