JAWAHARLAL NEHRU'S OUTLOOK IN THE PERSPECTIVE OF DAM PLANNING

SUJIT RAJBANSHI

Ph.D Research Scholar,
Department of History,
University of Kalyani, Nadia, West Bengal.

Abstract: **During the British rule, cultivation of India was mainly depended on nature. Indian Prime Minister Jawaharlal Nehru took the plan for big dams. For the sake of modern economy for India, he formulated an extensive plan of scientific and technological development. Nehru anticipated that the heavy dependency over nature could be reduced by the proper use of the water resources of the country. A large number of dams may be the solution to this problem. He was so convinced to the effectiveness of those dams that he compared the dams as that of 'Temple of Modern India'. Jawaharlal Nehru planned Nagarjunasagar dam on 10 December 1955. On 13 January 1957Nehru inaugurated the work of Hirakud dam as a power and irrigation project. In the five-year plan, the initiative was taken for the development of the Bhakra-Nangal Project, Damodar Valley Project, Hirakud Project, Tungabhadra Project, Kankarpara Project etc.**

***IndexTerms*- Bhakra-Nangal, Hirakud, Nagarjunasagar, Dam, Science, Power, Irrigation, Five-Year Plan.**

During the British rule, cultivation of India was mainly depended on nature. Indian agriculture was hampered by the excessive rainfall in one session and by drought in another session. Large dams helped the people of India to decrease the dependency on nature.[1] Jawaharlal Nehru, the first prime minister of independent India, tried to set up an example of scientific and technological development for India by constructing big dams. He believed that the dams would help the country to treacle the prevailing energy shortage and excessive dependency on nature. That is why Nehru, compared the dams with 'Temple of Modern India'.[2]In those days there were two different approaches in all on the making of the dams. One section believed that the country like India should build a large number of smaller dams than the huge gigantic water distribution plans. On the other hand, Nehru had faith on in bigger plans rather than a large number of small projects.[3] He thought big dams are much helpful not only for better irrigation and prevention of flood but also for the generation of electricity. There were plenty of rivers and water sources scattered all over the country. The government of India with the help of Planning Commission decided to use these resources through the proper use of science and technology to build India as a developed nation.[4]

Now the question is what Nehru's approach to the large-scale dam was? Why did he emphasise the construction of a large dam in the five-year plan? There is a small reserve of coal and crude oil in India. Thus it was not possible for the government to meet the energy required for its industries from that sector. Though there were few coal mines those were not sufficient to produce enough energy which was needed for the development of the country.[5] Moreover, the matter of concern is that these mineral resources cannot be brought back and they need a substitution. So it becomes urgent to produce hydro-electricity by making a dam, it can play an important role in the development of India. As a result, for the development of power plants for large industries, and an irrigation scheme for the development of agriculture, the first thing is to make the dams inevitable. Besides, a large dam project will be used to irrigate agriculture, to produce additional food and to protect the people's food security as much as possible, and also control floods to save lives of people from the flood.

India is a riverine country. As Rivers of North India are pasted in ice water, they contain water throughout the year which is helpful in the production of hydro-electricity. In Madras, the president of all India science assembly while speaking on the matter of hydro-electricity of India asserted that though no any minerals can be found in Himalaya, its huge quantity of water resources if can be converted into electric energy, India could acquire the supreme place in the sphere of electricalpower.[6] But as the rivers of South India are pasted in rain-water, they rise in the rainy season. These rivers carry over 1356 million acre-feet of water in a year but only 76 million acre-feet water of them that means 5-6% is used for irrigation.[7] The idea to make proper use of this vast quantity of water for the economic development through modern technology and scientific attitude was undertaken in the first Five-Year Plan.

Originally three crucial river projects were adopted in India's first five-year plan. For example, the Bhakra-Nangal dam, the Hirakud dam and the Nagarjuna dam. Each had different motives. The primary purpose of the Hirakud dam was to control flood; the purpose of the Bhakra-Nangal dam in Punjab was to produce hydroelectric power and to supply water for irrigation, and the purpose of the Nagarjunasagar dam on the Krishna River was to supply water from the other peninsular dams.

Hirakud dam was built on the Mahanadi of Orissa. Hirakud dam is known as the longest dam in India. It is about 25.8 km long and 60.96 meters high. Two towers were built to keep an eye on the dam; one is known as 'Gandhi Minar', and the other is known as 'Nehru Minar'. Hirakud reservoir was constructed for multiple purposes like flood control, irrigation system, power generation etc. This is the only multipurpose river-plan in independent India.

Hirakud dam was built mainly to control floods. Because the number of floods in Odissa from the period of 1868 to 1940 was sixty-three and it was a matter of concern. So Gandhiji had requested to Visvesvarayya through a letter to overcome the massive destruction of the flood in Orissa. Even Mr. Visvesvarayya was in favor of the dam for producing electricity. He started his professional life as a government engineer in Bombay. He became the head engineer of Mysore in 1909. He had an essential role

in the making of Raja Sagar dam over the river Kaberi. The electric energy that was produced through this dam was used for the development of Mysore.[8] After the devastating floods of 1937, the plan for Hirakud Dam was initiated.

In 1945 on 8th December Dr B.R. Ambedkar arranged a meeting in the city of Cuttack to fulfill multipurpose approach.[9] The Hirakud dam will control the floods of the Odisha. For this purpose, a multi-purpose plan of Hirakud Dam is adopted in the Five year plan. In April 1948, Jawaharlal Nehru, the first prime minister of India, inaugurated the Hirakud dam for the second time.[10] Nehru called this dam as 'The Temple of Modern India'. This dam took an important role to prevent the flood; increase the power of electricity and flourish the project of irrigation. These projects were introduced in 1956. In 1957 on January 13, Nehru visited the Hirakud dam. And the project of hydro-electricity was completed in 1966.[11]

With the planning of Hirakud dam, water irrigation was arranged in 1.5 million acres of land. Nehru's scientific view was prominent in the construction of the Hirakud dam. The dams played a vital role in the flood control of Orissa. As well as dams were used for irrigation, fish cultivation, hydropower production and tourism industry. Even Thousands of farmers rely on the Hirakud dam for farming.

The most important dam of all and the second biggest dam in the world was the Bhakra-Nangal of North India.[12] It aimed to produce one million kilowatt energy and to manage irrigation for 7 million 40 thousand acres of land. Sufficient canals were dug for irrigation. And the most important fact was that both Indian male and female labourer performed simultaneously for the construction of Bhakra-Nangal dam.[13] The Bhakra-Nangal dam is built on the Sutlej River in Himachal Pradesh.This dam is the largest in India and second largest in Asia. The height of this dam is 225 meters, and the length is 520 meters. The lake of the Bhakra-Nangal dam is known as 'Govinda Sagar Lake'. It is India's second largest reservoir. In the five-year plan, the versatile plan of the Bhakhara-Nangal project was adopted.

The power generated at Bhakra dam is distributed among partner states of Punjab, Haryana, Rajasthan, Himachal Pradesh, Chandigarh and Delhi.[14] According to the Colombo plan of British Commonwealth, some expert technicians were sent here. Even Dr Homi Jehangir Bhabha spoke highly to produce hydro-electricity from Bhakra-Nangaldam.[15] Bhakra-Nangal was the biggest singular plan in the first Five-Year Plan. In 1954 Nehru came to Bhakra to officially inaugurate this project.[16] Nangal dam was separated from Bhakra, and they two are simultaneously called Bhakra-Nangal dam. In the Golden Jubilee of Indian Institute of science, Nehru stated that we had entered the era of science through Bhakra-Nangal dam.[17]

Nangal dam is constructed eight miles below from Bhakra-Nangal. Two power plants are installed here in the power house. The irrigation system is connected with Sirhind irrigation canal, and it provides water in 3.5million acres of land. From there, it can produce 1.3 million ton wheat and other crops per year. This includes 0.8 million ton cotton, 0.55 million ton sugar-cane and 0.1 million ton oilseeds.[18]

The Nagarjun dam was built on Andhra Pradesh's Krishna Sea. Its height was 124 meters, and it was 1,450 meters in length.[19] The Nagarjuna Sagar dam was the most prominent human-made water reservoir in the world. Nagarjuna dam is built with twenty-six gates, and this dam is also carrying the sign of modern technology. Nagarjuna dam plays a vital role in the production of Indian grains for the green revolution and not depending on foreigners. Pandit Jawaharlal Nehru about the Nagarjuna dam said that it was the first step in the progress of modern India.

Planning Commission formed the Khosla Committee. The purpose of this committee was to create a report on how much profit can be achieved using Krishna river water. Based on the report of this committee, the Planning Commission planned to build a dam on the Krishna River in December 1952. Krishna river dam was previously known as Nandikonda. Jawaharlal Nehru laid the foundation for this dam on 10 December 1955. After this Nandikonda assumes the new name, popularly known as Nagarjuna Sagar dam in 1956 and it is by the name of Buddhist Pandit Nagarjuna. Its construction ended in 1969.

Moreover, even Dr Meghnad Saha supported the dam for the control of flood in eastern India. In 1948 a new law was passed in Lok Sabha to set up Damodar Valley Corporation.[20] In that law, it was decided that it would be a multipurpose river plan. And its development and maintenance would be bestowed on Corporation.[21] DVC was mainly built up for Bengal and Bihar. The idea of construction of four more dams was made in the first five-year plan. These are Tilaiya, Konar, Maithon, Panchet Hill. When Nehru went to see the Damodar Valley project, Nehru saw thousands of workers working there. The workers there did not know about the purpose of their work. They did not know the importance of the dam. Nehru informed the people there about the importance of the dam and its benefits. As a result, people and the workers received a clear view of the aim of the dam project.[22]

Many historians criticised some of the major dam project programs. There was no doubt that the dam plans were for development purposes. But Dam creates an adverse effect on the ecosystem. The excessive use of cement, sand, etc. in the construction of the dam results in a loss of livestock and various species of animals in the ecosystem. Apart from this, many types of diseases are created from ponds such as malaria, filariasis, dengue etc. Fluoride disease started from the Nagarjuna dam.[23] Apart from all these problems big dams are much helpful for better irrigation and flood prevention. Thus the Indian government, plan commission and engineers all together came up to make way for India to become a modern nation by preserving water resources through the proper use of science and technology.

REFERENCES

1. Basu, Syamaprasad, *Jawaharlal Nehru: SwadhintarAageEbngPare(1889-1964)*, Kolkata : Dey's Publishing, 2012, P. 219.
2. Ibid.
3. Singh, Baldev (ed.), *Jawaharlal Nehru on Science and Society: A Collection of his Writings and Speeches*, New Delhi: Nehru Memorial Museum and Library, 1988, P. 172.
4. R. Iyer, Ramaswamy, "Water Policy And Science Disciplines, Perspectives, Values", *Science, Technology and Development in India Encountering Values* (ed. Rajeswari S. Raina), New Delhi: Orient Black Swan, 2015, P. 92.
5. *First Five Year Plan*, The publication division, Ministry of information & broadcasting government of India, P.150.
6. Dwan, Dipak Kumar (Ed), *Meghnad Saha Rachana Sangraoho*, Kolkata: Patralekha, 2017, P. 123.

7. *First Five Year Plan*, op.cit. P.150.
8. Dwan, Dipak Kumar (Ed), op.cit. P.123.
9. *The Hirakud Dam Project Vol-I Report*, Government Of India, Mahanadi Valley Development Report, 1947, P.10.
10. Gopal, S. *Selected Works of Jawaharlal Nehru, Vol-2*, Delhi: Orient Longman, 1972, p. 35.
11. *Construction History*, http://www.hirakuddam.com/construction-history/, retrieved on: 09/10/2017, 20:05
12. Guha, Ramachandra, *Gandhi Uttar Bharatbarsha* (India After Gandhi), Kolkata: Ananda Publishers, 2012, P. 193.
13. Basu, Syamaprasad, op.cit. P. 219.
14. Ibid.
15. Singh, Baldev (ed.), op.cit. P. 129.
16. Guha, Ramachandra, op.cit, P. 194.
17. Singh, Baldev (ed.), op.cit, P. 189.
18. Moraes, Frank, *Jawaharlal Nehru: A Biography*, Mumbai: Jaico publishing House, 2007, p.449.
19. *Nagarjuna Sagar Dam*, http://guntur.nic.in/nagarjuna_sagar.html, retrieved on: 14/01/2018.
20. Gopal, S., op.cit, P.35.
21. Basu, Syamaprasad, op.cit, P. 219.
22. Guha, Ramachandra, op.cit, 203.
23. Padaria, N., Singh, R. P., & Singh, Y. P., *Big Dams Dilemma*, New Delhi: A. P. H. Publishing Corporation, 2000, p. 24.

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